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In cooperation with Illinois
Agricultural Experiment
Station

Soil Survey of Lee County, Illinois

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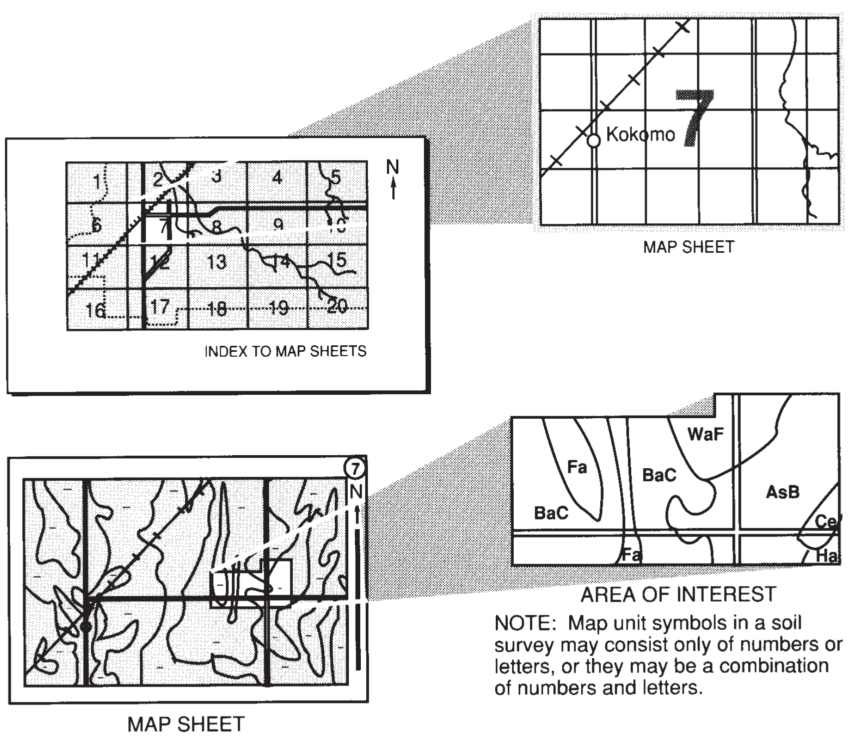
How To Use This Soil Survey

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 **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

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



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

National Cooperative Soil Survey

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. 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 Lee County Soil and Water Conservation District.

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. The most current official data are available on the Internet.

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.

Nondiscrimination Statement

Cover Photo Caption

Stripcropping in an area of sloping Ashdale soils. This conservation practice helps to minimize erosion caused by wind and water.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys 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 surveys 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 surveys 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 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
Lee County, Illinois

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LEE COUNTY is in north-central Illinois (fig. 1). It has an area of 466,500 acres, or 728 square miles. It is bounded by Ogle County on the north, De Kalb County on the east, Bureau County and part of La Salle County on the south, and Whiteside County on the west.

This survey area is a subset of Major Land Resource Areas (MLRAs) 108A and 108B, the Illinois and Iowa Deep Loess and Drift (USDA, 1981).

Lee County was established in 1839. In 2000, the population was 36,062 (U.S. Department of Commerce, 2004). Dixon, the county seat and largest town, has a population of 15,941 (U.S. Department of Commerce, 2004).

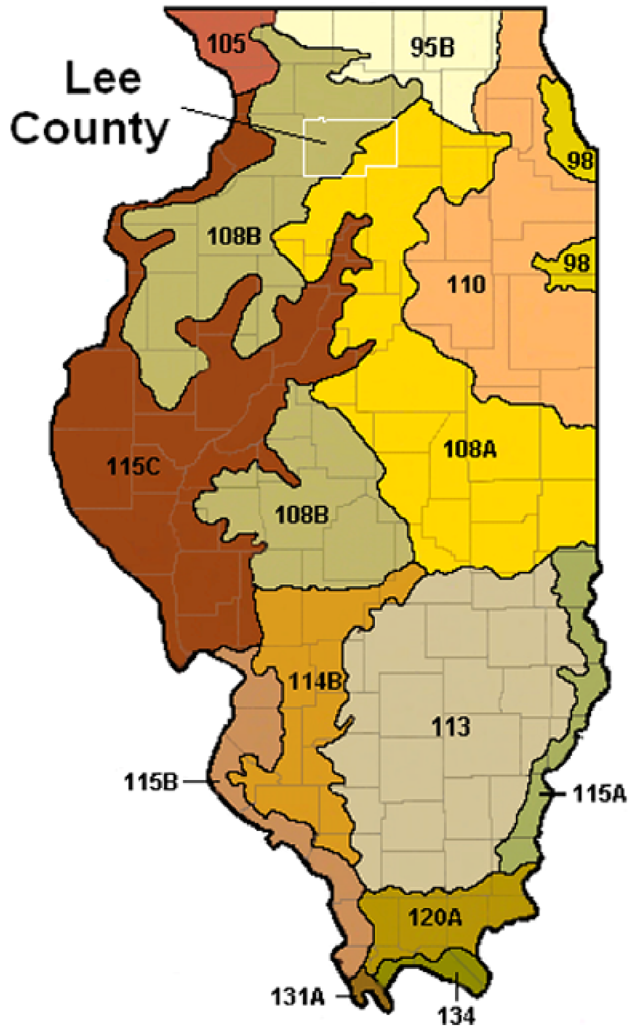
This soil survey updates the survey of Lee County published in 1985 (Zwicker, 1985). This updated survey provides additional soils information.

General Nature of the Survey Area

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

Transportation Facilities and Industry

Lee County has a well developed system of transportation. Interstate 39, U.S. Highway 52, and State Highway 251 cross the county from north to south. Interstate Highway 88, U.S. Highway 30, and State Highway 38 cross the county from east to west. The main secondary roads are blacktopped. Most rural areas are accessible by all-weather roads. Railroads furnish freight service to the county.



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

Several industries are established in the county. The largest employers are in the Dixon area where hardware manufacturing and food processing are done. Other industries include agricultural products, emission systems, automotive products, health care, food additives, industrial valves, Portland cement, and packaging and distribution. There is also a 640-megawatt gas-fired peak generation facility in the county. A wind energy farm has recently been completed near Mendota with a capacity to generate 50.4 megawatts of electricity (fig. 2). A number of pits provide crushed rock for roads and sand and gravel for building material.

Farming

Farming has been a major enterprise in Lee County since the area was settled. In 2002, the county had 842 operating farms (USDA, 2003). The average farm size was about 462 acres. Corn, soybeans, alfalfa hay, and wheat are the main crops. In 2002, 210,568 acres was used for corn; 141,818 acres was used for soybeans; 4,380 acres was used for alfalfa hay; and 1,157 acres was used for wheat (USDA, 2003).

Hogs and cattle are the main livestock. In 2002, the total number of swine was 55,414 and the total number of cattle was 15,173 (USDA, 2003).

Relief, Physiography, and Drainage

The landscape of Lee County consists of five major landforms: uplands, outwash plains, lake 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 and lake plain consist 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. The lowest point in the county occurs along the Rock River where it exits the western side of the county at an elevation of about 640 feet above sea level. The highest point occurs at an elevation of about 985 feet above sea level on the glacial moraine about 2.6 miles northeast of the town of

Figure 2.—Wind turbines in a farm field.

Paw Paw, near the Lee-De Kalb county line (fig. 3). The thickest glacial deposits in the state occur in this same area, where the moraine crosses a deep preglacial valley known as the Paw Paw Bedrock Valley. Glacial deposits over this valley are nearly 600 feet thick (Piskin and Bergstrom, 1975).

Most of the county is uplands that are divided by major stream channels. The uplands generally consist of 5 or more feet of loess over till. Till is exposed in many places on the steeper slopes. Some limestone or sandstone bedrock is exposed along the steeper slopes immediately east and west of Dixon. The prominent ridges on the east side of the county are part of the Bloomington Morainic System, which runs from northeast to southwest across the county. It consists of a series of undulating ridges and closed depressions, resulting from repeated cycles of advance and retreat during the overall recession of glacial ice from west to east in Illinois. Relief in general ranges from about 800 feet at the foot of the moraine to about 985 feet at the highest point on the moraine. Local relief on the moraine ranges from about 10 to 90 feet.

At the foot of the prominent Bloomington Morainic System, a broad outwash plain lies roughly between Steward and Ashton and then south along the foot of the moraine below Amboy. About 3 to 4 feet of loess overlies the sandy and gravelly outwash in the northern and central parts of the county. Beginning about 2 miles south of Route 30, however, stabilized sand dunes have formed on the outwash deposits and on the front slope of the Bloomington Moraine. Likewise, on the western side of the county, from Nelson south along the county line, outwash deposits occur in an area 1 to 4 miles wide within the county and extend west toward Rock Falls. Sand dunes are common on the outwash plain in this area. The outwash formations were created when

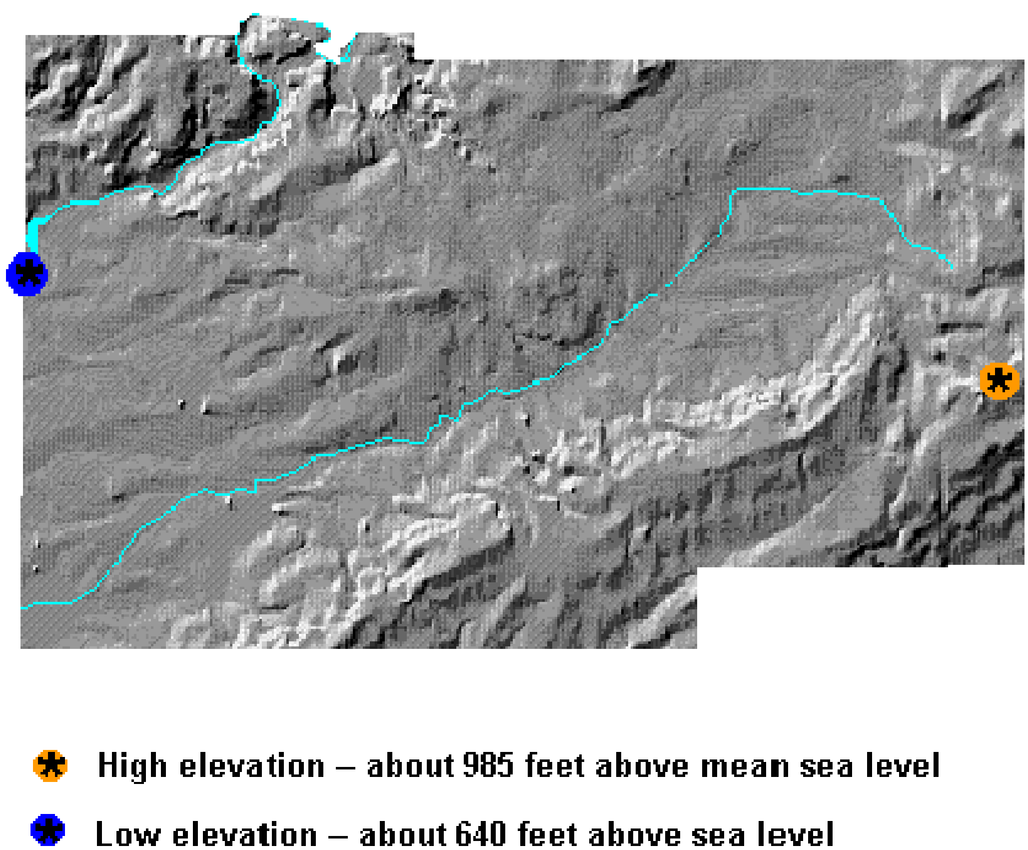


Figure 3.—A generalized physiographic map of Lee County.

meltwater distributed sandy and loamy material in front of the Bloomington Moraine as the ice melted back. These deposits were subsequently capped with a thin layer of loess in the northern part of the county. In the southern and western parts of the county, they were reworked by the wind into numerous sand dunes. Elevation ranges from about 650 to 800 feet above sea level. Local relief is generally very low, but near the sand dunes it may be 10 to 70 feet.

A major lake plain occurs mainly north of Route 30 at the upper end of the Green River at an elevation of about 760 feet above sea level. About 4 feet of silty calcareous deposits overlie sandy outwash deposits. The lakebed formed on the outwash plain in front of the Bloomington Moraine when glacial meltwater became trapped behind the bedrock high near Amboy (Lineback and others, 1979). In the early 1800s, this area was referred to as “Inlet Swamp” because of a bedrock ledge near the center of section 9, Lee Center Township, that was a natural barrier for drainage for over 30,000 acres of land above it. The Inlet Swamp Drainage District was formed in 1887. Drainage was completed in 1901 after a channel through the bedrock was deepened to 5 feet and widened to 30 feet (Bardwell, 1901).

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

The major flood plains in the county are along the Rock River and the Green River and their adjoining tributaries. Elevation on the flood plains ranges from a low of about 630 feet above sea level along the Rock River where it exits Lee County to about 780 feet in the upper reaches of the Green River Lowlands.

Lee County is within the Rock River and Green River drainage basins, which eventually drain into the Mississippi River further west. The Rock River drains the northern part of the county. Major tributaries of the Rock River are Franklin, Steward, Willow, Beach, Sugar, Threemile, and Fivemile Creeks and Main and Winnebago Ditches. All of these, except Franklin and Willow Creeks, join the Rock River outside of Lee County. The Green River drains the central part of the county. Major tributaries to the Green River are Willow Creek and Red Oak Ditch. The southern and southeastern parts of the county are drained by tributaries to Big Bureau Creek, which is part of the regional drainage into the Illinois River south of Lee County.

Climate

Lee County is cold in winter. In summer it generally is hot but has occasional cool spells. Precipitation falls as snow during frequent snowstorms 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 Paw Paw 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 about 22 degrees F and the average daily minimum temperature is 14 degrees. The lowest temperature on record, which occurred at Paw Paw on February 3, 1996, is -33 degrees. In summer, the average temperature is 70 degrees and the average daily maximum temperature is about 81 degrees. The highest recorded temperature, which occurred at Paw Paw on June 26, 1988, is 101 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 36.85 inches. Of this total, 24.14 inches, or about 66 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 12.26 inches. The heaviest 1-day rainfall on record is 6.92 inches on June 24, 1994. Thunderstorms occur on about 50 days each year.

The average seasonal snowfall is 30.6 inches. The heaviest 1-day snowfall on record is 14 inches on January 27, 1967. The greatest snow depth at any one time on record is 29 inches on January 19, 1979. On average, 48 days of the year have at least 1 inch of snow on the ground. The number of such days, however, 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 the survey area, which is in Major Land Resource Area 108 (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 detailed 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 Lee County survey but that is representative of the MLRA.

The information in this survey 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.

Commonly, individual soils on the landscape 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 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 areas. Differences are the result of an improved 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.

Formation of the Soils

A soil is a three-dimensional natural body consisting of mineral and organic material that can support plants. Soil-forming processes act on deposited or accumulated geologic material. The nature of any soil at a given site is the result of the interaction of the major factors of soil formation and their influence on the processes of soil formation.

Factors of Soil Formation

The major factors of soil formation are the physical and mineralogical composition of the parent material; living organisms, both on and in the soil; the climate in which the soil formed; the topography, or relief; and the length of time that the forces of soil formation have acted on the parent 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

Dr. John P. Kempton, geologist (retired), Illinois State Geological Survey, and Dr. Leon Follmer, geologist, Illinois State Geological Survey, helped prepare this section.

The nature and distribution of the surficial materials in Lee County provide a basis for understanding the soils. The soils in the county formed in loess, till, outwash deposits, eolian deposits, lacustrine deposits, alluvium, organic material, paleosols, and material weathered from limestone and sandstone.

Loess, or silty wind-deposited material, is the most extensive parent material in the county. It blankets many of the other parent materials. The major source of the loess was the Mississippi River Valley, about 30 miles west of Lee County.

The loess is referred to as Peoria Silt west of the Green River, where it reaches a maximum thickness of about 16 feet and overlies older silty deposits and Illinoian glacial deposits. Where it overlies Wisconsinan till east of the Green River, it was formerly called Richland Loess. Now it is included with the Peoria Silt, which is a geologic mapping unit that is mostly loess and includes other kinds of silty deposits

(Hansel and Johnson, 1996). The moderately well drained Osco and somewhat poorly drained Muscatune soils formed in loess that is more than 5 feet thick.

Till, which is commonly called glacial till, is unsorted, nonstratified, pulverized rock and sediments consisting of clay, silt, sand, pebbles, and boulders transported and deposited by glacial ice. In Lee County the till typically is clay, clay loam, loam, or sandy loam and is calcareous. A recent map of the Quaternary deposits of Illinois shows six tills at or near the surface in Lee County (Lineback and others, 1979). The area was glaciated many times, and many varieties of till were produced. Most of the older tills are buried (Willman and Frye, 1970), but four come to the surface in Lee County underneath the cover of soil and loess. Old soils, called paleosols, developed in all of the older deposits at one time; in general, these paleosols are weathered zones. However, ancient erosion removed the paleosols at many locations. The landscape to a large extent reflects the distribution of the tills. The older landscapes, on the older tills, tend to be flat, and the younger landscapes are more rolling. All tills in the weathered zone are leached; have typical altered colors of light gray, yellow, brown, or red; and become calcareous and dark gray with depth.

The oldest of the tills at or near the surface is the Sterling Till. It is within 5 feet of the surface on side slopes where the loess is thin. It is gray clay loam to clay till, mainly in South Dixon and Palmyra Townships. The moderately well drained Assumption soils formed in 20 to 40 inches of loess and in a paleosol that formed in the Sterling Till.

Lee Center Till covers some areas in the west-central part of the county. It is a yellowish brown loam to silty clay till. The moderately well drained Prairieville and somewhat poorly drained Nachusa soils formed in a thin layer of silty and loamy eolian material and in a paleosol that formed in till. In earlier work a paleosol in the Lee Center Till was not observed, and this served as the basis for distinguishing Lee Center Till from Sterling Till; however, both are now considered equivalent. Both become clayey with depth and may range up to 20 feet thick or more. In the north-central part of the county, the Esmond Till occurs. It also is equivalent to the Lee Center and Sterling Tills in age, but it tends to be more clayey near the surface and does not have a paleosol in most places. Erosion before the last glaciation removed most of the paleosol zone from the old tills across most of Lee County before the area was buried by Wisconsinan loesses. As a result, the parent material for modern soils is highly variable from place to place.

Argyle Till is on side slopes along Sugar and Franklin Creeks and their tributaries. It is a brownish yellow sandy loam till and may have a paleosol. The well drained Kidder soils formed in a thin layer of loess and in the underlying sandy loam till. The well drained Griswold soils formed in sandy loam till. In rare places a reddish clayey paleosol occurs below the loess.

Tiskilwa Till is the thickest and one of the youngest tills in the county. It forms the prominent Bloomington Morainal System, a range of hills that swings in an arcuate pattern from the northeast corner of the county to the southwest corner. It is a yellowish brown to reddish gray loam till and is commonly 100 to 150 feet thick beneath the higher parts of the moraine. A younger till occurs southeast of and roughly parallel to the Bloomington Morainal System. It was formerly called Malden Till and is now correlated with the Batestown Till (Hansel and Johnson, 1996). This till contains a higher proportion of fresh minerals but overall is similar to the Tiskilwa Till. As parent materials, these tills are similar enough that the same soils formed in both tills. The moderately well drained Saybrook and well drained Wyanet soils formed in these tills. Both soils have loess in the upper part of the profile.

Outwash material is deposited by running water from melting glaciers. It consists of layers of different particle sizes. The sorting of individual layers of material is related to stream velocity at the time of deposition. The coarser textured layers are related to high stream velocities, and the finer textured layers are related to low stream velocities. Outwash is extensive in the county. A large area of sand and gravel is in front of the Bloomington Moraine near Steward. The well drained Waupecan, somewhat poorly drained Grundelein, and poorly drained Dunham soils formed in loess and in the underlying stratified outwash.

Sand dunes formed when westerly winds reworked sandy outwash deposits after glacial meltwater receded. These eolian deposits are most extensive in the southwestern part of the county. Most are on the flood plain in the Green River Lowlands. Some are in the uplands east of the flood plain. Also, numerous dunes are adjacent to the Rock River. The excessively drained Coloma and Sparta soils formed in sandy material reworked by wind.

Lacustrine material was deposited by glacial meltwater. After the coarser particles were deposited as outwash by moving water, the finer particles of silt and clay were deposited in lakes or other still water. The poorly drained Milford soils formed in clayey and silty lacustrine sediments.

Alluvial material was recently deposited by floodwater from streams. The velocity of the floodwater determines the texture of the material deposited. An extensive area of alluvium occurs in the southwestern part of the county along the Green River. Before this stream was channelized, it meandered across the flood plain and deposited alluvium of various sand content, depending upon the velocity of any given flood. At times, the stream was very sluggish and deposited alluvium with small amounts of sand. During peak storm events the stream ran much faster and deposited alluvium with a much higher sand content. Cohoctah soils formed in alluvium with a higher sand content than that of the Ambraw soils in the same area. Ambraw soils formed in alluvium deposited during periods of relatively low stream velocities.

Organic material is made up of partially decomposed plant remains. When the glaciers receded, water was left standing in depressions on outwash plains and till plains. Water-tolerant plants eventually filled in these areas through the process of growth and decay, and large areas of muck were formed. The very poorly drained Adrian and Houghton soils formed in organic material.

Bedrock occurs mostly in the northern part of the county near Dixon and Ashton. It is mainly Ordovician in age and generally is Galena-Platteville dolomitic limestone and Glenwood and St. Peter sandstone (Willman and others, 1975). The well drained Whalan soils formed in 20 to 40 inches of loamy material and clayey limestone residuum. The somewhat excessively drained Eleva soils formed in 20 to 40 inches of material weathered from sandstone bedrock.

Living Organisms

Plants are the principal living organisms affecting the formation of soils in Lee 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 matter 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 that of the soils that formed under forest vegetation. Also, they have a higher content of organic matter. Fayette soils are an example of soils that formed under forest vegetation. Muscatune soils are an example of soils that formed under prairie vegetation.

Climate

Climate is an important factor in the formation of soils. It influences the kinds 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 Lee 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 Lee County, the slopes dominantly range from 0 to 35 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 an example of well drained, well aerated soils. Sable soils are an example of poorly drained, poorly aerated soils.

Time

Time, usually several thousand years, is needed for the agents of soil formation to result in the development of distinct horizons. Differences in the length of time that the parent materials have been in place are commonly reflected in the degree of profile development. Over a given period, however, some soils form rapidly whereas others form slowly.

In general, the more rapidly permeable soils having easily weatherable minerals and a low content of calcium carbonate form more rapidly than slowly permeable soils having a high content of calcium carbonate. Soils form more rapidly under forest vegetation than under prairie vegetation because the water penetrating the surface is more acid under forest vegetation and is more effective in leaching soluble bases. Soil formation in areas of strongly sloping topography is slower than in the less sloping areas because less water infiltrates the soil and the resulting runoff increases natural erosion of the surface layer. A soil that forms in nearly level areas accumulates water from adjacent slopes. The accumulation of water results in more rapid leaching of the more soluble compounds and thus in more rapid soil formation.

The soils in Lee County generally have moderately expressed horizons, but they range from young to mature. Coarse textured soils, such as Coloma and Sparta soils, consist mostly of slowly weatherable quartz minerals, which do not readily form soil horizons even though they are readily leached of calcium carbonates and tend to become acid. These soils remain youthful over time. Soils that formed in recent alluvial sediments, such as Lawson and Otter soils, also remain youthful because of the frequently deposited alluvium. Soils intermediate in maturity, such as Fayette and Osco soils, are on relatively stable landscapes where deposition is negligible. These soils develop horizons from permeable, medium textured loess over a relatively short period.

Denny soils are an example of mature soils that have distinct horizons. They have leached subsurface horizons and contain more clay in the subsoil than the Osco soils.

They formed in depressions, which collect runoff from surrounding slopes. The infiltrating water leaches soluble minerals from the surface layer to the subsoil at an accelerated rate.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). 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 Drummer series is 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 descriptions of the associated detailed 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 “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2003). 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 detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. 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 the principal hazards and limitations to be considered in planning for specific uses.

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Saybrook silty clay loam, 5 to 10 percent slopes, eroded, is a phase of the Saybrook series.

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

Adrian Series

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

Typical Pedon

Adrian muck, 0 to 2 percent slopes; at an elevation of 610 feet; 2,080 feet west and 1,200 feet south of the northeast corner of sec. 35, T. 19 N., R. 4 E.; 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 2.5/) 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 2.5/) 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 the 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 in the matrix; few fine pebbles; neutral.

Range in Characteristics

Thickness of the organic deposits: 16 to 51 inches

Surface tier:

Hue—5YR to 10YR or N
Value—2 or 2.5

Chroma—0 to 3
Reaction—strongly acid to neutral

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
Reaction—slightly acid or neutral

777A—Adrian muck, 0 to 2 percent slopes

Setting

Landform: Depressions on outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are deeper to the underlying sand
- Soils that have more clay in the substratum

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

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 layer: More than 80 inches
Available water capacity: About 11.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 55.0 to 75.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Deepest ponding (depth, months): 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 category: 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; at an elevation of 580 feet; 2,400 feet north and 160 feet east of the southwest corner of sec. 11, T. 19 N., R. 3 E.; Whiteside County, Illinois; USGS Erie NW 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 faint 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 faint 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 that has thin strata of gray (10YR 5/1) sandy clay loam; weak medium subangular blocky structure; friable; few fine soft masses of iron oxide throughout the matrix; few fine prominent brown (7.5YR 5/4) and common fine prominent yellowish brown (10YR 5/6) iron oxide masses in the matrix; slightly acid; gradual smooth boundary.

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

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to 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 more clay in the lower part of the subsoil and in the substratum
- Soils that have more clay in the surface layer and in the upper part of the subsoil

Dissimilar soils:
- The moderately well drained Medway soils in the slightly higher positions on flood plains

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 layer: More than 80 inches
Available water capacity: About 8.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
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 more clay in the lower part of the subsoil and in the substratum
- Soils that have more clay in the surface layer and in the upper part of the subsoil
- Soils that have less clay throughout
- Soils that have a thicker surface layer

Dissimilar soils:
- The poorly drained Normandy soils in positions similar to those of the Ambraw soil
- The somewhat poorly drained Hoopeston soils on summits

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 layer: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Arrowsmith Series

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

Typical Pedon

Arrowsmith silt loam, 0 to 2 percent slopes; at an elevation of 770 feet; 650 feet south and 1,890 feet east of the northwest corner of sec. 18, T. 22 N., R. 5 E.; McLean County, Illinois; USGS Farmer City North topographic quadrangle; lat. 40 degrees 22 minutes 04 seconds N. and long. 88 degrees 40 minutes 53 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure; very friable; neutral; abrupt smooth boundary.

A—8 to 12 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure; friable; neutral; abrupt smooth boundary.

Bt1—12 to 17 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; friable; common faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; neutral; clear smooth boundary.

Bt2—17 to 23 inches; olive brown (2.5Y 4/4) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; neutral; clear smooth boundary.

Bt3—23 to 30 inches; light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; many fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; slightly alkaline; abrupt smooth boundary.

BC—30 to 39 inches; light olive brown (2.5Y 5/4) silt loam; weak coarse subangular blocky structure; friable; very few distinct dark grayish brown (2.5Y 4/2) clay films lining pores; many fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; many fine and medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions in the matrix; few medium rounded white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; strongly effervescent; moderately alkaline; gradual smooth boundary.

C—39 to 60 inches; light olive brown (2.5Y 5/4) silt loam; massive; friable; many fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine rounded black (7.5YR 2.5/1) very weakly cemented iron and manganese concretions in the matrix; few medium rounded white (10YR 8/1) weakly cemented calcium carbonate concretions throughout; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess: More than 60 inches
Depth to carbonates: 25 to 40 inches
Thickness of the solum: 25 to 40 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—4 to 6
Chroma—2 to 4
Texture—silty clay loam or silt loam

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

715A—Arrowsmith silt loam, 0 to 2 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have loam in the substratum
- Soils that have a thinner surface layer and subsurface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The poorly drained Sable soils in the lower positions

Properties and Qualities of the Arrowsmith 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 layer: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 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 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 category: Prime farmland
Hydric soil status: Not hydric

Ashdale Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Ashdale soil in map unit 411C2 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

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.; 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 distinct 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 millimeters 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: 7 to 15 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

Ap and AB horizons:
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: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that do not have bedrock within a depth of 60 inches
- Soils that have more sand in the lower part of the subsoil
- Soils that have bedrock at a depth of less than 40 inches

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

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 layer: 40 to 60 inches to lithic bedrock
Available water capacity: About 10.5 inches to a depth of 60 inches

Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

411C2—Ashdale silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that do not have bedrock within a depth of 60 inches
- Soils that have more sand in the lower part of the subsoil
- Soils that have bedrock at a depth of less than 40 inches

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

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 layer: 40 to 60 inches to lithic bedrock
Available water capacity: About 11.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Assumption Series

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

Taxadjunct features: The Assumption soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

Typical Pedon

Assumption silt loam, 2 to 5 percent slopes; at an elevation of 720 feet; 100 feet north and 300 feet east of the southwest corner of sec. 29, T. 15 N., R. 2 E.; Henry County, Illinois; USGS Andover topographic quadrangle; lat. 41 degrees 15 minutes 00 seconds N. and long. 90 degrees 17 minutes 57 seconds W., NAD 27:

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; many fine roots throughout; neutral; abrupt smooth boundary.

A—6 to 13 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; many fine roots throughout; slightly acid; clear smooth boundary.

AB—13 to 16 inches; very dark grayish brown (10YR 3/2) silt loam mixed with some brown (10YR 4/3) in the lower 2 inches; grayish brown (10YR 5/2) and brown (10YR 5/3) dry; weak medium subangular blocky structure; friable; many fine roots throughout; neutral; clear wavy boundary.

Bt1—16 to 26 inches; brown (10YR 4/3) silty clay loam; weak medium prismatic structure parting to moderate fine subangular blocky; firm; common fine roots between peds; many moderately thick brown (10YR 5/3) clay films on faces of peds; slightly acid; clear wavy boundary.

Bt2—26 to 35 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots between peds; many faint brown (10YR 4/3) clay films on faces of peds; many medium distinct brownish yellow (10YR 6/6) masses of iron accumulation and common faint grayish brown (2.5Y 5/2) iron depletions in the matrix; slightly acid; abrupt wavy boundary.

2Bt3—35 to 51 inches; yellowish brown (10YR 5/4) clay loam; weak medium subangular blocky structure; firm; common fine roots between peds; common distinct moderately thick dark brown (10YR 4/3) clay films on faces of peds; many coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation; common medium prominent light olive gray (5Y 6/2) iron depletions; slightly acid; clear wavy boundary.

2Bt4—51 to 60 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots between peds; many moderately thick light brown (10YR 4/3) clay films on faces of peds; many medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; slightly acid; clear wavy boundary.

2C—60 to 80 inches; brown (10YR 5/3) clay loam; massive; firm; common coarse faint grayish brown (2.5Y 5/2) iron depletions and common coarse faint brown (7.5YR 4/4) masses of iron accumulation in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 15 inches
Thickness of the loess: 20 to 40 inches
Thickness of the solum: 48 to more than 70 inches

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

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

2Btg or 2Bt horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 to 6
Texture—clay loam, silty clay loam, loam, clay, or silty clay

2C or 2Cg horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 to 6
Texture—clay loam, silty clay loam, loam, clay, or silty clay

259C2—Assumption silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Severely eroded soils that have more sand and clay and less silt in the surface layer
- Soils in which the underlying till is at a depth of more than 40 inches
- Soils that have a calcareous substratum

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes in drainageways

Properties and Qualities of the Assumption Soil

Parent material: Loess over a paleosol that formed in till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: High

Depth and months of the highest perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Ayr Series

Taxonomic classification: Sandy over loamy, mixed, superactive, mesic Arenic Argiudolls

Typical Pedon

Ayr sandy loam, 2 to 5 percent slopes, eroded; at an elevation of 840 feet; 171 feet west and 1,778 feet south of the northeast corner of sec. 24, T. 19 N., R. 9 E.; Lee County, Illinois; USGS Ohio topographic quadrangle; lat. 41 degrees 37 minutes 23 seconds N. and long. 89 degrees 24 minutes 05 seconds W., NAD 27:

Ap—0 to 8 inches; 5 percent dark yellowish brown (10YR 4/4) and 95 percent very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; neutral; abrupt smooth boundary.
Bw1—8 to 11 inches; dark yellowish brown (10YR 4/4) sandy loam, pale brown (10YR 6/3) dry; moderate fine subangular blocky structure; friable; very dark grayish brown (10YR 3/2) organic stains on vertical faces of peds; slightly acid; clear smooth boundary.
Bw2—11 to 16 inches; dark yellowish brown (10YR 4/4) sandy loam; moderate medium subangular blocky structure; friable; very dark grayish brown (10YR 3/2) organic stains on vertical faces of peds; neutral; clear smooth boundary.
Bw3—16 to 27 inches; dark yellowish brown (10YR 4/4) sandy loam; moderate medium subangular blocky structure; friable; slightly acid; abrupt smooth boundary.
2Bt—27 to 39 inches; brown (7.5YR 4/4) loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; brown (10YR 4/3) clay films on vertical faces of peds; neutral; clear smooth boundary.
2C—39 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; slightly alkaline; slightly effervescent.

Range in Characteristics

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

Ap horizon:
Hue—10YR
Value—2 or 3

Chroma—1 to 3
Texture—dominantly sandy loam; loamy fine sand or loamy sand included in the range

Bw horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 8
Texture—dominantly sandy loam; loamy sand or loamy fine sand included in the range

2Bt horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 8
Texture—loam or clay loam
Content of gravel—0 to 5 percent

2C horizon:
Hue—10YR or 7.5YR
Value—5
Chroma—3 to 6
Texture—loam or clay loam

204B2—Ayr sandy loam, 2 to 5 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less sand in the subsoil
- Soils that have a thicker surface layer

Dissimilar soils:
- The somewhat poorly drained Odell soils on footslopes
- The excessively drained Sparta soils on summits and shoulders

Properties and Qualities of the Ayr Soil

Parent material: Sandy outwash 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 layer: More than 80 inches
Available water capacity: About 6.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate

Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

Billett Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Mollic Hapludalfs
Taxadjunct features: The Billett soil in map unit 332C2 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 Typic Hapludalf.

Typical Pedon

Billett sandy loam, 0 to 2 percent slopes; at an elevation of 745 feet; 500 feet east and 2,100 feet north of the southwest corner of sec. 13, T. 43 N., R. 2 E.; Winnebago County, Illinois; USGS Cherry Valley topographic quadrangle; lat. 42 degrees 12 minutes 05 seconds N. and long. 89 degrees 57 minutes 28 seconds W., NAD 27:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; weak medium granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.
E—8 to 13 inches; brown (10YR 4/3) sandy loam; weak medium subangular blocky structure; friable; few fine roots; moderately acid; abrupt smooth boundary.
Bt1—13 to 21 inches; dark yellowish brown (10YR 4/4) sandy loam; weak coarse subangular blocky structure; friable; few fine roots; few distinct very dark grayish brown (10YR 3/2) clay films on faces of peds and bridges between sand grains; slightly acid; clear smooth boundary.
Bt2—21 to 28 inches; dark yellowish brown (10YR 4/4) sandy loam; weak coarse subangular blocky structure; friable; few fine roots; few distinct very dark grayish brown (10YR 3/2) clay films on faces of peds and bridges between sand grains; slightly acid; clear smooth boundary.
Bt3—28 to 41 inches; yellowish brown (10YR 5/4) loamy sand; weak coarse prismatic structure; very friable; few fine roots; very few faint dark brown (10YR 3/3) clay bridges between sand grains; slightly acid; abrupt smooth boundary.
Bt4—41 to 47 inches; brown (10YR 4/3) and dark yellowish brown (10YR 4/4) sandy loam; weak medium subangular blocky structure; friable; few fine roots; few distinct very dark grayish brown (10YR 3/2) clay films on faces of peds; about 2 percent fine gravel; slightly acid; abrupt smooth boundary.
C1—47 to 52 inches; dark yellowish brown (10YR 4/4) loamy sand; single grain; loose; few fine roots; about 8 percent fine gravel; slightly acid; abrupt smooth boundary.
C2—52 to 60 inches; dark yellowish brown (10YR 4/4) gravelly loamy sand; single grain; loose; about 15 percent fine gravel; slightly acid.

Range in Characteristics

Special features: Some pedons have redoximorphic features, and some contain thin lamellae of sandy loam, loam, or finer textured material.

Ap or A horizon:
Hue—10YR or 7.5YR

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

E horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—2 to 4
Texture—sandy loam or fine sandy loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—sandy loam or fine sandy loam in the upper part with subhorizons of loam, loamy sand, loamy fine sand, or sandy clay loam; fine sandy loam, sandy loam, loamy fine sand, loamy sand, fine sand, or sand in the lower part

C horizon:
Hue—10YR or 7.5YR
Value—4 to 7
Chroma—3 to 6
Texture—loamy sand, sand, loamy fine sand, or fine sand or the gravelly analogs of these textures

332A—Billett fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more sand in the surface layer and subsurface layer

Dissimilar soils:
- The poorly drained Gilford and Orio soils in depressions
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Billett 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 layer: More than 80 inches
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

332B—Billett fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have less clay in the surface layer and subsurface layer

Dissimilar soils:
- The poorly drained Gilford and Orio soils on toeslopes
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Billett 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 layer: More than 80 inches
Available water capacity: About 6.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

332C2—Billett fine sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

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

Dissimilar soils:
- The somewhat excessively drained Eleva soils, the excessively drained Rodman soils, and the well drained, moderately deep Whalan soils; in positions similar to those of the Billett soil

Properties and Qualities of the Billett 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 layer: More than 80 inches
Available water capacity: About 5.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

Binghampton Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Aquollic Hapludalfs

Typical Pedon

Binghampton sandy loam, 0 to 2 percent slopes; at an elevation of 764 feet; 2,435 feet north and 1,580 feet west of the southeast corner of sec. 16, T. 20 N., R. 9 E.; Lee County, Illinois; USGS Walton topographic quadrangle; lat. 41 degrees 43 minutes 16 seconds N. and long. 89 degrees 27 minutes 47 seconds W., NAD 27:

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) sandy loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

BA—8 to 12 inches; brown (10YR 4/3) loam; moderate fine and medium subangular blocky structure; friable; common fine roots; thin continuous dark brown (10YR 3/3) organic coatings on faces of peds; common fine dark accumulations (iron and manganese oxides); moderately acid; clear smooth boundary.

Bt1—12 to 17 inches; brown (10YR 4/3) loam; moderate medium subangular blocky structure; friable; few fine roots; many thin dark grayish brown (10YR 4/2) clay films on faces of peds; common medium faint grayish brown (10YR 5/2) iron depletions in the matrix; many fine and few medium dark accumulations (iron and manganese oxides); strongly acid; clear smooth boundary.

Bt2—17 to 24 inches; grayish brown (10YR 5/2) loam; moderate coarse and medium subangular blocky structure; friable; few fine roots; many thin dark grayish brown (10YR 4/2) clay films on faces of peds; common fine distinct dark yellowish brown (10YR 4/4) and common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine dark accumulations (iron and manganese oxides); strongly acid; clear smooth boundary.

Bt3—24 to 27 inches; light brownish gray (10YR 6/2) sandy loam; moderate coarse and medium subangular blocky structure; friable; few fine roots; common thin dark grayish brown (10YR 4/2) clay films on faces of peds; many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine dark accumulations (iron and manganese oxides); moderately acid; abrupt smooth boundary.

2Bt4—27 to 36 inches; pale brown (10YR 6/3) sand; weak coarse subangular blocky structure; very friable; few fine roots; few thin dark grayish brown (10YR 4/2) clay bridges; few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix and common medium faint yellowish brown (10YR 5/4) and light brownish gray (10YR 6/2) iron depletions in the matrix; common medium dark accumulations (iron and manganese oxides); strongly acid; clear wavy boundary.

2Bt5—36 to 51 inches; brown (10YR 4/3) sand; weak coarse subangular blocky structure; friable; few fine roots; common thin dark gray (10YR 4/1) clay films on vertical faces of peds; common dark grayish brown (10YR 4/2) krotovinas; many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine dark accumulations (iron and manganese oxides); slightly acid; abrupt smooth boundary.

3Btg1—51 to 54 inches; very dark grayish brown (10YR 3/2) clay loam; moderate coarse prismatic structure; firm; common moderately thick dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common fine distinct yellowish brown (10YR 5/6) iron accumulations in the matrix and few fine faint gray (10YR 5/1) iron depletions in the matrix; few fine dark accumulations (iron and manganese oxides); about 2 to 5 percent pebbles 5 to 20 millimeters in diameter; slightly acid; clear smooth boundary.

3Btg2—54 to 66 inches; gray (10YR 6/1) clay loam; moderate coarse prismatic structure; firm; common thin grayish brown (10YR 5/2) clay films on faces of peds; many fine prominent strong brown (7.5YR 5/6) iron accumulations in the matrix; common fine dark accumulations (iron and manganese oxides); about 5 percent pebbles 5 to 20 millimeters in diameter; neutral.

Range in Characteristics

Thickness of the loamy eolian deposits: 10 to 30 inches
Depth to the loamy till paleosol: 60 inches or less

Depth to carbonates: More than 60 inches
Thickness of the solum: 45 to more than 60 inches

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

Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—3 or 4 in the upper part and 1 to 4 in the lower part
Texture—loam or clay loam; commonly grades to sandy loam or sandy clay loam in the lower part

2Bt horizon:
Hue—10YR, 7.5YR, or 2.5Y
Value—4 to 6
Chroma—1 to 8
Texture—coarse sand, sand, loamy coarse sand, or loamy sand

3Btg horizon:
Hue—10YR, 2.5Y, or N
Value—3 to 6
Chroma—0 to 4
Texture—clay loam, silt loam, loam, or silty clay loam

355A—Binghampton sandy loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more clay and less sand in the subsoil
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- Poorly drained soils on toeslopes

Properties and Qualities of the Binghampton Soil

Parent material: Loamy eolian deposits and/or sandy outwash over till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 7.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 1 foot, January through May
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2s
Prime farmland category: 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.; 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 distinct 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 2.5/1) 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 distinct 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 2.5/1) 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 distinct 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 distinct dark brown (7.5YR 3/4) masses of iron in the matrix; common prominent black (5YR 2.5/1) 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 carbonates: 44 to 70 inches
Thickness of the solum: 44 to 70 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:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—loam, clay loam, silty clay loam, or silt loam

233B—Birkbeck silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the substratum is at a depth of less than 40 inches
- Soils in which the substratum is below a depth of 60 inches
- Soils that have a seasonal high water table at a depth of less than 3 feet

Dissimilar soils:
- The well drained, moderately deep Whalan soils on backslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess over till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
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: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

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 in which the substratum is at a depth of less than 40 inches
- Soils in which the substratum is below a depth of 60 inches
- Soils that have a darker surface layer
- Severely eroded soils in which the subsoil is exposed at the surface

Dissimilar soils:
- The well drained Whalan soils on backslopes
- The somewhat poorly drained Lawson soils on toeslopes in drainageways
- The poorly drained Sable soils on toeslopes

Properties and Qualities of the Birkbeck Soil

Parent material: Loess over 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 layer: 40 to 70 inches to dense material
Available water capacity: About 10.3 inches to a depth of 60 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 perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

Blackberry Series

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

Typical Pedon

Blackberry silt loam, 0 to 2 percent slopes; at an elevation of 728 feet; 475 feet south and 770 feet west of the northeast corner of sec. 27, T. 39 N., R. 7 E.; Kane County, Illinois; USGS Sugar Grove topographic quadrangle; lat. 41 degrees 50 minutes 15 seconds N. and long. 88 degrees 25 minutes 05 seconds W., NAD 27:

Ap—0 to 4 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; friable; common very fine and fine roots; neutral; clear smooth boundary.

A—4 to 11 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak medium angular blocky structure parting to weak fine granular; friable; common very fine and fine roots; neutral; abrupt smooth boundary.

Bt1—11 to 15 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine and medium angular blocky structure; friable; common very fine roots; common distinct black (10YR 2/1) organic coatings throughout; few distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores; few faint brown (10YR 4/3) clay films on faces of peds and in pores; neutral; gradual wavy boundary.

Bt2—15 to 24 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films in root channels and pores; common faint brown (10YR 4/3) clay films on faces of peds and in pores; neutral; gradual wavy boundary.

Bt3—24 to 35 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine to medium roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; common fine distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

Bt4—35 to 44 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine to medium roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

Bt5—44 to 52 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; few faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine irregular very dark gray (10YR 3/1) very weakly cemented manganese concretions throughout; common fine distinct strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; many medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; neutral; gradual wavy boundary.

2Bt6—52 to 58 inches; yellowish brown (10YR 5/4) loam; weak medium prismatic structure parting to weak medium and coarse subangular blocky; friable; few faint brown (10YR 4/3) clay films on vertical faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline; clear wavy boundary.

2Bt7—58 to 68 inches; brown (10YR 4/3) gravelly clay loam; weak medium and coarse subangular blocky structure; friable; common faint dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common medium distinct yellowish brown (10YR 5/6) and prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; 18 percent gravel; strongly effervescent; moderately alkaline; gradual wavy boundary.

2C—68 to 80 inches; brown (10YR 4/3) gravelly clay loam; massive; very friable; common medium prominent strong brown (7.5YR 4/6) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 23 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess: 40 to 60 inches
Depth to carbonates: More than 40 inches
Thickness of the solum: 45 to 70 inches

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

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

2Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—2 to 6

Texture—loam, clay loam, silt loam, silty clay loam, sandy loam, fine sandy loam, or sandy clay loam or the gravelly analogs of these textures
Content of gravel—less than 25 percent

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—loam, clay loam, silt loam, sandy loam, loamy sand, or sandy clay loam or the gravelly analogs of these textures
Content of gravel—less than 25 percent

679A—Blackberry silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more silt and less sand in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Blackberry Soil

Parent material: Loess and the underlying outwash
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2 feet, February through April
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 category: Prime farmland
Hydric soil status: Not hydric

679B—Blackberry silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more silt and less sand in the lower part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 3.5 feet
- Soils that have a thinner surface layer
- Soils that have more sand in the middle part of the subsoil

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Blackberry Soil

Parent material: Loess over outwash
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2 feet, February through April
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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Boone Series

Taxonomic classification: Mesic, uncoated Typic Quartzipsamments

Typical Pedon

Boone sand, 1 to 7 percent slopes; 937 feet west and 320 feet north of the center of sec. 29, T. 23 N., R. 10 E.; Ogle County, Illinois; USGS Daysville topographic quadrangle; lat. 41 degrees 57 minutes 03 seconds N. and long. 89 degrees 20 minutes 00 seconds W., NAD 27:

A—0 to 2 inches; mixed very dark grayish brown (10YR 3/2) and dark brown (10YR 3/3) sand, pale brown (10YR 6/3) dry; weak very fine granular structure; very friable; common roots; white (10YR 8/2) uncoated sand grains on faces of peds; slightly acid; abrupt smooth boundary.

Bw—2 to 9 inches; yellowish brown (10YR 5/4) sand; weak coarse subangular blocky structure; very friable; few roots; strongly acid; clear smooth boundary.

C—9 to 34 inches; light yellowish brown (10YR 6/4) sand; single grain; loose; few roots; many sandstone fragments 1/2 inch to 6 inches in diameter; strongly acid; diffuse smooth boundary.

Cr—34 to 60 inches; light yellowish brown (10YR 6/4) sand; weakly cemented sandstone; strongly acid.

Range in Characteristics

Depth to weathered sandstone: 20 to 40 inches

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

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

C and Cr horizons:
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—3 to 6
Texture—sand

397D—Boone loamy fine sand, 7 to 15 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a gravelly surface layer
- Soils that have bedrock within a depth of 20 inches

Dissimilar soils:
- The well drained Martinsville soils on summits
- The poorly drained Comfrey soils on toeslopes

Properties and Qualities of the Boone Soil

Parent material: Siliceous sandy residuum derived from sandstone

Drainage class: Excessively 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 layer: 20 to 40 inches to paralithic bedrock
Available water capacity: About 1.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 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: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

397F—Boone loamy fine sand, 15 to 35 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a gravelly surface layer
- Soils that have bedrock within a depth of 20 inches

Dissimilar soils:
- Soils that have more clay and less sand than the Boone soil
- The poorly drained Comfrey soils on toeslopes

Properties and Qualities of the Boone Soil

Parent material: Siliceous sandy residuum derived from sandstone
Drainage class: Excessively 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 layer: 20 to 40 inches to paralithic bedrock
Available water capacity: About 1.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 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: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

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

Buckhart Series

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

Typical Pedon

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

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

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

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

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

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

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

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

Range in Characteristics

Thickness of the loess: More than 80 inches

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the argillic horizon: 40 to 55 inches
Depth to carbonates: More than 40 inches

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

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

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

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

Setting

Landform: Ground moraines
Position on the landform: Summits of knolls

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that have a seasonal high water table at a depth of more than 4 feet

Dissimilar soils:
- The poorly drained Drummer and Sable soils on toeslopes

Properties and Qualities of the Buckhart Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2 feet, February through April
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 category: Prime farmland
Hydric soil status: Not hydric

Catlin Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Taxadjunct features: The Catlin soil in map unit 171C2 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 Oxyaquic Hapludalf.

Typical Pedon

Catlin silt loam, 0 to 2 percent slopes; at an elevation of 830 feet; 650 feet south and 571 feet east of the northwest corner of sec. 36, T. 42 N., R. 2 E.; Ogle County, Illinois; USGS Fairdale topographic quadrangle; lat. 42 degrees 04 minutes 38 seconds N. and long. 88 degrees 57 minutes 17 seconds W., NAD 27:

Ap—0 to 11 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate very fine granular structure; friable; many fine roots; neutral; abrupt smooth boundary.

BA—11 to 18 inches; brown (10YR 4/3) silt loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; many fine roots; few faint dark brown (10YR 3/3) clay films; few distinct light gray (10YR 7/1) (dry) clay depletions on faces of peds; moderately acid; clear smooth boundary.

Bt1—18 to 23 inches; brown (10YR 5/3) silty clay loam; weak fine prismatic structure parting to strong fine and medium angular and subangular blocky; friable; few fine roots; common faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) clay depletions on faces of peds; strongly acid; clear smooth boundary.

Bt2—23 to 31 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to strong medium angular and subangular blocky; firm; few fine roots; many faint brown (10YR 4/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) clay depletions on faces of peds; few fine distinct dark brown (7.5YR 3/3) soft masses of iron and manganese accumulation in the matrix; few fine faint yellowish brown (10YR 5/4) and brown (7.5YR 4/4) iron masses in the matrix; strongly acid; clear smooth boundary.

Bt3—31 to 36 inches; yellowish brown (10YR 5/4) silty clay loam; strong medium prismatic structure parting to strong medium and coarse angular and subangular blocky; firm; few fine roots; many distinct grayish brown (2.5Y 5/2) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) clay depletions on faces of peds; common fine distinct dark brown (7.5YR 3/3) soft masses of iron and manganese accumulation in the matrix; few fine faint brown (7.5YR 4/4) and common medium faint yellowish brown (10YR 5/4) iron masses in the matrix; moderately acid; clear smooth boundary.

Bt4—36 to 44 inches; yellowish brown (10YR 5/4), brown (7.5YR 4/4), and light brownish gray (2.5Y 6/2) silty clay loam; weak coarse prismatic structure parting to moderate coarse subangular blocky; friable; many faint brown (10YR 5/3) clay films on faces of peds; few distinct light gray (10YR 7/1) (dry) clay depletions on faces of peds; few fine distinct dark brown (7.5YR 3/3) soft masses of iron and manganese accumulation in the matrix; few distinct very dark brown (10YR 2/2) organic coatings on root channels; slightly acid; abrupt smooth boundary.

2BC—44 to 49 inches; dark yellowish brown (10YR 4/4) loam; weak coarse subangular blocky structure; firm; few faint brown (10YR 4/3) clay films on faces of peds; few pebbles; few distinct very dark brown (10YR 2/2) organic coatings on root channels; slightly alkaline; clear smooth boundary.

2C—49 to 60 inches; yellowish brown (10YR 5/4) loam; massive; friable; few distinct very dark brown (10YR 2/2) organic coatings on root channels; common fine distinct yellowish brown (10YR 5/6) iron masses in the matrix; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 8 to 13 inches
Thickness of the loess: 40 to 60 inches
Depth to carbonates: 40 to 60 inches
Thickness of the solum: 45 to 65 inches

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

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

171B—Catlin silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the underlying calcareous substratum is at a depth of less than 40 inches
- Soils that have more silt and less sand in the lower part of the subsoil and in the substratum
- Soils that have a thinner surface layer
- Soils that have a seasonal high water table at a depth of more than 4 feet

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over 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 layer: More than 80 inches
Available water capacity: About 11.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

171C2—Catlin silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils in which the underlying calcareous substratum is at a depth of less than 40 inches
- Soils that have more silt and less sand in the lower part of the subsoil and in the substratum
- Soils that have more sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes in drainageways
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Catlin Soil

Parent material: Loess over 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 layer: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 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 perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Clyde Series

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

Typical Pedon

Clyde clay loam, 0 to 2 percent slopes; at an elevation of 689 feet; 1,098 feet south and 192 feet west of the northeast corner of sec. 36, T. 21 N., R. 8 E.; Lee County, Illinois; USGS Dixon West topographic quadrangle; lat. 41 degrees 46 minutes 10 seconds N. and long. 89 degrees 30 minutes 54 seconds W., NAD 27:

Ap—0 to 6 inches; black (N 2.5/) clay loam, very dark gray (10YR 3/1) dry; moderate medium granular structure; friable; neutral; abrupt smooth boundary.
A—6 to 12 inches; black (N 2.5/) clay loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure; friable; neutral; clear smooth boundary.
AB—12 to 17 inches; very dark gray (10YR 3/1) clay loam, dark gray (10YR 4/1) dry; moderate medium subangular blocky structure; friable; few fine roots; few fine distinct grayish brown (2.5Y 5/2) iron depletions; few pebbles 5 to 10 millimeters in diameter; neutral; clear smooth boundary.
Bg1—17 to 20 inches; grayish brown (2.5Y 5/2) clay loam; moderate fine subangular blocky structure; friable; few fine roots; prominent dark grayish brown (10YR 4/2) organic stains on vertical faces of peds; fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; few pebbles 5 to 10 millimeters in diameter; neutral; clear smooth boundary.
Bg2—20 to 24 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; prominent dark grayish brown

(10YR 4/2) organic stains on vertical faces of peds; fine distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; few pebbles 5 to 10 millimeters in diameter; neutral; clear smooth boundary.

Bg3—24 to 32 inches; grayish brown (2.5Y 5/2) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; few pebbles 5 to 10 millimeters in diameter; prominent dark grayish brown (10YR 4/2) organic stains on vertical faces of peds; fine distinct yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; neutral; abrupt smooth boundary.

Bg4—32 to 36 inches; 10 percent yellowish brown (10YR 5/8), 45 percent grayish brown (10YR 5/2), and 45 percent yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; very friable; few fine roots; few pebbles 5 to 10 millimeters in diameter; neutral; abrupt smooth boundary.

2BC—36 to 45 inches; yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; firm; few fine roots; fine prominent gray (10YR 6/1) iron depletions; few pebbles 5 to 10 millimeters in diameter; slightly effervescent; slightly alkaline; clear smooth boundary.

2C—45 to 60 inches; yellowish brown (10YR 5/8) loam; massive; friable; fine prominent gray (10YR 6/1) iron depletions; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the solum: 30 to 60 inches

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

Bg horizon:
Hue—5Y, 2.5Y, or 10YR
Value—4 to 6
Chroma—1 or 2; ranges to 8 for redoximorphic features
Texture—clay loam or loam; some strata of silty clay loam or silt loam and layers of sandy loam or sandy clay loam less than 6 inches thick in some pedons

2BC and 2C horizons:
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—1 to 8
Texture—clay loam or loam; strata of silty clay loam or silt loam and layers of sandy loam or sandy clay loam less than 6 inches thick in some pedons

648A—Clyde clay loam, 0 to 2 percent slopes

Setting

Landform: Drainageways on till plains
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have sandy strata in the substratum
- Soils that have a seasonal high water table at a depth of more than 2.5 feet

Dissimilar soils:
- Poorly drained soils that are calcareous at the surface

Properties and Qualities of the Clyde Soil

Parent material: Outwash over till
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 6.0 to 9.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Cohoctah Series

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

Typical Pedon

Cohoctah loam, 0 to 2 percent slopes, occasionally flooded; at an elevation of 645 feet; 1,420 feet north and 820 feet west of the southeast corner of sec. 27, T. 19 N., R. 7 E.; 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 2.5/) 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 2.5/) loam that has thin strata of dark grayish brown (10YR 4/2) 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 that has thin strata of black (N 2.5/) 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 that has thin strata of very dark gray (10YR 3/1), very dark grayish brown (10YR 3/2), dark grayish brown (10YR 4/2), and yellowish brown (10YR 5/8) sandy loam and loam; single grain; loose; neutral; gradual wavy boundary.

Cg3—40 to 60 inches; pale brown (10YR 6/3) sand that has 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 18 inches

Ap or A horizon:
Hue—10YR, 2.5Y, or N
Value—2 to 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; ranges to 8 for redoximorphic features
Texture—sand, fine sand, or loamy sand; thin strata of finer textured material

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

Setting

Landform: Flood plains

Map Unit Composition

Cohoctah 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 throughout

Dissimilar soils:
- The somewhat poorly drained Hoopeston soils on footslopes
- The excessively drained Sparta soils on summits

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 layer: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.0 percent
Shrink-swell potential: Low

Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: 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.; 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 brownish gray (10YR 6/2) dry; weak medium granular structure; very friable; neutral; clear wavy boundary.
E—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 (less than 1 inch in total thickness); 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 (less than 2 inches in total thickness); 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: Stream terraces
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that do not have dark brown bands in the subsoil and substratum
- Soils that have finer sand

Dissimilar soils:
- The well drained Ayr and Senachwine soils on footslopes
- The somewhat poorly drained Morocco soils on footslopes
- The poorly drained Orio soils on toeslopes

Properties and Qualities of the Coloma Soil

Parent material: Sandy alluvium 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: Moderately rapid or rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 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: 4s
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

689D—Coloma sand, 7 to 15 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Shoulders and backslopes

Map Unit Composition

Coloma and similar soils: 80 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils that do not have dark brown bands in the subsoil and substratum
- Soils that have finer sand

Dissimilar soils:
- The well drained Ayr and Senachwine soils on footslopes
- The somewhat poorly drained Morocco soils on footslopes
- The poorly drained Orio soils on toeslopes

Properties and Qualities of the Coloma Soil

Parent material: Sandy alluvium 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: Moderately rapid or rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 4.1 inches to a depth of 60 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 category: Not prime farmland
Hydric soil status: Not hydric

689F—Coloma sand, 20 to 30 percent slopes

Setting

Landform: Stream terraces
Position on the landform: Backslopes and shoulders

Map Unit Composition

Coloma and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that do not have dark brown bands in the subsoil and substratum
- Soils that have finer sand

Properties and Qualities of the Coloma Soil

Parent material: Sandy alluvium 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: Moderately rapid or rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 4.8 inches to a depth of 60 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: Low
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very high

Interpretive Groups

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

Comfrey Series

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

Typical Pedon

Comfrey loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 725 feet; 570 feet north and 1,400 feet west of the center of sec. 25, T. 43 N., R. 2 E.; Winnebago County, Illinois; USGS Cherry Valley topographic quadrangle; lat. 42 degrees 10 minutes 32 seconds N. and long. 88 degrees 57 minutes 17 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; many very fine roots; neutral; clear smooth boundary.

A1—7 to 15 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine roots; many distinct black (N

2.5/) organic coatings on faces of peds; common fine prominent brown (7.5YR 4/4) very weakly cemented iron oxide concretions throughout; neutral; clear smooth boundary.

A2—15 to 26 inches; very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; weak fine and medium granular structure; friable; common very fine roots; many prominent black (N 2.5/) organic coatings on faces of peds; common fine prominent brown (7.5YR 4/4) very weakly cemented iron oxide concretions throughout; neutral; clear smooth boundary.

Bg—26 to 37 inches; gray (2.5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common very fine roots; few faint very dark gray (2.5Y 3/1) organic coatings on faces of peds and in pores; many fine and medium prominent yellowish brown (10YR 5/6) very weakly cemented iron oxide concretions throughout; common fine faint gray (10YR 6/1) iron depletions in the matrix; neutral; gradual smooth boundary.

Cg1—37 to 57 inches; gray (5Y 5/1), stratified clay loam and loam; massive; friable; few very fine roots; many fine and medium prominent yellowish brown (10YR 5/6) very weakly cemented iron oxide concretions throughout; common fine distinct gray (10YR 6/1) iron depletions in the matrix; neutral; gradual smooth boundary.

Cg2—57 to 63 inches; 40 percent gray (5Y 5/1), 30 percent yellowish brown (10YR 5/6), and 30 percent dark gray (2.5Y 4/1), stratified loam and sandy loam; massive; friable; 12 percent gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches
Depth to carbonates: More than 18 inches
Thickness of the solum: 24 to 50 inches

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

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

Cg horizon:
Hue—2.5Y or 5Y
Value—4 or 5
Chroma—1 or 2
Texture—loam, clay loam, silt loam, or sandy loam
Content of gravel—less than 15 percent

1776A—Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Comfrey and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have more sand throughout
- Soils that are not ponded most of the year
- Soils that have a thinner surface layer and subsurface layer

Properties and Qualities of the Comfrey Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through June
Deepest ponding (depth, months): 1 foot, January through July
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 category: Not prime farmland
Hydric soil status: Hydric

8776A—Comfrey loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have either a thicker or thinner surface soil
- Soils that have less sand throughout
- Soils that have a seasonal high water table at a depth of more than 1 foot

Dissimilar soils:
- Comfrey soils in old stream channels that are subject to ponding for most of the year

Properties and Qualities of the Comfrey 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 to rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 8.0 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 July
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 category: Prime farmland where drained
Hydric soil status: Hydric

Dakota Series

Taxonomic classification: Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs.
Taxadjunct features: The Dakota soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

Typical Pedon

Dakota loam, 0 to 2 percent slopes; at an elevation of 797 feet; 1,600 feet north and 2,000 feet west of the southeast corner of sec. 21, T. 44 N., R. 5 E.; McHenry County, Illinois; USGS Garden Prairie topographic quadrangle; lat. 42 degrees 16 minutes 24 seconds N. and long. 88 degrees 39 minutes 17 seconds W., NAD 27:

Ap—0 to 11 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; moderate medium subangular blocky structure parting to weak fine granular; friable; common very fine roots; common faint black (10YR 2/1) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.
Bt1—11 to 19 inches; dark yellowish brown (10YR 4/4) clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; common faint brown (10YR 4/3) clay films on faces of peds; few distinct very dark brown (10YR 2/2) and very dark grayish brown (10YR 3/2) organic coatings on faces of peds; 1 percent gravel; neutral; clear smooth boundary.
Bt2—19 to 30 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common very fine roots; common faint brown (10YR 4/3) clay films on faces of peds; 3 percent gravel; moderately acid; clear smooth boundary.
2Bt3—30 to 34 inches; dark yellowish brown (10YR 4/4) sandy loam; weak medium subangular blocky structure; very friable; common very fine roots; few faint brown (10YR 4/3) clay films on faces of peds; 1 percent gravel; moderately acid; clear smooth boundary.
2C1—34 to 46 inches; dark yellowish brown (10YR 4/6) loamy sand; single grain; loose; few very fine roots; 1 percent gravel; moderately acid; gradual smooth boundary.

2C2—46 to 60 inches; yellowish brown (10YR 5/6) sand; single grain; loose; 3 percent gravel; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 6 to 10 inches
Depth to sandy outwash: 20 to 40 inches
Depth to carbonates: More than 45 inches
Thickness of the solum: 24 to 45 inches

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

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

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

2C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 6
Texture—loamy sand, sand, loamy coarse sand, or coarse sand
Content of gravel—0 to 15 percent

379B2—Dakota sandy loam, 2 to 5 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Summits, shoulders, and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the substratum
- Soils that have more sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Binghampton soils on footslopes
- The excessively drained Sparta soils in positions similar to those of the Dakota soil

Properties and Qualities of the Dakota Soil

Parent material: Loamy alluvium over sandy 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 layer: More than 80 inches
Available water capacity: About 5.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

Danabrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Taxadjunct features: The Danabrook soil in map unit 512C2 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 Oxyaquic Hapludalf.

Typical Pedon

Danabrook silt loam, 2 to 5 percent slopes; at an elevation of 872 feet; 176 feet south and 2,334 feet west of the northeast corner of sec. 5, T. 42 N., R. 5 E.; De Kalb County, Illinois; USGS Riley topographic quadrangle; lat. 42 degrees 09 minutes 09 seconds N. and long. 88 degrees 40 minutes 28 seconds W., NAD 27:

Ap—0 to 8 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak very fine and fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
A—8 to 13 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.
Bt1—13 to 21 inches; brown (10YR 4/3) silty clay loam; moderate very fine and fine subangular blocky structure; friable; common very fine roots; few faint dark brown (10YR 3/3) clay films and very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; neutral; clear smooth boundary.
Bt2—21 to 26 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; few very fine roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine faint dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; neutral; clear wavy boundary.
Bt3—26 to 33 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; many faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine distinct dark brown (7.5YR 3/3) very weakly cemented iron and

manganese oxide concretions throughout; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

2Bt4—33 to 42 inches; brown (7.5YR 5/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; common fine faint dark brown (7.5YR 3/3) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 6 percent gravel; slightly alkaline; clear wavy boundary.

2BC—42 to 50 inches; brown (7.5YR 5/4) loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 8 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.

2C—50 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 10 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 6 to 13 inches
Thickness of the loess or silty material: 22 to 40 inches
Depth to carbonates: 30 to 50 inches
Thickness of the solum: 30 to 55 inches

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

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

2Bt or 2BC horizon:
Hue—7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—loam, clay loam, or sandy clay loam
Content of gravel—2 to 15 percent

2C horizon:
Hue—7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—loam or sandy loam
Content of gravel—2 to 15 percent

512B—Danabrook silt loam, 2 to 5 percent slopes

Setting

Landform: End moraines and ground moraines
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the subsoil
- Soils that are not calcareous within a depth of 40 inches
- Soils that have a thinner surface layer

Dissimilar soils:
- The poorly drained Drummer and Elpaso soils on toeslopes
- The somewhat poorly drained Flanagan soils on footslopes

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying 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 layer: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

512C2—Danabrook silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the subsoil
- Soils that are not calcareous within a depth of 40 inches
- Soils that have a thicker surface layer
- Soils in which the substratum is within a depth of 24 inches

Dissimilar soils:
- The poorly drained Drummer and Elpaso soils on toeslopes
- The somewhat poorly drained Flanagan soils on footslopes

Properties and Qualities of the Danabrook Soil

Parent material: Loess or other silty material and the underlying 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 layer: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Denny Series

Taxonomic classification: Fine, smectitic, mesic Mollic Albaqualfs

Typical Pedon

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

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

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

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

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

Btg2—29 to 38 inches; grayish brown (10YR 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots between peds; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few faint very dark gray (10YR 3/1) organic coatings in root channels; many fine prominent dark yellowish brown (10YR 4/6) and common fine prominent yellowish brown (10YR 5/8) masses of iron and manganese accumulation throughout; common fine prominent (N 2.5/) iron and manganese concretions in the matrix; moderately acid; gradual smooth boundary.

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

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

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

Range in Characteristics

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

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

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

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

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

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

Setting

Landform: Depressions on ground moraines

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker subsurface layer
- Soils that have less clay in the upper part of the subsoil
- Soils that have more sand in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Muscatune soils on summits
- Soils in depressions that are ponded during most of the growing season

Properties and Qualities of the Denny Soil

Parent material: Loess
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: High
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Dickinson Series

Taxonomic classification: Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Taxadjunct features: The Dickinson soils in map units 87B2, 742B2, and 742C2 have a thinner dark surface layer than is defined as the range for the series. These soils are classified as coarse-loamy, mixed, superactive, mesic Dystric Eutrudepts.

Typical Pedon

Dickinson sandy loam, 0 to 2 percent slopes; at an elevation of 617 feet; 880 feet east and 2,280 feet south of the northwest corner of sec. 17, T. 17 N., R. 6 E.; 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 faint 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 faint 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 dark surface soil: 8 to 20 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

Bt, BC, 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: Stream terraces and outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more sand in the surface layer and subsoil
- Soils that have more clay in the subsoil

Dissimilar soils:
- The poorly drained Gilford soils on toeslopes
- 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 layer: More than 80 inches
Available water capacity: About 5.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

87B—Dickinson sandy loam, 2 to 5 percent slopes

Setting

Landform: Stream terraces and outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more sand in the surface layer and subsoil
- Soils that have more clay in the subsoil

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

Properties and Qualities of the Dickinson Soil

Parent material: Sandy alluvium and/or 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 layer: More than 80 inches
Available water capacity: About 5.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

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

Setting

Landform: Stream terraces and outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more sand in the surface layer and subsoil
- Soils that have more clay in the subsoil

Dissimilar soils:
- The poorly drained Gilford and Selma soils on toeslopes
- The somewhat poorly drained Hoopeston soils on footslopes

Properties and Qualities of the Dickinson Soil

Parent material: Sandy alluvium and/or 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 layer: More than 80 inches
Available water capacity: About 5.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

742B2—Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded

Setting

Landform: Upland slopes
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the substratum to a depth of 60 inches or more
- Soils that have more sand in the upper part of the subsoil
- Soils that have a thicker surface layer

Dissimilar soils:
- Somewhat poorly drained soils in the lower positions

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over loamy drift

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

742C2—Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes, eroded

Setting

Landform: Upland slopes
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the substratum to a depth of 60 inches or more
- Soils that have more sand in the upper part of the subsoil
- Soils that have a thicker surface layer

Dissimilar soils:
- Somewhat poorly drained soils in the lower positions

Properties and Qualities of the Dickinson Soil

Parent material: Eolian sands over loamy drift
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 6.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low

Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Prime farmland
Hydric soil status: 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.; 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 faint 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 worm holes 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/) 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/) 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/) clay films on face of peds; many medium prominent gray (N 5/) iron depletions; neutral; clear wavy boundary.

2Btg3—41 to 47 inches; gray (N 5/) 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/) 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/) 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 carbonates: 40 to 65 inches
Thickness of the solum: 42 to 65 inches

Ap or A horizon:
Hue—10YR, 2.5Y, 5Y, 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 4
Texture—silty clay loam or silt loam (lower part)

2Bg or 2Btg horizon:
Hue—7.5YR to 5Y or N
Value—4 to 6
Chroma—0 to 2
Texture—loam or silt loam; 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 are underlain by gravel
- Soils that have more than 60 inches of silty material over the underlying loamy material
- Soils that have more sand in the surface layer and subsoil
- Soils that have more silt and less clay in the surface layer
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The poorly drained, calcareous Harpster soils in positions similar to those of the Drummer soil

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 layer: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 7.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

152A+—Drummer silt loam, 0 to 2 percent slopes, overwash

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 more than 20 inches of overwash on the surface
- Soils that have a surface layer of silty clay loam
- Soils that have less sand in the substratum
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- Soils that are subject to flooding; on toeslopes along drainage ditches
- The moderately well drained Catlin and Saybrook soils on summits and shoulders

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 layer: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May

Deepest ponding (depth, months): 0.5 foot, January through May (fig. 4)
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 category: 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; at an elevation of 595 feet; 1,160 feet east and 1,820 feet south of the northwest corner of sec. 36, T. 20 N., R. 4 E.; 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;

Figure 4.—A restored wetland in an area of Drummer silt loam, 0 to 2 percent slopes, overwash.

friable; few snail-shell fragments; strongly effervescent; slightly 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; slightly 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; slightly 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; slightly alkaline; clear smooth boundary.

C—34 to 60 inches; dark grayish brown (10YR 4/2) loam that has 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, 2.5Y, 5Y, or N
Value—2 or 3
Chroma—0 or 1
Texture—silty clay loam, loam, or silt loam

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

C horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2
Texture—dominantly loam, clay loam, silt loam, or silty clay loam; strata of sandier textures in some pedons

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 have a thinner surface layer
- Soils that have more sand in the surface layer and subsurface layer

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The poorly drained Ambraw and Millington soils on toeslopes

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 layer: More than 80 inches
Available water capacity: About 9.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 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 concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Dunham Series

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

Typical Pedon

Dunham silty clay loam, 0 to 2 percent slopes; at an elevation of 877 feet; 939 feet south and 81 feet west of the center of sec. 15, T. 45 N., R. 5 E.; McHenry County, Illinois; USGS Capron topographic quadrangle; lat. 42 degrees 22 minutes 33 seconds N. and long. 88 degrees 38 minutes 16 seconds W., NAD 27:

Ap—0 to 6 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure parting to moderate fine and medium granular; friable; common very fine roots; neutral; clear smooth boundary.
A—6 to 12 inches; black (N 2.5/) silty clay loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to moderate fine and medium granular; friable; common very fine roots; moderately acid; abrupt smooth boundary.
BAg—12 to 15 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak fine and medium subangular blocky structure; friable; common very fine roots; common faint very dark gray (2.5Y 3/1) organic coatings on faces of peds and in pores; few fine prominent strong brown (7.5YR 5/6) very weakly cemented iron oxide

concretions throughout; common fine distinct olive brown (2.5Y 4/4) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

Btg1—15 to 24 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common very fine roots; common faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; very few faint very dark gray (2.5Y 3/1) organic coatings in root channels and in pores; common fine prominent black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; few fine prominent strong brown (7.5YR 5/6) very weakly cemented iron oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) and common fine and medium distinct light olive brown (2.5Y 5/4) masses of iron oxide accumulation in the matrix; slightly acid; gradual smooth boundary.

Btg2—24 to 31 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; firm; few very fine roots; few faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; very few faint very dark grayish brown (2.5Y 3/2) organic coatings in root channels and in pores; few fine prominent dark brown (7.5YR 3/4) very weakly cemented iron oxide concretions throughout; common medium prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; slightly acid; clear smooth boundary.

Btg3—31 to 35 inches; grayish brown (2.5Y 5/2) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; few faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; very few faint very dark grayish brown (2.5Y 3/2) organic coatings in root channels and in pores; many medium and coarse prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; 1 percent gravel; neutral; clear smooth boundary.

2Btg4—35 to 39 inches; olive gray (5Y 5/2) clay loam; weak medium subangular blocky structure; friable; few very fine roots; few faint olive gray (5Y 4/2) clay films on faces of peds; very few faint dark olive gray (5Y 3/2) organic coatings in root channels and in pores; many medium and coarse prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; 3 percent gravel; neutral; abrupt smooth boundary.

3Cg—39 to 44 inches; olive gray (5Y 5/2) gravelly sandy loam; massive; very friable; few very fine roots; common fine prominent strong brown (7.5YR 4/6) masses of iron oxide accumulation in the matrix; common fine faint light olive gray (5Y 6/2) iron depletions in the matrix; 25 percent gravel; strongly effervescent; slightly alkaline; clear smooth boundary.

3C—44 to 60 inches; brown (10YR 5/3) gravelly loamy sand and gravelly loamy fine sand; single grain; loose; few very fine roots; common fine and medium distinct yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; common fine and medium faint grayish brown (10YR 5/2) iron depletions in the matrix; 25 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess or other silty material: 24 to 50 inches
Depth to sandy and gravelly outwash: 32 to 55 inches
Depth to carbonates: 30 to 50 inches
Thickness of the solum: 36 to 55 inches

Ap or A horizon:
Hue—10YR, 2.5Y, or N

Value—2 to 3
Chroma—0 to 2
Texture—silty clay loam or silt loam

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

2Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—5 or 6
Chroma—0 to 2
Texture—loam, silt loam, clay loam, sandy clay loam, or sandy loam or the gravelly analogs of these textures
Content of gravel—less than 20 percent

3Cg or 3C horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 7
Chroma—0 to 8
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, loamy coarse sand, fine sand, loamy fine sand, or sandy loam
Content of gravel—15 to 70 percent

523A—Dunham silty clay loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less gravel in the substratum
- Soils that have more than 60 inches of silty material over the underlying gravelly material
- Soils that have more sand in the surface layer and subsoil
- Soils that have more silt and less clay in the surface layer
- Soils that have a seasonal high water table at a depth of more than 1 foot

Dissimilar soils:
- The poorly drained, calcareous Harpster soils in positions similar to those of the Dunham soil

Properties and Qualities of the Dunham Soil

Parent material: Loess or other silty material and the underlying loamy and gravelly outwash
Drainage class: Poorly drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Elburn Series

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

Typical Pedon

Elburn silt loam, 0 to 2 percent slopes; at an elevation of about 617 feet; 2,716 feet north and 1,300 feet west of the southeast corner of sec. 36, T. 14 N., R. 1 E.; Christian County, Illinois; USGS Assumption topographic quadrangle; lat. 39 degrees 37 minutes 04.7 seconds N. and long. 89 degrees 01 minute 45.8 seconds W., NAD 27:

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; few very fine roots; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.
A—6 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; few very fine roots; many faint very dark gray (10YR 3/1) organic coatings on faces of peds; neutral; clear smooth boundary.
Bt1—16 to 21 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; few very fine roots; many distinct very dark gray (10YR 3/1) organo-clay films and dark gray (10YR 4/1) clay films on faces of peds; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation and few fine faint brown (10YR 5/3) masses of iron and manganese accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) iron and manganese concretions throughout; slightly acid; clear smooth boundary.
Bt2—21 to 28 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organo-clay films and common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few fine faint grayish brown (10YR 5/2) iron depletions and few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix;

few fine prominent black (7.5YR 2.5/1) iron and manganese concretions throughout; neutral; clear smooth boundary.

Bt3—28 to 36 inches; brown (10YR 5/3) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organo-clay films and dark gray (10YR 4/1) clay films on faces of peds; common fine faint grayish brown (10YR 5/2) iron depletions and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) iron and manganese concretions throughout; neutral; clear smooth boundary.

Bt4—36 to 43 inches; light olive brown (2.5Y 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few very fine roots; few prominent very dark gray (10YR 3/1) organo-clay films and few faint brown (10YR 5/3) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) and brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) iron and manganese concretions throughout; slightly alkaline; clear smooth boundary.

Btg—43 to 49 inches; grayish brown (2.5Y 5/2) silty clay loam; weak coarse subangular blocky structure; friable; few very fine roots; few distinct very dark gray (10YR 3/1) organo-clay films and few faint dark grayish brown (10YR 4/2) clay films on faces of peds; many medium prominent brownish yellow (10YR 6/8) and few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) iron and manganese concretions throughout; slightly alkaline; clear smooth boundary.

2BCtg—49 to 58 inches; grayish brown (2.5Y 5/2), stratified silt loam, loam, and sandy loam; weak coarse subangular blocky structure; friable; few very fine roots; few distinct very dark grayish brown (10YR 3/2) organo-clay films and few faint dark grayish brown (10YR 4/2) clay films lining pores; common medium prominent brownish yellow (10YR 6/8) and few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few very fine iron and manganese concretions throughout; slightly alkaline; clear smooth boundary.

2Cg—58 to 62 inches; grayish brown (2.5Y 5/2), stratified sandy loam and loamy sand; massive; very friable; common medium prominent yellowish brown (10YR 5/8) and brownish yellow (10YR 6/8) masses of iron accumulation in the matrix; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 19 inches
Depth to the base of the diagnostic horizon: 40 to 70 inches

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

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

2Btg, 2Bt, 2Bg, 2BC, 2BCtg, or 2BCg horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6

Chroma—2 to 8
Texture—stratified sandy loam, clay loam, loam, silty clay loam, or silt loam

2C or 2Cg horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 8
Texture—stratified sandy loam, loam, 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 more silt and less sand in the lower part of the subsoil and in the substratum
- Soils that have higher pH in the substratum
- Soils that have more sand in the middle part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 3 feet

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes

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: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 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 category: Prime farmland
Hydric soil status: Not hydric

Eleva Series

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

Typical Pedon

Eleva fine sandy loam, 7 to 15 percent slopes; at an elevation of 770 feet; 1,000 feet south and 1,950 feet west of the northeast corner of sec. 23, T. 22 N., R. 1 W.; Lee County, Illinois; USGS Grand Detour topographic quadrangle; lat. 41 degrees 53 minutes 07 seconds N. and long. 89 degrees 25 minutes 32 seconds W., NAD 27:

A—0 to 4 inches; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; very friable; few fine roots; neutral; abrupt smooth boundary.

BA—4 to 8 inches; dark yellowish brown (10YR 4/4) fine sandy loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine roots; very dark grayish brown (10YR 3/2) organic stains on vertical faces of peds; neutral; abrupt smooth boundary.

Bt1—8 to 12 inches; yellowish brown (10YR 5/4) fine sandy loam; weak fine subangular blocky structure; very friable; few fine roots; common thin dark yellowish brown (10YR 4/4) clay films on vertical faces of peds; neutral; clear smooth boundary.

Bt2—12 to 18 inches; brown (7.5YR 5/4) sandy loam; moderate medium subangular blocky structure; very friable; few fine roots; common thin dark yellowish brown (10YR 4/4) clay films on vertical faces of peds; slightly acid; clear smooth boundary.

Bt3—18 to 32 inches; brown (7.5YR 5/4) fine sandy loam; moderate medium subangular blocky structure; very friable; few fine roots; many thin dark yellowish brown (10YR 4/4) clay films on vertical faces of peds; moderately acid; abrupt smooth boundary.

Cr—32 to 37 inches; yellowish brown (10YR 5/4), weakly cemented sandstone bedrock; moderately acid; abrupt smooth boundary.

R—37 to 60 inches; very pale brown (10YR 7/4), strongly cemented sandstone bedrock; moderately acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to paralithic or lithic contact with sandstone: 20 to 40 inches

Ap or A horizon:
Hue—10YR or 7.5YR
Value—3 or 4
Chroma—2 to 4
Texture—sandy loam, fine sandy loam, or loam
Content of rock fragments—0 to 35 percent

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—sandy loam or fine sandy loam
Content of rock fragments—0 to 35 percent

761D—Eleva fine sandy loam, 7 to 15 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand throughout
- Soils that are deeper to bedrock
- Soils that are shallower to bedrock
- Soils that have more clay in the surface layer and subsoil

Dissimilar soils:
- The well drained, very deep Billett and Martinsville soils on footslopes

Properties and Qualities of the Eleva Soil

Parent material: Residuum derived from sandstone
Drainage class: Well 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 layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 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: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

761F—Eleva fine sandy loam, 15 to 35 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand throughout
- Soils that are deeper to bedrock
- Soils that are shallower to bedrock
- Soils that have more clay in the surface layer and subsoil

Dissimilar soils:
- The well drained, very deep Billett and Martinsville soils on footslopes

Properties and Qualities of the Eleva Soil

Parent material: Residuum derived from sandstone
Drainage class: Well 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 layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 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: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

Elizabeth Series

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

Typical Pedon

Elizabeth silt loam, 10 to 18 percent slopes; at an elevation of 754 feet; 1,900 feet west and 560 feet south of the northeast corner of sec. 10, T. 27 N., R. 2 E; Jo Daviess County, Illinois; USGS Hanover topographic quadrangle; lat. 42 degrees 21 minutes 17 seconds N. and long. 90 degrees 15 minutes 47 seconds W., NAD 27:

A1—0 to 6 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; many fine and very fine roots; less than 10 percent limestone cobbles; slightly alkaline; clear smooth boundary.

A2—6 to 10 inches; very dark grayish brown (10YR 3/2) cobbly silt loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure parting to moderate medium granular; friable; many fine and very fine roots; 25 percent limestone cobbles; slightly effervescent; slightly alkaline; clear smooth boundary.

A3—10 to 19 inches; dark brown (10YR 3/3) extremely cobbly loam; moderate medium granular structure; friable; few fine and very fine roots; about 90 percent cobbles 3 to 6 inches in the smallest dimension; slightly effervescent; slightly alkaline; diffuse wavy boundary.

R—19 inches; fractured dolomitic limestone bedrock; some dark silt loam in cracks in the upper few inches.

Range in Characteristics

Thickness of the solum and depth to bedrock: 7 to 20 inches

A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—silt loam, loam, clay loam, or silty clay loam
Content of rock fragments—15 to 90 percent

403D—Elizabeth loam, 10 to 18 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Elizabeth and similar soils: 90 percent
Dissimilar components: 10 percent

Minor Components

Similar soils:
- Soils that have more sand in the surface layer
- Soils in areas that have bedrock outcrops

Dissimilar components:
- The somewhat poorly drained Lawson soils on footslopes of drainageways
- The well drained Whalan soils on summits

Properties and Qualities of the Elizabeth Soil

Parent material: Loamy residuum derived from limestone and dolomite
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive layer: 4 to 20 inches to lithic bedrock
Available water capacity: About 2.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

403F—Elizabeth loam, 18 to 35 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Backslopes

Map Unit Composition

Elizabeth and similar soils: 90 percent
Dissimilar components: 10 percent

Minor Components

Similar soils:
- Soils that have more sand in the surface layer
- Soils in areas that have bedrock outcrops

Dissimilar components:
- The somewhat poorly drained Lawson soils on footslopes of drainageways
- The well drained Whalan soils on summits

Properties and Qualities of the Elizabeth Soil

Parent material: Loamy residuum derived from limestone and dolomite
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive layer: 4 to 20 inches to lithic bedrock
Available water capacity: About 2.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

Elpaso Series

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

Typical Pedon

Elpaso silty clay loam, 0 to 2 percent slopes; at an elevation of 715 feet; 210 feet north and 320 feet west of the southeast corner of sec. 30, T. 27 N., R. 2 E.; Woodford County, Illinois; USGS Benson topographic quadrangle; lat. 40 degrees 46 minutes 03 seconds N. and long. 89 degrees 01 minute 34 seconds W., NAD 27:

Ap—0 to 7 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak very fine granular structure; firm; many very fine and fine roots; moderately acid; abrupt smooth boundary.

A—7 to 21 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine and medium subangular blocky structure; firm; many very fine and fine roots; moderately acid; gradual wavy boundary.

Bg—21 to 35 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; friable; many fine roots; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine distinct black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.

Btg1—35 to 44 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; common faint dark gray (10YR 4/1) clay films on faces of peds; common fine distinct black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common fine prominent yellowish brown (10YR 5/6) and few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.

2Btg2—44 to 53 inches; dark grayish brown (2.5Y 4/2) silt loam; weak medium and coarse subangular blocky structure; friable; few fine roots; common faint dark gray (10YR 4/1) clay films on faces of peds; common fine distinct black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; common medium prominent yellowish brown (10YR 5/6) and fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation in the matrix; 5 percent pebbles; slightly alkaline; clear wavy boundary.

2Btg3—53 to 69 inches; dark grayish brown (2.5Y 4/2) and olive brown (2.5Y 4/4) silty clay loam; weak medium and coarse prismatic structure; firm; few faint dark gray (10YR 4/1) clay films on faces of peds; few fine distinct black (10YR 2/1) very weakly cemented iron and manganese oxide concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint olive gray (5Y 5/2) iron depletions throughout; 4 percent pebbles; slightly effervescent beginning at a depth of 63 inches; slightly alkaline; diffuse wavy boundary.

2C—69 to 80 inches; olive brown (2.5Y 4/4) silty clay loam; massive; firm; few fine prominent black (10YR 2/1) very weakly cemented iron and manganese concretions throughout; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine distinct olive gray (5Y 5/2) iron depletions throughout; 4 percent pebbles; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the loess or silty material: 40 to 60 inches
Depth to carbonates: 35 to 65 inches
Thickness of the solum: 45 to 75 inches

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

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

2Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 4
Texture—loam, clay loam, silt loam, or silty clay loam
Content of gravel—1 to 10 percent

2C or 2Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—loam, clay loam, silt loam, or silty clay loam
Content of gravel—1 to 10 percent

356A—Elpaso silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more than 60 inches of silty material over the underlying loamy material
- Soils that have more sand in the surface layer and subsoil
- Soils that have more silt and less clay in the surface layer
- Soils that have a seasonal high water table at a depth of more than 1 foot

Dissimilar soils:
- The moderately well drained Catlin and Saybrook soils on summits and shoulders

Properties and Qualities of the Elpaso Soil

Parent material: Loess or other silty material and the underlying till
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 13.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 7.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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: Very low

Interpretive Groups

Land capability classification: 2w
Prime farmland category: 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; at an elevation of 690 feet; 2,100 feet north and 1,700 feet west of the southeast corner of sec. 31, T. 12 N., R. 3 W.; Warren County, Illinois; USGS Rozetta topographic quadrangle; lat. 40 degrees 59 minutes 13 seconds N. and long. 90 degrees 46 minutes 18 seconds W., NAD 27:

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

EB—5 to 9 inches; mixed brown (10YR 5/3) and yellowish brown (10YR 5/4) silt loam; weak medium platy structure parting to moderate very 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 distinct 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 distinct 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 distinct 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 carbonates: More than 40 inches

Ap or A horizon:
Hue—10YR
Value—2 to 4; 5 in some pedons in eroded areas

Chroma—1 to 3; 4 in some pedons in eroded areas
Texture—silt loam

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

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

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

Setting

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

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 are calcareous in the lower part of the subsoil

Dissimilar soils:
- Somewhat poorly drained soils on footslopes
- The moderately well drained Birkbeck soils on backslopes

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 layer: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

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

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that are calcareous in the lower part of the subsoil and in the substratum

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The well drained, moderately deep Whalan soils in positions similar to those of the Fayette soil
- The somewhat poorly drained Keomah soils on summits

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

280D—Fayette silt loam, 10 to 18 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that are calcareous in the lower part of the subsoil and in the substratum
- Soils that have an eroded surface layer

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The moderately well drained Birkbeck soils on backslopes

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 layer: More than 80 inches
Available water capacity: About 11.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: 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.; 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.

BAg—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) iron masses 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) iron masses 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 prominent very dark grayish brown (10YR 3/2) organic coatings in root channels; many fine and medium prominent strong brown (7.5YR 4/6) iron masses with diffuse boundaries throughout the matrix and occurring as accumulations 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 prominent 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 gray (10YR 4/1), stratified silt loam and very fine sandy loam; weak coarse prismatic structure; friable; few medium prominent strong brown (7.5YR 5/6) irregularly shaped iron masses with diffuse boundaries in the matrix; slightly effervescent; slightly alkaline; clear smooth boundary.

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

2Cg—61 to 80 inches; dark gray (5Y 4/1), stratified loamy fine sand and very 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 2.5/) 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 carbonates: 16 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 and Bkg horizons:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam

2BCg 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

2C and/or 2Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 or 5
Chroma—1 to 4

Texture—stratified sand, very fine sand, loamy sand, loamy fine sand, sandy loam, or fine sandy loam

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 deeper to calcareous material
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that are calcareous at the surface

Dissimilar soils:
- The poorly drained Adrian and Houghton soils in positions similar to those of the Fella soil

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 or rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Flanagan Series

Taxonomic classification: Fine, smectitic, mesic Aquic Argiudolls

Typical Pedon

Flanagan silt loam, 0 to 2 percent slopes; 1,607 feet east and 1,405 feet north of the southwest corner of sec. 19, T. 19 N., R. 9 E.; Champaign County, Illinois; USGS Urbana topographic quadrangle; lat. 40 degrees 05 minutes 14 seconds N. and long. 88 degrees 13 minutes 57 seconds W., NAD 27:

A1—0 to 8 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; slightly alkaline; gradual smooth boundary.

A2—8 to 15 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.

A3—15 to 18 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium granular structure; friable; slightly acid; clear smooth boundary.

Bt1—18 to 23 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few fine faint brown (10YR 4/3) masses of iron and manganese accumulation in the matrix; moderately acid; clear smooth boundary.

Bt2—23 to 32 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate medium subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine faint brown (10YR 5/3 and 4/3) masses of iron and manganese accumulation in the matrix; moderately acid; clear smooth boundary.

Bt3—32 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; many distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; common fine faint light yellowish brown (10YR 6/4) and distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

Bt4—38 to 45 inches; 40 percent yellowish brown (10YR 5/6), 30 percent light brownish gray (10YR 6/2), and 30 percent brown (10YR 5/3) silt loam; weak medium subangular blocky structure; friable; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; slightly acid; gradual smooth boundary.

2Bt5—45 to 49 inches; 35 percent yellowish brown (10YR 5/4), 35 percent light olive brown (2.5Y 5/4), and 30 percent light brownish gray (10YR 6/2) silt loam; weak coarse subangular blocky structure; firm; few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; 5 percent fine gravel; neutral; abrupt smooth boundary.

2C—49 to 60 inches; yellowish brown (10YR 5/4) loam; massive; firm; common medium rounded white (10YR 8/1) weakly cemented calcium carbonate nodules throughout; common fine and medium distinct light brownish gray (10YR 6/2) iron depletions in the matrix; 5 percent fine gravel; slightly effervescent; 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: 45 to 65 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—4 to 6
Chroma—2 to 6
Texture—silty clay loam or silt loam

2Bt, 2Btg, 2BCg, or 2BC horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—loam, silt loam, clay loam, or silty clay loam

2C horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—2 to 6
Texture—loam, clay loam, or silt loam

154A—Flanagan silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more silt and less sand in the substratum
- Soils that have more sand and less silt

Dissimilar soils:
- The well drained Wyanet soils on summits and shoulders
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Flanagan Soil

Parent material: Loess over loamy till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.5 to 5.0 percent
Shrink-swell potential: High
Depth and months of the highest perched 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 category: Prime farmland
Hydric soil status: Not hydric

Friesland Series

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

Typical Pedon

Friesland fine sandy loam, 2 to 5 percent slopes; at an elevation of 800 feet; 2,496 feet west and 586 feet north of the southeast corner of sec. 14, T. 20 N., R. 11 E.; Lee County, Illinois; USGS Sublette topographic quadrangle; lat. 41 degrees 43 minutes 05 seconds N. and long. 89 degrees 11 minutes 57 seconds W., NAD 27:

Ap—0 to 7 inches; very dark gray (10YR 3/1) fine sandy loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; neutral; abrupt smooth boundary.

A—7 to 14 inches; very dark gray (10YR 3/1) fine sandy loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure; friable; neutral; clear smooth boundary.

AB—14 to 18 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; friable; common thin very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bt1—18 to 26 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; common thin dark brown (10YR 3/3) organo-clay films on faces of peds; neutral; clear smooth boundary.

Bt2—26 to 34 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; common thin brown (10YR 4/3) clay films on faces of peds; neutral; clear smooth boundary.

2Bt3—34 to 45 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few thin brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.

2Bt4—45 to 50 inches; yellowish brown (10YR 5/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few thin brown (10YR 4/3) clay films on vertical faces of peds; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine faint brown (10YR 5/3) iron depletions in the matrix; slightly acid; clear smooth boundary.

2BC—50 to 60 inches; yellowish brown (10YR 5/4) silt loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation and few fine faint iron depletions in the matrix; slightly alkaline; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the solum: 32 to 60 inches

Ap and A horizons:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—typically fine sandy loam; sandy loam or loam in some pedons

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5

Chroma—4 to 6
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

2Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—silt loam or silty clay loam

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

781B—Friesland fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more sand and less silt in the substratum
- Soils that have a calcareous substratum
- Soils that have more sand and less clay in the subsoil

Dissimilar soils:
- The excessively drained Coloma soils on summits
- The somewhat poorly drained La Hogue soils on footslopes

Properties and Qualities of the Friesland Soil

Parent material: Till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 9.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 2e

Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Gilford Series

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

Typical Pedon

Gilford fine sandy loam, 0 to 2 percent slopes; at an elevation of 608 feet; 1,840 feet north and 1,180 feet east of the southwest corner of sec. 14, T. 19 N., R. 4 E.; 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 faint very dark gray (10YR 3/1) organic coatings on faces of peds; few fine prominent yellowish brown (10YR 5/8) iron masses 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) krotovina between the depths of 29 and 32 inches; few fine prominent yellowish brown (10YR 5/8) iron masses 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 have more clay throughout

Dissimilar soils:
- The very poorly drained Adrian soils on toeslopes
- The poorly drained Hooppole soils on summits

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 layer: More than 80 inches
Available water capacity: About 7.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: 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.; 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 2.5/) 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 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 2.5/) 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 2.5/) 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 2.5/) manganese oxide stains; moderately acid.

Range in Characteristics

Depth to carbonates: More than 60 inches

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

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

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 and 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 soil
- Soils that have a lighter colored surface layer
- Soils that have a seasonal high water table within a depth of 4 feet

Dissimilar soils:
- The poorly drained Denny soils in depressions

Properties and Qualities of the Greenbush Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 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 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 category: Prime farmland
Hydric soil status: Not hydric

Griswold Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Taxadjunct features: The Griswold soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

Typical Pedon

Griswold loam, 5 to 10 percent slopes, eroded; at an elevation of 830 feet; 1,000 feet north and 1,850 feet west of the southeast corner of sec. 33, T. 46 N., R. 8 E.; McHenry County, Illinois; USGS Richmond topographic quadrangle; lat. 42 degrees 25 minutes 03 seconds N. and long. 88 degrees 18 minutes 12 seconds W., NAD 27:

Ap—0 to 10 inches; 95 percent very dark grayish brown (10YR 3/2) and 5 percent brown (10YR 4/3) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure parting to moderate fine and medium granular; friable; many very fine roots; 1 percent gravel; neutral; clear smooth boundary.
Bt1—10 to 14 inches; 85 percent dark yellowish brown (10YR 4/4) and 15 percent very dark grayish brown (10YR 3/2) clay loam; moderate very fine and fine subangular blocky structure; friable; many very fine roots; few faint brown (10YR 4/3) clay films and dark brown (10YR 3/3) organo-clay films on faces of peds and in pores; 1 percent gravel; neutral; clear smooth boundary.
Bt2—14 to 20 inches; dark yellowish brown (10YR 4/4) clay loam; moderate fine and medium subangular blocky structure; friable; many very fine roots; common faint brown (10YR 4/3) clay films on faces of peds and in pores; few faint dark brown (10YR 3/3) organo-clay films on faces of peds and in pores; 3 percent gravel; neutral; clear wavy boundary.
Bt3—20 to 24 inches; dark yellowish brown (10YR 4/4) loam; weak medium subangular blocky structure; friable; common very fine roots; few faint brown (10YR 4/3) clay films on faces of peds and in pores; very few distinct very dark grayish brown (10YR 3/2) organo-clay films in root channels and in pores; 5 percent gravel; neutral; clear smooth boundary.
BC—24 to 27 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable; common very fine roots; 10 percent gravel; slightly effervescent; slightly alkaline; clear wavy boundary.
C—27 to 60 inches; yellowish brown (10YR 5/4) sandy loam; massive; friable; few very fine roots; 13 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 16 inches
Depth to carbonates: 20 to 32 inches
Thickness of the solum: 24 to 40 inches

Ap or A horizon:
Hue—10YR
Value—2 or 3; 4 in some pedons in eroded areas
Chroma—1 to 3
Texture—loam or silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture—clay loam, loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR

Value—4 or 5
Chroma—3 to 6
Texture—sandy loam or gravelly sandy loam
Content of gravel—10 to 35 percent

363D2—Griswold loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker subsoil
- Soils that have less sand in the subsoil and substratum

Dissimilar soils:
- The excessively drained Rodman soils on backslopes
- Well drained, severely eroded, calcareous soils on shoulders

Properties and Qualities of the Griswold Soil

Parent material: Calcareous sandy 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 layer: More than 80 inches
Available water capacity: About 8.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

Grundelein Series

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

Typical Pedon

Grundelein silt loam, 0 to 2 percent slopes; at an elevation of 885 feet; 1,875 feet south and 2,526 feet west of the northeast corner of sec. 15, T. 45 N., R. 5 E.; McHenry

County, Illinois; USGS Capron topographic quadrangle; lat. 42 degrees 22 minutes 48 seconds N. and long. 88 degrees 38 minutes 14 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to moderate fine and medium granular; friable; common very fine roots; neutral; clear smooth boundary.

A—7 to 11 inches; very dark brown (10YR 2/2) silt loam, brown (10YR 4/3) dry; weak medium subangular blocky structure; friable; common very fine roots; common faint black (10YR 2/1) organic coatings on faces of peds; neutral; abrupt smooth boundary.

Bt1—11 to 19 inches; brown (10YR 5/3) silty clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; common faint dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct black (10YR 2/1) organic coatings on faces of peds and in pores; few fine black (5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.

Bt2—19 to 29 inches; light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; common distinct dark grayish brown (2.5Y 4/2) clay films on faces of peds; few fine black (5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; many medium distinct light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; many fine and medium distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; neutral; clear smooth boundary.

Bt3—29 to 33 inches; light olive brown (2.5Y 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; few faint olive brown (2.5Y 4/4) and dark grayish brown (2.5Y 4/2) clay films on faces of peds; common medium very dark gray (10YR 3/1) wormcasts; few fine black (5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine and medium prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; many medium and coarse distinct grayish brown (2.5Y 5/2) iron depletions in the matrix; neutral; clear wavy boundary.

2BCg—33 to 39 inches; grayish brown (2.5Y 5/2) clay loam; weak medium and coarse subangular blocky structure; friable; few very fine roots; common medium very dark brown (10YR 2/2) wormcasts; few fine black (5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine and medium prominent brownish yellow (10YR 6/6) and strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 5 percent gravel; neutral; clear wavy boundary.

3C1—39 to 46 inches; yellowish brown (10YR 5/4), stratified gravelly sandy loam and gravelly loamy sand; massive; very friable; common fine distinct brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; 20 percent gravel; strongly effervescent; slightly alkaline; gradual wavy boundary.

3C2—46 to 60 inches; brown (10YR 5/3), stratified gravelly loamy sand, gravelly sand, and gravelly sandy loam; single grain; loose; common fine distinct brownish yellow (10YR 6/6) masses of iron accumulation in the matrix; 20 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the loess or other silty material: 24 to 45 inches
Depth to sandy and gravelly outwash: 32 to 50 inches

Depth to carbonates: 30 to 50 inches
Thickness of the solum: 36 to 50 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—4 to 6
Chroma—2 to 4
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—loam, clay loam, sandy clay loam, silt loam, or sandy loam or the gravelly analogs of these textures
Content of gravel—less than 20 percent

3C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 7
Chroma—1 to 8
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, sandy loam, coarse sand, loamy coarse sand, or coarse sandy loam
Content of gravel—15 to 70 percent

526A—Grundelein silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more silt and less sand and gravel in the lower part of the subsoil and in the substratum
- Soils that have higher pH in the substratum
- Soils that have more sand in the middle part of the subsoil
- Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
- The poorly drained Dunham soils on toeslopes

Properties and Qualities of the Grundelein Soil

Parent material: Loess or other silty material 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 layer: More than 80 inches
Available water capacity: About 10.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 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 category: Prime farmland
Hydric soil status: Not hydric

Harpster Series

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

Typical Pedon

Harpster silty clay loam, 0 to 2 percent slopes; at an elevation of 635 feet; 1,452 feet south and 990 feet west of the northeast corner of sec. 8, T. 16 N., R. 6 E.; Bureau County, Illinois; USGS Mineral topographic quadrangle; lat. 41 degrees 23 minutes 23 seconds N. and long. 89 degrees 49 minutes 22 seconds W., NAD 27:

Apk—0 to 8 inches; black (N 2.5/) silty clay loam, very dark gray (N 3/) dry; moderate medium granular structure; friable; few fine roots; violently effervescent; moderately alkaline; abrupt smooth boundary.
Ak—8 to 18 inches; black (N 2.5/) silty clay loam, very dark gray (N 3/) dry; moderate fine subangular blocky structure; friable; few fine roots; violently effervescent; moderately alkaline; clear smooth boundary.
Bkg1—18 to 26 inches; dark gray (10YR 4/1) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many prominent very dark gray (N 3/) organic stains; violently effervescent; moderately alkaline; clear smooth boundary.
Bkg2—26 to 32 inches; dark gray (5Y 4/1) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; common fine prominent strong brown (7.5YR 5/6) iron accumulations in the matrix; violently effervescent; moderately alkaline; clear smooth boundary.
Ckg—32 to 60 inches; gray (10YR 5/1) silty clay loam; massive; friable; many fine prominent strong brown (7.5YR 5/6) iron accumulations in the matrix; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Thickness of the solum: 26 to 46 inches

Apk and Ak horizons:
Hue—10YR to 5Y or N

Value—2 to 3
Chroma—0 or 1
Texture—silty clay loam

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

Cg horizon:
Hue—7.5YR to 5Y
Value—4 to 6
Chroma—1 to 8
Texture—silty clay loam

67A—Harpster silty clay loam, 0 to 2 percent slopes

Setting

Landform: Depressions on outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand throughout
- Soils that do not have carbonates within a depth of 16 inches
- Soils that have more sand and gravel in the substratum

Dissimilar soils:
- The somewhat poorly drained Elburn and Grundelein soils on footslopes
- The poorly drained, noncalcareous Drummer soils in positions similar to those of the Harpster soil
- The poorly drained, noncalcareous Dunham soils on toeslopes

Properties and Qualities of the Harpster Soil

Parent material: Calcareous 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 layer: More than 80 inches
Available water capacity: About 12.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.5 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

8067A—Harpster silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Harpster and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have more sand throughout
- Soils that have a sandy or gravelly substratum

Properties and Qualities of the Harpster 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 layer: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Hartsburg Series

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

Typical Pedon

Hartsburg silty clay loam, 0 to 2 percent slopes; at an elevation of 562 feet; 660 feet west and 40 feet north of the southeast corner of sec. 23, T. 21 N., R. 4 W.; Logan County, Illinois; USGS New Holland topographic quadrangle; lat. 40 degrees 14 minutes 58 seconds N. and long. 89 degrees 31 minutes 28 seconds W., NAD 27:

Ap—0 to 7 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; slightly acid; abrupt smooth boundary.

A1—7 to 12 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; few very fine roots; slightly acid; clear smooth boundary.

A2—12 to 17 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; moderate medium granular structure; firm; few very fine roots; few fine rounded black (7.5YR 2.5/1) weakly cemented concretions of iron and manganese with diffuse boundaries along root channels and pores; few fine faint dark grayish brown (2.5Y 4/2) iron depletions in the matrix; neutral; clear smooth boundary.

Bg—17 to 21 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak fine and medium subangular blocky structure; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common very dark gray (10YR 3/1) krotovinas; few fine rounded black (7.5YR 2.5/1) weakly cemented concretions of iron and manganese with diffuse boundaries lining root channels and pores; common fine prominent yellowish brown (10YR 5/6) masses of iron in the matrix; neutral; clear smooth boundary.

Bkg—21 to 30 inches; gray (5Y 5/1) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots; common distinct dark grayish brown (10YR 4/2) and grayish brown (2.5Y 5/2) pressure faces on peds; common very dark gray (10YR 3/1) krotovinas; few fine rounded black (7.5YR 2.5/1) weakly cemented concretions of iron and manganese with diffuse boundaries lining root channels and pores; few fine and medium rounded white (10YR 8/1) weakly cemented concretions of calcium carbonate throughout; common medium prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) masses of iron in the matrix; slightly effervescent; slightly alkaline; abrupt wavy boundary.

BCkg—30 to 34 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak coarse subangular blocky structure; firm; many distinct gray (N 5/) and grayish brown (2.5Y 5/2) linings in pores and root channels; common very dark gray (10YR 3/1) krotovinas; few fine rounded black (7.5YR 2.5/1) weakly cemented concretions of iron and manganese with diffuse boundaries lining pores; many medium and coarse rounded white (10YR 8/1) weakly cemented concretions of calcium carbonate throughout; many medium prominent yellowish brown (10YR 5/8) masses of iron in the matrix; violently effervescent among concretions, slightly effervescent in the matrix; slightly alkaline; clear wavy boundary.

Cg—34 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; common very dark gray (10YR 3/1) krotovinas; few medium rounded white (10YR 8/1) weakly cemented concretions of calcium carbonate throughout; many medium prominent strong brown (7.5YR 5/8) masses of iron with diffuse boundaries lining pores; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to carbonates: 15 to 35 inches
Depth to the base of the diagnostic horizon: 24 to 50 inches

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

Bg, Bkg, Btg, BCk, BCkg, or BCg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 or 2
Texture—silty clay loam or silt loam

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

244A—Hartsburg silty clay loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and ground moraines
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have carbonates closer to the surface
- Soils that are deeper to carbonates

Dissimilar soils:
- The somewhat poorly drained Muscatune soils on slight rises

Properties and Qualities of the Hartsburg 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 layer: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.5 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Hitt Series

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

Typical Pedon

Hitt silt loam, 2 to 5 percent slopes, eroded; 240 feet west and 200 feet north of the southeast corner of sec. 33, T. 24 N., R. 7 E.; Carroll County, Illinois; USGS Brookville topographic quadrangle; lat. 42 degrees 01 minute 34 seconds N. and long. 89 degrees 41 minutes 09 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silt loam; moderate fine and coarse granular structure; friable; slightly acid; clear smooth boundary.

A—8 to 12 inches; very dark grayish brown (10YR 3/2) silt loam; moderate fine and medium granular structure; friable; slightly acid; gradual smooth boundary.

Bt1—12 to 17 inches; brown (7.5YR 4/4) silty clay loam; weak fine and medium subangular blocky structure; firm; thin discontinuous dark brown (10YR 3/3) clay films; moderately acid; clear smooth boundary.

2Bt2—17 to 28 inches; brown (7.5YR 4/4) clay loam; moderate fine subangular blocky and angular blocky structure; firm; thin continuous reddish brown (5YR 4/3) clay films; strongly acid; clear smooth boundary.

2Bt3—28 to 40 inches; dark reddish brown (5YR 3/4) clay loam; moderate fine and medium angular blocky structure; firm; thin continuous reddish brown (5YR 4/3) clay films; few chert fragments; moderately acid; abrupt smooth boundary.

2Bt4—40 to 50 inches; brown (7.5YR 5/4) clay loam; weak medium subangular blocky structure; friable; thin discontinuous reddish brown (5YR 4/3) clay films; many pebbles; common chert fragments; moderately acid; clear smooth boundary.

3Bt5—50 to 57 inches; reddish brown (5YR 4/4) silty clay; moderate medium and coarse angular blocky structure; very firm; thin discontinuous reddish brown (5YR 4/3) clay films; many chert fragments; neutral; abrupt smooth boundary.

3R—57 inches; calcareous limestone (dolomite) bedrock; calcareous sandy loam broken limestone in places.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 15 inches
Thickness of the solum: 40 to 60 inches
Thickness of the loess: 10 to 25 inches
Depth to limestone bedrock: 40 to 60 inches

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

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—silty clay loam or clay loam

2Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—3 to 5
Chroma—3 to 5
Texture—sandy clay loam or clay loam

3Bt horizon:
Hue—2.5YR, 5YR, or 7.5YR
Value—3 or 4
Chroma—3 or 4
Texture—silty clay or clay; variable content of chert

106B—Hitt sandy loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more sand in the surface layer and in the upper part of the subsoil
- Soils that have bedrock at a depth of less than 40 inches

Dissimilar soils:
- The well drained, very deep Jasper soils in positions similar to those of the Hitt soil
- The somewhat excessively drained Elizabeth soils on backslopes

Properties and Qualities of the Hitt Soil

Parent material: Eolian sediments over till over limestone and dolomite
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 layer: 40 to 60 inches to lithic bedrock
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: 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; at an elevation of 608 feet; 2,530 feet south and 1,060 feet east of the northwest corner of sec. 14, T. 19 N., R. 4 E.; 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 faint 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 carbonates: More than 40 inches
Thickness of the solum: 20 to 54 inches

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

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

Cg and/or C horizon:
Hue—7.5YR to 5Y
Value—3 to 6
Chroma—1 to 8
Texture—loamy sand, sand, loamy fine sand, or fine sand; loamy strata in some pedons

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

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the subsoil
- Soils that have more clay in the subsoil
- Soils that have a thinner surface layer

Dissimilar soils:
- The excessively drained Sparta soils on summits and shoulders
- The well drained Dickinson soils on summits
- The poorly drained Gilford soils on toeslopes

Properties and Qualities of the Hoopeston Soil

Parent material: Outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 7.3 inches to a depth of 60 inches (fig. 5)
Content of organic matter in the surface layer: 2.0 to 3.0 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: Moderate for steel and 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 category: 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; at an elevation of 317 feet; 470 feet south and 1,940 feet west of the northeast corner of sec. 18, T. 17 N., R. 6 E.; 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 2.5/) loam, very dark gray (10YR 3/1) dry; moderate medium granular structure; friable; common fine roots throughout; violently effervescent; slightly alkaline; abrupt smooth boundary.

Figure 5.—Center-pivot irrigation in an area of Hoopeston sandy loam, 0 to 2 percent slopes, helps to overcome the moderate available water capacity of the soil.

Ak—7 to 12 inches; black (N 2.5/) 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 distinct 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 prominent 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 prominent 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 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 to 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
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less sand throughout
- Soils that are not calcareous in the surface layer and subsoil

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

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 layer: More than 80 inches
Available water capacity: About 9.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 8.0 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 category: 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.; 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 2.5/) 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 2.5/) 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 2.5/) 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 2.5/) 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

103A—Houghton muck, 0 to 2 percent slopes

Setting

Landform: Ground moraines, outwash plains, and end moraines
Position on the landform: Toeslopes

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
- Soils that have a sandy substratum

Dissimilar soils:
- Soils that are ponded throughout the growing season
- The poorly drained Comfrey and Sable soils in positions similar to those of the Houghton soil

Properties and Qualities of the Houghton Soil

Parent material: Herbaceous organic material
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 layer: More than 80 inches
Available water capacity: About 23.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 70.0 to 99.0 percent
Shrink-swell potential: Not rated
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Deepest ponding (depth, months): 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: 3w
Prime farmland category: Not prime farmland
Hydric soil status: Hydric

Jasper Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Jasper soil in map unit 440C2 has a thinner dark surface

layer than is defined as the range for the series. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Jasper loam, 2 to 5 percent slopes; at an elevation of 836 feet; 114 feet west and 1,530 feet north of the southeast corner of sec. 30, T. 22 N., R. 11 E.; Lee County, Illinois; USGS Franklin Grove topographic quadrangle; lat. 41 degrees 51 minutes 48 seconds N. and long. 89 degrees 15 minutes 55 seconds W., NAD 27:

Ap—0 to 11 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate very fine granular structure; friable; few fine roots; neutral; clear smooth boundary.

AB—11 to 15 inches; dark brown (10YR 3/3) loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; friable; few fine roots; many thin very dark grayish brown (10YR 3/2) organic stains on vertical faces of peds; neutral; clear smooth boundary.

Bt1—15 to 21 inches; dark yellowish brown (10YR 4/4) clay loam; moderate fine subangular blocky structure; friable; few fine roots; many thin dark brown (10YR 3/3) organic stains on vertical faces of peds and brown (10YR 4/3) clay films on vertical faces of peds; slightly acid; clear smooth boundary.

Bt2—21 to 26 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; many thin brown (10YR 4/3) clay films on vertical faces of peds; slightly acid; clear smooth boundary.

Bt3—26 to 36 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; common thin brown (10YR 4/3) clay films on vertical faces of peds; few fine dark iron and manganese oxide concretions; neutral; clear smooth boundary.

Bt4—36 to 45 inches; dark yellowish brown (10YR 4/4) loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few fine roots; common thin brown (10YR 4/3) (moist) clay films on vertical faces of peds; 1 percent fine prominent spherical black (7.5YR 2.5/1) iron-manganese concretions throughout; neutral; clear smooth boundary.

C—45 to 60 inches; dark yellowish brown (10YR 4/4) silt loam; massive; friable; 1 percent fine prominent spherical black (7.5YR 2.5/1) iron-manganese concretions throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 8 to 17 inches
Thickness of the solum: 40 to 48 inches

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

Bt horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—clay loam or silty clay loam; subhorizons of loam and fine sandy loam are common

C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—commonly silt loam; thin strata of fine sandy loam or fine sand in some pedons

440A—Jasper loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that are underlain by bedrock within a depth of 60 inches
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained La Hogue soils on footslopes

Properties and Qualities of the Jasper Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

440B—Jasper loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that have less sand in the subsoil
- Soils that have a seasonal high water table within a depth of 60 inches
- Soils that have a thinner surface layer and subsoil

Dissimilar soils:
- The somewhat poorly drained La Hogue and Nachusa soils on footslopes
- The excessively drained Dickinson soils on summits

Properties and Qualities of the Jasper Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

440C2—Jasper loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the lower part of the subsoil and in the substratum
- Soils that are underlain by bedrock within a depth of 60 inches
- Soils that have a seasonal high water table within a depth of 60 inches

Dissimilar soils:
- The somewhat poorly drained La Hogue soils on footslopes

- The excessively drained Dickinson soils in positions similar to those of the Jasper soil

Properties and Qualities of the Jasper Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and high for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Kidami Series

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

Typical Pedon

Kidami silt loam, 2 to 4 percent slopes; at an elevation of 952 feet; 1,500 feet north and 1,980 feet east of the southwest corner of sec. 13, T. 44 N., R. 5 E.; McHenry County, Illinois; USGS Marengo North topographic quadrangle; lat. 42 degrees 17 minutes 18 seconds N. and long. 88 degrees 36 minutes 00 seconds W., NAD 27:

A—0 to 3 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure parting to weak fine granular; friable; common fine and medium roots; 2 percent gravel; neutral; abrupt smooth boundary.

E—3 to 7 inches; brown (10YR 5/3) silt loam, light brownish gray (10YR 6/2) dry; weak thin platy structure parting to weak fine subangular blocky; very friable; common fine roots; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; common faint light gray (10YR 7/2) (dry) clay depletions on faces of peds and in pores; 1 percent gravel; slightly acid; abrupt smooth boundary.

BE—7 to 10 inches; 50 percent brown (10YR 5/3) and 50 percent brown (7.5YR 5/4) silt loam; moderate fine subangular blocky structure; friable; common fine roots; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; common faint light gray (10YR 7/2) (dry) clay depletions on faces of peds and in pores; 2 percent gravel; moderately acid; clear smooth boundary.

2Bt1—10 to 16 inches; brown (7.5YR 5/4) loam; moderate fine subangular blocky structure; firm; common very fine and fine roots; few faint brown (7.5YR 4/4) clay films and light gray (10YR 7/2) (dry) clay depletions on faces of peds and in pores; 3 percent gravel; strongly acid; clear wavy boundary.

2Bt2—16 to 24 inches; brown (7.5YR 4/4) clay loam; moderate fine prismatic structure parting to moderate fine subangular blocky; firm; common very fine and fine roots; few faint brown (7.5YR 4/3) clay films and light gray (10YR 7/2) (dry) clay depletions on faces of peds and in pores; 3 percent gravel; strongly acid; clear smooth boundary.

2Bt3—24 to 30 inches; strong brown (7.5YR 4/6) clay loam; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few very fine roots; few distinct brown (7.5YR 4/3 and 4/4) clay films on faces of peds and in pores; 5 percent gravel; moderately acid; clear wavy boundary.

2Bt4—30 to 37 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; firm; few very fine and fine roots; few faint brown (7.5YR 4/3) clay films on faces of peds and in pores; 6 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.

2Bt5—37 to 45 inches; brown (7.5YR 5/4) loam; weak medium and coarse subangular blocky structure; firm; few very fine roots; few faint brown (7.5YR 4/3) clay films on faces of peds and in pores; 7 percent gravel; slightly effervescent; slightly alkaline; gradual wavy boundary.

2C—45 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; few very fine roots; few faint brown (7.5YR 4/3) clay films in root channels and in pores; 8 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess or silty material: Less than 18 inches
Depth to carbonates: 20 to 48 inches
Thickness of the solum: 24 to 55 inches

Ap or A horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—1 to 3
Texture—silt loam or loam
Content of gravel—less than 10 percent

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam, loam, or sandy loam
Content of gravel—less than 10 percent

2Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—clay loam or loam
Content of gravel—2 to 15 percent

2C horizon:
Hue—5YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—loam or sandy loam
Content of gravel—5 to 15 percent

527B—Kidami silt loam, 2 to 4 percent slopes

Setting

Landform: Ground moraines and end moraines
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Odell soils on footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Kidami Soil

Parent material: Thin mantle of loess or other silty material and the underlying 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 layer: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

527C2—Kidami loam, 4 to 6 percent slopes, eroded

Setting

Landform: End moraines and ground moraines
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less sand in the subsoil
- Soils that have a thicker subsoil
- Soils that have a stratified substratum that has more sand

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The well drained, moderately deep Whalan soils on backslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Kidami Soil

Parent material: 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 layer: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Kidder Series

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

Typical Pedon

Kidder silt loam, 2 to 6 percent slopes; at an elevation of 885 feet; 140 feet north and 2,450 feet east of the center of sec. 1, T. 4 N., R. 13 E.; Rock County, Wisconsin; USGS Milton topographic quadrangle; lat. 42 degrees 50 minutes 15 seconds N. and long. 88 degrees 53 minutes 44 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine and very fine subangular blocky structure; friable; common fine fibrous roots; common fine and medium continuous (mostly exped) dendritic pores; neutral; abrupt smooth boundary.

2BE—7 to 11 inches; brown (10YR 4/3 and 7.5YR 4/4) loam; weak fine and medium subangular blocky structure; friable; common fine fibrous roots; common very fine and fine and few medium continuous (mostly exped) dendritic pores; neutral; clear smooth boundary.

2Bt1—11 to 17 inches; brown (7.5YR 4/4) clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots; common fine and very fine and few medium continuous (mostly exped) dendritic pores; few faint brown (7.5YR 4/3) clay films on faces of peds and in pores and clay bridges between sand grains; neutral; clear wavy boundary.

2Bt2—17 to 28 inches; brown (7.5YR 4/4) sandy clay loam; moderate medium subangular blocky structure; firm; few fine fibrous roots; common fine and very fine continuous (mostly exped) dendritic pores; few faint brown (7.5YR 4/3) clay films on faces of peds and in pores and clay bridges between sand grains; neutral; clear wavy boundary.

2Bt3—28 to 30 inches; dark yellowish brown (10YR 3/4) sandy loam; weak medium subangular blocky structure; friable; few fine and very fine continuous obliquely oriented inped and exped pores; very few faint dark brown (10YR 3/3) clay films on faces of some peds and clay bridges between sand grains; about 15 percent gravel; slightly alkaline; clear wavy boundary.

2C—30 to 60 inches; brown (10YR 5/3) gravelly sandy loam; massive; friable; few fine and very fine continuous obliquely oriented pores; about 35 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: 16 to 32 inches
Thickness of the solum: 20 to 40 inches

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

Bt or 2Bt horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—3 or 4
Texture—clay loam, loam, sandy clay loam, or sandy loam
Content of gravel—less than 15 percent

2C horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, gravelly sandy loam, or gravelly fine sandy loam
Content of gravel—5 to 35 percent

361D2—Kidder loam, 6 to 12 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the lower part of the subsoil and in the substratum
- Soils that have a darker surface layer
- Soils that have more sand in the surface layer

Dissimilar soils:
- The poorly drained Comfrey soils on toeslopes
- The well drained, moderately deep Whalan soils in positions similar to those of the Kidder soil

Properties and Qualities of the Kidder Soil

Parent material: Till
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 layer: More than 80 inches
Available water capacity: About 8.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

La Hogue Series

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

Typical Pedon

La Hogue loam, 0 to 2 percent slopes; at an elevation of 675 feet; 1,910 feet north and 150 feet east of the southwest corner of sec. 7, T. 19 N., R. 14 W.; Champaign County, Illinois; USGS Homer topographic quadrangle; lat. 40 degrees 07 minutes 05 seconds N. and long. 87 degrees 59 minutes 39 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine angular fragments (cloddy) parting to weak fine granular structure; friable; neutral; abrupt smooth boundary.

A—10 to 16 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; neutral; clear smooth boundary.

Bt1—16 to 26 inches; brown (10YR 4/3) clay loam; weak medium prismatic structure; friable; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine irregularly shaped accumulations of iron and manganese; few fine faint grayish brown (10YR 5/2) redoximorphic depletions and yellowish brown (10YR 5/4) redoximorphic concentrations; neutral; clear smooth boundary.

Bt2—26 to 36 inches; brown (10YR 4/3) sandy clay loam; moderate medium prismatic structure; friable; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few fine irregularly shaped accumulations of iron and manganese; few fine prominent strong brown (7.5YR 5/6) redoximorphic concentrations and distinct light brownish gray (10YR 6/2) redoximorphic depletions; neutral; clear smooth boundary.

Bt3—36 to 43 inches; brown (10YR 4/3) sandy loam; weak medium prismatic structure; friable; many distinct dark grayish brown (10YR 4/2) clay films on faces of peds; common medium irregularly shaped accumulations of iron and manganese; common medium prominent reddish brown (5YR 4/4) and common medium distinct yellowish brown (10YR 5/6) redoximorphic concentrations; neutral; gradual smooth boundary.

Cg1—43 to 54 inches; grayish brown (10YR 5/2) and strong brown (7.5YR 5/6) sandy loam; massive; very friable; common medium irregularly shaped accumulations of iron and manganese; common medium distinct reddish brown (5YR 4/4) redoximorphic concentrations; neutral; abrupt smooth boundary.

Cg2—54 to 61 inches; gray (10YR 5/1) sandy loam; massive; friable; few medium prominent yellowish brown (10YR 5/8) redoximorphic concentrations; neutral; abrupt smooth boundary.

Cg3—61 to 65 inches; light olive gray (5Y 6/2) and brownish yellow (10YR 6/6) silt loam; massive; friable; common medium distinct yellowish brown (10YR 5/8) redoximorphic concentrations; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of the argillic horizon: 35 to 60 inches

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

Bt horizon (upper part):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—sandy clay loam, loam, clay loam, or sandy loam
Reaction—strongly acid to neutral

Bt horizon (lower part):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 6
Texture—sandy loam, sandy clay loam, or loamy sand
Reaction—moderately acid to slightly alkaline

Cg or C horizon:
Hue—7.5YR, 10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 8
Texture—sand, loamy sand, sandy loam, loam, or silt loam
Reaction—slightly acid to slightly alkaline

102A—La Hogue loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

La Hogue and similar soils: 85 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils that have more sand in the subsoil
- Soils that have less sand in the subsoil

Dissimilar soils:
- The well drained Jasper and Waukee soils on summits and shoulders
- The poorly drained Selma soils on toeslopes
- The poorly drained Orio soils in depressions

Properties and Qualities of the La Hogue Soil

Parent material: Outwash
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately slow to moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 9.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 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 category: Prime farmland
Hydric soil status: Not hydric

La Rose Series

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

Typical Pedon

La Rose loam, 5 to 10 percent slopes, eroded; at an elevation of 852 feet; 2,440 feet north and 2,200 feet west of the southeast corner of sec. 23, T. 44 N., R. 6 E.; McHenry County, Illinois; USGS Woodstock topographic quadrangle; lat. 42 degrees 16 minutes 34 seconds N. and long. 88 degrees 29 minutes 58 seconds W., NAD 27:

Ap—0 to 7 inches; 97 percent very dark grayish brown (10YR 3/2) and 3 percent dark brown (7.5YR 3/4) loam, brown (10YR 5/3) dry; weak medium subangular blocky structure parting to weak fine and medium granular; friable; common very fine roots; 2 percent gravel; neutral; abrupt smooth boundary.

BA—7 to 11 inches; 75 percent dark brown (7.5YR 3/4) and 25 percent very dark grayish brown (10YR 3/2) clay loam; weak medium subangular blocky structure; firm; common very fine roots; 2 percent gravel; neutral; abrupt smooth boundary.

Bt1—11 to 15 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common very fine roots; common faint dark brown (7.5YR 3/4) clay films on faces of peds; very few distinct dark brown (7.5YR 3/2) organic coatings in root channels and in pores; 2 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.

Bt2—15 to 21 inches; brown (7.5YR 4/4) clay loam; weak medium subangular blocky structure; friable; common very fine roots; few faint dark brown (7.5YR 3/4) clay films on faces of peds; very few distinct dark brown (7.5YR 3/2) organic coatings in root channels and in pores; 3 percent gravel; strongly effervescent; slightly alkaline; gradual smooth boundary.

C—21 to 60 inches; brown (7.5YR 5/4) loam; massive; friable; common very fine roots; 4 percent gravel; violently effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 10 inches
Depth to carbonates: 10 to 24 inches
Thickness of the solum: 12 to 24 inches

Ap or A horizon:
Hue—10YR or 7.5YR
Value—2 or 3
Chroma—1 to 3; 4 in some pedons in eroded areas
Texture—loam or silt loam

Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam
Content of gravel—less than 7 percent

C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 or 4
Texture—loam or silt loam
Content of gravel—2 to 10 percent

60B2—La Rose silt loam, 2 to 5 percent slopes, eroded

Setting

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

Map Unit Composition

La Rose and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a thicker subsoil
- Soils that have a thinner surface layer that also contains more gravel

Dissimilar soils:
- The poorly drained Drummer soils on toeslopes
- The somewhat poorly drained Flanagan soils on footslopes

Properties and Qualities of the La Rose Soil

Parent material: Loamy till
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 layer: 10 to 24 inches to dense material
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
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 category: Prime farmland
Hydric soil status: Not hydric

60C2—La Rose silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

La Rose and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have a thicker subsoil
- Soils that have a thinner surface layer that also contains more gravel

Dissimilar soils:
- The somewhat poorly drained Flanagan soils on footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the La Rose Soil

Parent material: Loamy till
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 layer: 10 to 24 inches to dense material
Available water capacity: About 6.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.5 to 3.5 percent
Shrink-swell potential: Moderate
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: 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.; Whiteside County, Illinois; USGS Tampico topographic quadrangle; lat. 41 degrees 41 minutes 09 seconds N. and long. 89 degrees 48 minutes 50 seconds W., NAD 27:

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

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

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

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

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

2C—36 to 54 inches; brown (7.5YR 5/4) coarse sand; single grain; loose; common fine prominent yellowish brown (10YR 5/8) iron oxide accumulations 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 A horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—loam

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

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

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

647A—Lawler loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are deeper to sandy textures
- Soils that do not have a water table within a depth of 3 feet

Dissimilar soils:
- The well drained Dickinson soils in positions similar to those of the Lawler soil

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 layer: More than 80 inches
Available water capacity: About 6.5 inches to a depth of 60 inches

Content of organic matter in the surface layer: 4.0 to 5.0 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 category: 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; at an elevation of 695 feet; 318 feet south and 1,040 feet east of the northwest corner of sec. 17, T. 17 N., R. 9 E.; 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 prominent 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 faint 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 thinner dark surface soil
- Soils that have a higher content of sand

Dissimilar soils:
- The poorly drained Otter soils on the lower parts of the 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 layer: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 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: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3w
Prime farmland category: 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 more sand in the subsurface layer and substratum
- Soils that have a buried black surface layer
- Soils that have a thicker subsurface layer

Dissimilar soils:
- The poorly drained Otter soils on toeslopes
- The well drained Ross soils on summits

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 layer: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 7.0 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: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Martinsville Series

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

Typical Pedon

Martinsville silt loam, 2 to 5 percent slopes; at an elevation of 705 feet; 200 feet north and 2,440 feet west of the center of sec. 36, T. 21 N., R. 7 E.; Champaign County, Illinois; USGS Rising topographic quadrangle; lat. 40 degrees 13 minutes 53 seconds N. and long. 88 degrees 21 minutes 52 seconds W., NAD 27:

Ap—0 to 6 inches; mixed dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4) silt loam, pale brown (10YR 6/3) dry; moderate fine and medium granular structure; friable; slightly acid; abrupt smooth boundary.
E—6 to 9 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; weak medium platy structure parting to moderate medium subangular blocky; friable; light gray (10YR 7/1) silt coatings on faces of peds; few thin dark grayish brown (10YR 4/2) films on faces of peds; neutral; abrupt smooth boundary.
Bt1—9 to 18 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; many thin brown (10YR 4/3) clay films on faces of peds; common fine accumulations of iron and manganese; slightly acid; clear smooth boundary.
2Bt2—18 to 33 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common thin brown (10YR 4/3) clay films on faces of peds; common thin accumulations of iron and manganese; slightly acid; clear smooth boundary.
2Bt3—33 to 42 inches; dark yellowish brown (10YR 4/4) sandy loam; weak coarse prismatic structure parting to weak coarse subangular blocky; friable; few thin brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.
2BC—42 to 48 inches; yellowish brown (10YR 5/4), stratified silt loam and loam; weak coarse prismatic structure; friable; very few thin brown (10YR 4/3) clay films lining pores; moderately acid; clear smooth boundary.
2C—48 to 72 inches; mottled yellowish brown (10YR 5/4) and dark grayish brown (10YR 4/2), stratified silt loam, loam, and sandy loam; massive; friable; slightly acid.

Range in Characteristics

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

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

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

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

570A—Martinsville silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a thinner subsoil
- Soils that have more sand or gravel in the substratum

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

Properties and Qualities of the Martinsville Soil

Parent material: Outwash with a thin mantle of loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

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

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have a thinner subsoil
- Soils that have more sand or gravel in the substratum

Dissimilar soils:
- The well drained Billett soils on summits and shoulders
- The well drained, moderately deep Whalan soils on backslopes

Properties and Qualities of the Martinsville Soil

Parent material: Outwash with a thin mantle of 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 layer: More than 80 inches
Available water capacity: About 9.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

570C2—Martinsville silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand or gravel in the substratum
- Soils that have less sand in the upper part of the subsoil

Dissimilar soils:
- The well drained Billett soils on summits and shoulders
- The well drained, moderately deep Whalan soils on backslopes

Properties and Qualities of the Martinsville Soil

Parent material: Outwash with a thin mantle of loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

570D—Martinsville silt loam, 10 to 18 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

Martinsville and similar soils: 80 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils that have more sand or gravel in the substratum
- Soils that have less sand in the upper part of the subsoil
- Soils that are more eroded

Dissimilar soils:
- The excessively drained Eleva and Elizabeth soils on backslopes
- The well drained, moderately deep Whalan soils on backslopes

Properties and Qualities of the Martinsville Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 4e
Prime farmland category: Not prime farmland
Hydric soil status: Not 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.; 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) iron masses 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 2.5/) manganese concretions; 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) iron masses 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 2.5/) manganese concretions; few pebbles; few fine prominent strong brown (7.5YR 5/6) iron masses 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—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, loamy sand, silt loam, silty clay loam, or clay loam; thin strata of sand or 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 thicker dark surface soil
- Soils that have more sand

Dissimilar soils:
- The poorly drained Ambraw soils on the lower parts of the flood plains

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: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.3 inches to a depth of 60 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 category: Prime farmland
Hydric soil status: Not hydric

Millington Series

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

Typical Pedon

Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded; at an elevation of 595 feet; 700 feet south and 940 feet west of the northeast corner of sec. 25, T. 20 N., R. 4 E.; 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—silty clay loam, silt loam, or 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 more sand in the substratum

Dissimilar soils:
- The well drained Du Page and Ross soils on summits and shoulders
- The somewhat poorly drained Lawson soils on footslopes

Properties and Qualities of the Millington Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, November through June
Deepest ponding (depth, months): 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 category: Not prime farmland
Hydric soil status: Hydric

Morocco Series

Taxonomic classification: Mixed, mesic Aquic Udipsamments

Typical Pedon

Morocco loamy fine sand, 0 to 2 percent slopes; 822 feet west and 1,443 feet north of the southeast corner of sec. 28, T. 20 N., R. 10 E.; Lee County, Illinois; USGS Amboy topographic quadrangle; lat. 41 degrees 41 minutes 24 seconds N. and long. 89 degrees 20 minutes 49 seconds W., NAD 27:

Ap—0 to 7 inches; dark brown (10YR 3/3) loamy fine sand, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; fine roots; moderately acid; abrupt smooth boundary.

Bw1—7 to 16 inches; yellowish brown (10YR 5/4) loamy fine sand; weak medium subangular blocky structure; very friable; fine roots; brown (10YR 5/3) organic stains on vertical faces of peds; fine prominent yellowish red (5YR 5/6) masses of iron-manganese accumulation in the matrix; very strongly acid; clear smooth boundary.

Bw2—16 to 23 inches; pale brown (10YR 6/3) sand; weak medium subangular blocky structure; very friable; fine roots; common fine distinct yellowish brown (10YR 5/6) and few fine prominent yellowish red (5YR 5/6) masses of iron-manganese accumulation in the matrix; many medium faint light brownish gray (2.5Y 6/2) depletions in the matrix; very strongly acid; clear smooth boundary.

Bw3—23 to 38 inches; light brownish gray (2.5Y 6/2) sand; weak medium subangular blocky structure; very friable; fine prominent yellowish brown (10YR 5/6) masses of iron-manganese accumulation; very strongly acid; clear smooth boundary.

C—38 to 60 inches; yellowish brown (10YR 5/4) sand; single grain; very friable; fine prominent yellowish red (5YR 5/6) masses of iron-manganese accumulation and common medium distinct light brownish gray (2.5Y 6/2) iron depletions; very strongly acid.

Range in Characteristics

Depth to carbonates: More than 40 inches
Thickness of the solum: 20 to 54 inches

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

Bw horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—sand, fine sand, loamy sand, or loamy fine sand

Cg and/or C horizon:
Hue—7.5YR to 2.5Y
Value—5 to 8
Chroma—1 to 4
Texture—sand or fine sand

501A—Morocco loamy fine sand, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have less sand in the upper part of the subsoil

Dissimilar soils:
- The excessively drained Coloma soils on summits and shoulders
- The poorly drained Gilford and Orio soils on toeslopes

Properties and Qualities of the Morocco Soil

Parent material: Sandy outwash
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 layer: More than 80 inches
Available water capacity: About 4.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 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: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: 4s
Prime farmland category: 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; at an elevation of 695 feet; 2,500 feet west and 2,240 feet north of the southeast corner of sec. 29, T. 9 N., R. 1 W.; 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 faint 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 faint 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 carbonates: More than 40 inches
Thickness of the solum: 40 to 64 inches

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

Bt and Btg horizons:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam

Cg 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 are loam in the substratum
- Soils that have a thinner surface layer and subsurface layer
- Soils that have a seasonal high water table at a depth of more than 4 feet

Dissimilar soils:
- The poorly drained Denny soils in depressions
- The poorly drained Sable soils in the slightly lower areas

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 layer: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 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 category: Prime farmland
Hydric soil status: Not hydric

Nachusa Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Aquic Argiudolls

Typical Pedon

Nachusa silt loam, 0 to 2 percent slopes; 246 feet east and 952 feet north of the southwest corner of sec. 10, T. 20 N., R. 10 E.; Lee County, Illinois; USGS Amboy topographic quadrangle; lat. 41 degrees 43 minutes 55 seconds N. and long. 89 degrees 20 minutes 33 seconds W., NAD 27:

Ap—0 to 11 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine granular structure; friable; common fine roots; neutral; abrupt smooth boundary.

BA—11 to 16 inches; dark grayish brown (10YR 4/2) silt loam, light gray (10YR 7/2) dry; moderate fine subangular blocky structure parting to moderate fine granular; friable; common fine roots; common thin very dark gray (10YR 3/1) organic coatings on faces of peds; few fine prominent yellowish brown (10YR 5/6) masses of iron oxide accumulation in the matrix; neutral; clear smooth boundary.

Bt1—16 to 23 inches; dark grayish brown (10YR 4/2) silty clay loam; weak medium prismatic structure parting to moderate fine subangular blocky; friable; common fine roots; common thin dark gray (10YR 4/1) clay films on faces of peds; few fine dark iron-manganese oxide concretions; common fine prominent yellowish brown (10YR 5/8) masses of iron oxide accumulation in the matrix; moderately acid; clear smooth boundary.

2Bt2—23 to 33 inches; yellowish brown (10YR 5/8) clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; firm; common fine roots; thin dark gray (10YR 4/1) clay films (continuous on vertical faces of peds and discontinuous on horizontal faces); common fine dark iron-manganese oxide concretions; few fine prominent grayish brown (2.5Y 5/2) iron depletions and few fine faint strong brown (7.5YR 5/8) masses of iron oxide accumulation in the matrix; slightly acid; clear smooth boundary.

2Bt3—33 to 46 inches; yellowish brown (10YR 5/8) clay loam; moderate medium prismatic structure; firm; few fine roots; few thin dark gray (10YR 4/1) clay films on both vertical and horizontal faces of peds; thick gray (10YR 5/1) and very dark gray (10YR 3/1) fillings in root channels; few fine dark iron-manganese oxide concretions; few fine prominent grayish brown (2.5Y 5/2) iron depletions and few fine faint strong brown (7.5YR 5/8) masses of iron oxide accumulation in the matrix; neutral; clear smooth boundary.

2Bt4—46 to 60 inches; yellowish brown (10YR 5/8) loam that has lenses of sandy loam; weak coarse prismatic structure; friable; common thin gray (10YR 5/1) clay films on faces of peds; common fine prominent gray (10YR 6/1) iron depletions; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 16 inches
Thickness of the solum: 48 to 72 inches
Thickness of eolian sediments over the paleosol: 20 to 34 inches

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

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

2Bt horizon:
Hue—7.5YR or 10YR; ranges to 2.5Y or 5Y in some pedons or subhorizons
Value—4 to 6
Chroma—2 to 8
Texture—typically clay loam; loam or clay included in some subhorizons

649A—Nachusa silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil

• Soils that have more sand in the lower part of the subsoil
• Soils that have a seasonal high water table at a depth of more than 2 feet

Dissimilar soils:
• The poorly drained Clyde and Orio soils on toeslopes

Properties and Qualities of the Nachusa Soil

Parent material: Loamy eolian deposits over till
Drainage class: Somewhat 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 layer: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched 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 category: Prime farmland
Hydric soil status: Not hydric

Normandy Series

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

Typical Pedon

Normandy loam, 0 to 2 percent slopes, occasionally flooded; at an elevation of 758 feet; 210 feet north and 444 feet east of the southwest corner of sec. 33, T. 39 N., R. 1 W.; Lee County, Illinois; USGS Ashton topographic quadrangle; lat. 41 degrees 48 minutes 15 seconds N. long. 89 degrees 07 minutes 50 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; about 2 percent gravel; strongly effervescent; slightly alkaline; abrupt smooth boundary.
AB—8 to 13 inches; very dark gray (10YR 3/1) silt loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; about 2 percent gravel; violently effervescent; slightly alkaline; abrupt smooth boundary.
Bg1—13 to 19 inches; dark gray (10YR 4/1) silt loam, gray (10YR 5/1) dry; moderate medium subangular blocky structure; friable; about 2 percent gravel; violently effervescent; slightly alkaline; abrupt smooth boundary.
Bg2—19 to 25 inches; gray (5Y 5/1) silt loam; moderate medium subangular blocky structure; friable; about 2 percent gravel; common distinct dark gray (10YR 4/1) clay films on faces of peds; few fine prominent yellowish brown (10YR 5/6) redoximorphic concentrations; slightly effervescent; slightly alkaline; abrupt smooth boundary.

Bg3—25 to 33 inches; gray (5Y 5/1) silt loam; moderate medium prismatic structure parting to moderate fine subangular blocky; friable; about 2 percent gravel; common distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) redoximorphic concentrations; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg4—33 to 39 inches; gray (5YR 6/1) silt loam; moderate medium prismatic structure parting to moderate coarse subangular blocky; friable; about 2 percent gravel; common prominent dark gray (10YR 4/1) clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) redoximorphic concentrations; slightly effervescent; slightly alkaline; clear smooth boundary.

Bg5—39 to 49 inches; gray (5Y 6/1) silt loam; moderate coarse subangular blocky structure; friable; few fine prominent yellowish brown (10YR 5/6) redoximorphic concentrations; about 2 percent gravel; violently effervescent; slightly alkaline; clear smooth boundary.

Bg6—49 to 54 inches; very dark gray (10YR 3/1) and dark gray (10YR 4/1) loam; weak medium subangular blocky structure; friable; strongly effervescent; slightly alkaline; abrupt smooth boundary.

2Cg—54 to 60 inches; olive gray (5Y 5/2) sand; single grain; loose; violently effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

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

Bg, Btg, or Bkg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 or 2
Texture—clay loam, loam, silty clay loam, silt loam, or sandy loam

2Cg horizon:
Hue—10YR, 7.5YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—1 to 4
Texture—sand or loamy sand

8492A—Normandy loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less sand throughout
- Soils that are not calcareous in the surface layer and subsoil

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

Properties and Qualities of the Normandy Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 8.0 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 category: 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; at an elevation of 633 feet; 716 feet south and 1,056 feet east of the northwest corner of sec. 18, T. 17 N., R. 6 E.; 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.
Bw1—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.
Bw2—23 to 36 inches; yellowish brown (10YR 5/6) fine sand; 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

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

741D3—Oakville fine sand, 7 to 20 percent slopes, severely eroded

Setting

Landform: Dunes
Position on the landform: Backslopes

Map Unit Composition

Oakville and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have dark brown bands in the lower part of the subsoil and in the substratum
- Soils that have slopes of less than 7 percent
- Soils that have a dark surface layer

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 layer: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 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: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

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

Odell Series

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

Typical Pedon

Odell silt loam, 0 to 2 percent slopes; at an elevation of 699 feet; 650 feet west and 200 feet north of the southeast corner of sec. 36, T. 21 N., R. 8 E.; Lee County, Illinois; USGS Dixon West topographic quadrangle; lat. 41 degrees 45 minutes 31 seconds N. and long. 89 degrees 30 minutes 53 seconds W., NAD 27:

Ap—0 to 12 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; friable; neutral; abrupt smooth boundary.

AB—12 to 16 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; friable; neutral; clear smooth boundary.

2Bt1—16 to 22 inches; brown (10YR 4/3) clay loam; friable; very dark gray (10YR 3/1) organo-clay films on vertical faces of peds; fine yellowish brown (10YR 5/8) iron-manganese masses throughout; slightly acid; clear smooth boundary.

2Bt2—22 to 27 inches; brown (10YR 4/3) clay loam; friable; very dark gray (10YR 3/1) organo-clay films on vertical faces of peds; fine grayish brown (2.5Y 5/2) iron depletions throughout and fine yellowish brown (10YR 5/8) iron-manganese masses throughout; few pebbles; neutral; clear smooth boundary.

2Bt3—27 to 34 inches; yellowish brown (10YR 5/6) clay loam; friable; very dark gray (10YR 3/1) organo-clay films on vertical faces of peds; fine grayish brown (2.5Y 5/2) iron depletions throughout and fine strong brown (7.5YR 5/8) iron-manganese masses throughout; few pebbles; neutral; clear smooth boundary.

2C—34 to 60 inches; yellowish brown (10YR 5/4) loam; friable; fine grayish brown (2.5Y 5/2) iron depletions throughout and fine yellowish brown (10YR 5/8) iron-manganese masses throughout; few pebbles; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 22 inches
Thickness of the solum: 34 to 42 inches

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

2Bt horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—loam or clay loam
Content of rock fragments—0 to 14 percent gravel and cobbles

2C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—2 to 4
Texture—loam or fine sandy loam
Content of rock fragments—0 to 14 percent gravel and cobbles
Calcium carbonate equivalent—15 to 40 percent

490A—Odell silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer and subsoil
- Soils that have more sand in the subsoil
- Soils that have more sand in the substratum

Dissimilar soils:
- The well drained Parr soils on shoulders
- The poorly drained Clyde soils on toeslopes

Properties and Qualities of the Odell Soil

Parent material: Till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 8.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 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 category: 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 (fig. 6); 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.; 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:

Figure 6.—A typical profile of an Orio soil. Depth is marked in inches.

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 faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; common medium prominent 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:
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam or mucky sandy 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 and BC horizons:
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: Depressions on outwash plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have a thinner subsoil
- Soils that have more sand and less clay in the subsoil

Dissimilar soils:
- Soils that are ponded throughout most of the growing season

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 layer: More than 80 inches
Available water capacity: About 8.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

1200A—Orio mucky sandy loam, undrained, 0 to 2 percent slopes

Setting

Landform: Depressions on flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less clay in the subsoil
- Soils that have a thicker subsoil that contains more clay
- Soils that have loamy strata in the substratum

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

Properties and Qualities of the Orio Soil

Parent material: Outwash
Drainage class: Poorly drained (fig. 7)
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 7.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through June
Deepest ponding (depth, months): 0.5 foot, January 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: Moderately high

Figure 7.—A field in an area of Orio mucky sandy loam, undrained, 0 to 2 percent slopes.

Interpretive Groups

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

802A—Orthents, loamy, nearly level

Setting

Landform: Ground moraines
Position on the landform: Backslopes
Slope range: 0 to 2 percent

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand and gravel
- Soils in areas used as highway interchanges
- Soils in areas used as landfills

Dissimilar soils:
- The well drained Dakota and Jasper soils on undisturbed summits and shoulders

- The somewhat poorly drained Nachusa soils on undisturbed footslopes
- The poorly drained Clyde soils on undisturbed toeslopes

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 layer: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 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 concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: 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.; 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/) 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 dark surface soil: 7 to 15 inches
Thickness of the solum: 40 to more than 60 inches
Depth to carbonates: More than 48 inches

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

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

C or Cg horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—silt loam

86B—Osco silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that contain more sand in the lower part of the subsoil and in the substratum
- Soils that have a seasonal high water table within a depth of 4 feet

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

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 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 concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

86C2—Osco silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that contain more sand in the lower part of the subsoil and in the substratum

Dissimilar soils:
- The somewhat poorly drained Lawson soils in drainageways
- The poorly drained Sable soils on summits
- The poorly drained Denny soils in depressions

Properties and Qualities of the Osco Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 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: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: 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; at an elevation of 672 feet; 1,960 feet west and 2,540 feet south of the northeast corner of sec. 35, T. 22 N., R. 5 E.; 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 2.5/) silt loam, very dark gray (10YR 3/1) dry; weak fine subangular blocky structure parting to moderate medium granular; friable; few fine prominent 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 2.5/) mucky silt loam, black (N 2.5/) 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 distinct 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 to 3
Chroma—0 to 2
Texture—silt loam

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

Cg 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 a thinner dark surface soil
- Soils that have more clay in the profile

Dissimilar soils:
- The somewhat poorly drained Lawson soils in the slightly higher positions
- The well drained Ross soils on natural levees

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 layer: More than 80 inches
Available water capacity: About 13.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Hydric

8076A—Otter silt loam, 0 to 2 percent slopes, occasionally 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 a seasonal high water table at a depth of more than 1 foot
- Soils that have more sand in the subsurface layer
- Soils that have more sand in the substratum
- Soils that have more clay

Dissimilar soils:
- Poorly drained soils that are ponded for most of the year

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 layer: More than 80 inches
Available water capacity: About 12.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 10.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Palsgrove Series

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

Typical Pedon

Palsgrove silt loam, 5 to 10 percent slopes; 2,020 feet north and 5 feet east of the southwest corner of sec. 30, T. 29 N., R. 7 E.; Stephenson County, Illinois; USGS Lena topographic quadrangle; lat. 42 degrees 27 minutes 51 seconds N. and long. 89 degrees 44 minutes 59 seconds W., NAD 27:

A—0 to 4 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine and very fine granular structure; friable; many fine roots; neutral; abrupt smooth boundary.

E—4 to 8 inches; brown (10YR 5/3) silt loam; moderate thin platy structure; friable; many fine roots; slightly acid; clear smooth boundary.

BE—8 to 11 inches; brown (10YR 4/3) silt loam; moderate very fine and fine subangular blocky structure; friable; many fine roots; common light gray (10YR 7/1) (dry) silt coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—11 to 17 inches; brown (10YR 4/3) silty clay loam; moderate very fine and fine subangular blocky structure; firm; many fine roots; few faint dark brown (7.5YR 3/4) clay films and few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt2—17 to 23 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; firm; common fine roots; common faint dark brown (7.5YR 3/4) clay coatings and few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt3—23 to 30 inches; brown (10YR 4/3) silty clay loam; moderate fine angular and subangular blocky structure; firm; common fine and very fine roots; common faint dark brown (7.5YR 3/2) clay coatings and few distinct light gray (10YR 7/1) (dry) silt coatings on faces of peds; strongly acid; clear smooth boundary.

Bt4—30 to 37 inches; brown (10YR 4/3) and dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium angular blocky structure; firm; common fine and very fine roots; common faint dark brown (7.5YR 3/2) clay coatings on faces of peds; strongly acid; clear wavy boundary.

2BC—37 to 42 inches; reddish brown (5YR 4/4) and dark reddish brown (5YR 3/3) clay; moderate fine and medium angular and subangular blocky structure; very firm; few fine and very fine roots; 2 percent cherty gravel; few distinct dark brown (7.5YR 3/2) and prominent black (10YR 2/1) organo-clay coatings; slightly acid; clear wavy boundary.

2R—42 inches; level-bedded dolomitic limestone; partly disintegrated in the upper 3 to 5 inches.

Range in Characteristics

Thickness of the loess: 36 to 50 inches
Thickness of the solum: 40 to 60 inches
Thickness of the residuum: 2 to 20 inches; commonly 2 to 12 inches
Depth to lithic contact with dolomitic limestone: 40 to 60 inches

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

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

2Bt or 2BC horizon:
Hue—2.5YR, 5YR, 7.5YR, or 10YR
Value—3 to 5
Chroma—3 to 8
Content of chert gravel—1 to 15 percent

429C—Palsgrove silt loam, 5 to 10 percent slopes

Setting

Landform: Hillslopes
Position on the landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a darker surface layer
- Soils that have more sand in the subsoil

Dissimilar soils:
- The well drained, very deep St. Charles and moderately deep Whalan soils in positions similar to those of the Palsgrove soil

Properties and Qualities of the Palsgrove Soil

Parent material: Loess over residuum derived from limestone and dolomite
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive layer: 40 to 60 inches to lithic bedrock
Available water capacity: About 8.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
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: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: Not prime farmland
Hydric soil status: Not 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.; 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; strongly effervescent; moderately alkaline; 5 percent gravel; clear wavy boundary.
2C—60 to 80 inches; 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:
Hue—10YR

Value—2 or 3
Chroma—1 to 3
Texture—silt 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 and 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 below a depth of 60 inches
- Soils in which the dark surface soil is 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
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Parkway Soil

Parent material: Loess and the underlying 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 layer: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 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 concrete
Surface runoff class: Low
Susceptibility to water erosion: Slight
Susceptibility to wind erosion: Slight

Interpretive Groups

Land capability classification: 2e
Prime farmland category: 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 below a depth of 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 and the underlying 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 layer: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 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: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Slight

Interpretive Groups

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

Parr Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Mollic Oxyaquic Hapludalfs
Taxadjunct features: The Parr soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

Typical Pedon

Parr silt loam, 2 to 5 percent slopes; at an elevation of 849 feet; 2,186 feet north and 2,604 feet west of the southeast corner of sec. 23, T. 44 N., R. 6 E.; McHenry County, Illinois; USGS Marengo North topographic quadrangle; lat. 42 degrees 16 minutes 32 seconds N. and long. 88 degrees 30 minutes 03 seconds W., NAD 27:

Ap1—0 to 4 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure parting to moderate fine granular; friable; common very fine roots; common faint black (10YR 2/1) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.

Ap2—4 to 11 inches; very dark brown (10YR 2/2) silt loam, grayish brown (10YR 5/2) dry; moderate medium subangular blocky structure parting to weak medium granular; friable; common very fine roots; common faint black (10YR 2/1) organic coatings on faces of peds; 1 percent gravel; neutral; abrupt smooth boundary.

Bt1—11 to 17 inches; brown (10YR 4/3) silty clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; few faint dark brown (10YR 3/3) clay films on faces of peds; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; 1 percent gravel; slightly acid; clear smooth boundary.

2Bt2—17 to 21 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; common very fine roots; few faint brown (10YR 4/3) and dark brown (10YR 3/3) clay films on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; 3 percent gravel; slightly acid; clear smooth boundary.

2Bt3—21 to 32 inches; brown (7.5YR 4/4) clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; few faint brown (7.5YR 4/3) and dark brown (7.5YR 3/3) clay films on faces of peds; very few distinct dark brown (7.5YR 3/2) organic coatings in root channels and in pores; common fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; 3 percent gravel; neutral; clear smooth boundary.

2BCt—32 to 36 inches; brown (7.5YR 5/4) loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common very fine roots; very few faint dark brown (7.5YR 3/3) clay films in root channels and in pores; very few faint brown (7.5YR 4/4) clay films on faces of peds; common fine black (7.5YR 2.5/1) very weakly cemented iron and manganese oxide concretions throughout; common fine distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; 3 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.

2C—36 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; common very fine roots; very few faint dark brown (7.5YR 3/3) linings in root channels and in pores; common medium white (7.5YR 8/1) soft masses of carbonate throughout; common medium and coarse distinct strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; common fine and medium faint brown (7.5YR 5/3) iron depletions in the matrix; 4 percent gravel; strongly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the dark surface soil: 7 to 12 inches
Thickness of the loess or silty material: Less than 18 inches
Depth to carbonates: 20 to 40 inches
Thickness of the solum: 24 to 40 inches

Ap or A horizon:
Hue—10YR

Value—2 or 3
Chroma—1 to 3
Texture—silt loam

Bt or 2Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam, loam, or silty clay loam
Content of gravel—less than 10 percent

2C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 or 4
Texture—loam
Content of gravel—less than 15 percent

221B2—Parr silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Ground moraines and end moraines
Position on the landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have a lighter colored surface layer
- Soils that have a thicker surface layer
- Soils that have less sand in the upper part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Flanagan and Odell soils on footslopes
- The poorly drained Elpaso soils on toeslopes

Properties and Qualities of the Parr Soil

Parent material: Thin mantle of loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 8.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

221C2—Parr silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have gravel in the surface layer
- Soils that have less sand in the subsoil

Dissimilar soils:
- The excessively drained Sparta soils on summits
- The poorly drained Elpaso soils on toeslopes
- The somewhat poorly drained Lisbon soils on summits and footslopes

Properties and Qualities of the Parr Soil

Parent material: Thin mantle of loess or other silty material and the underlying till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 8.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Peotone Series

Taxonomic classification: Fine, smectitic, mesic Cumulic Vertic Endoaquolls

Typical Pedon

Peotone silty clay loam, 0 to 2 percent slopes; at an elevation of 707 feet; 315 feet south and 2,233 feet east of the northwest corner of sec. 21, T. 29 N., R. 9 E.; Ford County, Illinois; USGS Cabery topographic quadrangle; lat. 40 degrees 58 minutes 48 seconds N. and long. 88 degrees 12 minutes 02 seconds W., NAD 27:

Ap—0 to 7 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.

A—7 to 13 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; weak fine granular structure; friable; common very fine roots; neutral; clear smooth boundary.

Bg1—13 to 27 inches; black (N 2.5/) silty clay loam, dark gray (10YR 4/1) dry; moderate medium angular blocky structure; friable; common very fine roots; neutral; clear smooth boundary.

Bg2—27 to 41 inches; dark gray (10YR 4/1) silty clay; moderate fine prismatic structure; firm; common very fine roots; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly alkaline; clear smooth boundary.

Bg3—41 to 50 inches; dark gray (10YR 4/1) silty clay; moderate medium prismatic structure; firm; few very fine roots; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; common medium faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly alkaline; clear smooth boundary.

Cg—50 to 60 inches; dark gray (10YR 4/1) silty clay loam; massive; firm; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine faint dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches
Depth to carbonates: More than 28 inches
Thickness of the solum: 38 to 60 inches

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

Bg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—2 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—silty clay loam or silt loam

330A—Peotone silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have less clay and more silt in the subsoil

Dissimilar soils:
- The moderately well drained Catlin and Saybrook soils on summits and shoulders
- The somewhat poorly drained Flanagan soils on footslopes

Properties and Qualities of the Peotone Soil

Parent material: Colluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 7.0 percent
Shrink-swell potential: High
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.5 foot, January 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: Moderate

Interpretive Groups

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

864—Pits, quarries

This map unit consists of excavations from which dolomitic limestone has been removed and the areas around the excavations where the soil has been disturbed. The bottom and sides of the pits are limestone bedrock. This map unit supports little or no vegetation, except in areas where the soil has been mixed with excavated rock. The areas that support vegetation make up 5 to 15 percent of the mapped areas. Some pits are filled with water. Most areas of this map unit are mined. Some are used for recreational development. This map unit is moderately suited to recreational uses. Stocking the water-filled pits with fish and planting trees enhance the recreational areas. Topdressing and grading the disturbed areas help to establish vegetation.

Setting

Landform: Uplands or terraces

Map Unit Composition

Pits, quarries: 85 to 95 percent
Dissimilar components: 5 to 15 percent

Minor Components

Dissimilar components:
- Small areas of loamy Orthents, which support vegetation

865—Pits, gravel

This map unit consists of excavations from which gravel and sand have been removed and the areas around the excavations where the soil has been disturbed. This map unit supports little or no vegetation, except in areas where spoil material has been mixed with material from around the pit. Some pits are filled with water.

Map Unit Composition

Pits, gravel: 85 to 95 percent
Dissimilar components: 5 to 15 percent

Minor Components

- Small areas of loamy Orthents, which support vegetation

Plano Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Taxadjunct features: The Plano soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

Typical Pedon

Plano silt loam, 0 to 2 percent slopes; at an elevation of 715 feet; 1,200 feet south and 1,920 feet east of the northwest corner of sec. 13, T. 12 N., R. 7 E.; Stark County, Illinois; USGS Castleton topographic quadrangle; lat. 41 degrees 01 minute 45 seconds N. and long. 89 degrees 39 minutes 00 seconds W., NAD 27:

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

A—9 to 14 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine granular structure; friable; many very fine roots; slightly acid; clear smooth boundary.

Bt1—14 to 19 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine subangular blocky structure; friable; common very fine roots; many faint dark brown (10YR 3/3) organo-clay films on faces of peds; slightly acid; clear smooth boundary.

Bt2—19 to 31 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common very fine roots; many faint brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.

Bt3—31 to 43 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; many faint brown (10YR 4/3) clay films on faces of peds; common distinct very pale brown (10YR 7/3) (dry) clay depletions on faces of peds; few fine faint yellowish brown (10YR 5/4) masses of iron in the matrix; slightly acid; clear smooth boundary.

Bt4—43 to 49 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium prismatic structure; friable; few very fine roots; many faint brown (10YR 4/3) clay films on faces of peds; few distinct very pale brown (10YR 7/3) (dry) clay depletions on faces of peds; slightly acid; clear smooth boundary.

2Bt5—49 to 53 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure; friable; few fine roots; many faint brown (10YR 4/3) clay films on faces of peds; neutral; clear smooth boundary.

2BC—53 to 60 inches; brown (7.5YR 4/4) sandy loam; weak medium subangular blocky structure; very friable; many faint dark yellowish brown (10YR 3/4) clay films bridging sand grains; about 5 percent gravel; neutral; gradual smooth boundary.

2C—60 to 72 inches; stratified yellowish brown (10YR 5/6) and brown (7.5YR 4/4) sandy loam, loam, and loamy sand; massive; friable; about 12 percent gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of the argillic horizon: 44 to 70 inches

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

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

Bt horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Reaction—moderately acid to neutral

2Bt or 2BC horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 6
Texture—silt loam, loam, sandy loam, clay loam, or sandy clay loam
Reaction—moderately acid to slightly alkaline

2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—3 to 5
Chroma—3 to 6
Texture—loam, loamy sand, sandy loam, or silt loam
Reaction—moderately acid to moderately alkaline

199C2—Plano silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have less sand in the lower part of the subsoil
- Soils that have slightly alkaline loam in the substratum

Dissimilar soils:
- The poorly drained Drummer and Sable soils and the somewhat poorly drained Elburn soils in the slightly lower positions

Properties and Qualities of the Plano Soil

Parent material: Loess and the underlying 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 layer: More than 80 inches
Available water capacity: About 10.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Prairieville Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Oxyaquic Argiudolls

Typical Pedon

Prairieville silt loam, 2 to 5 percent slopes; at an elevation of 800 feet; 1,855 feet north and 346 feet west of the southeast corner of sec. 5, T. 20 N., R. 10 E.; Lee County, Illinois; USGS Amboy topographic quadrangle; lat. 41 degrees 44 minutes 57 seconds N. and long. 89 degrees 21 minutes 54 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 medium granular structure; friable; common fine roots; neutral; abrupt smooth boundary.

A—9 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; moderate medium granular structure; friable; common fine roots; moderately acid; clear smooth boundary.

BA—12 to 18 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common fine roots; many thin very dark grayish brown (10YR 3/2) organic coatings on faces of peds; strongly acid; clear smooth boundary.

Bw—18 to 26 inches; brown (10YR 4/3) loam; moderate medium subangular blocky structure; friable; few fine roots; common thin very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few pebbles 2 to 5 millimeters in diameter; strongly acid; clear smooth boundary.

2Bt1—26 to 31 inches; yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; firm; few fine roots; common thin dark grayish brown (10YR 4/2) clay films on faces of peds; few pebbles 2 to 20 millimeters in diameter; strongly acid; clear smooth boundary.

2Bt2—31 to 41 inches; yellowish brown (10YR 5/6) clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; common thin dark yellowish brown (10YR 4/4) clay films on faces of peds; few dark iron-manganese oxide concretions; few fine distinct strong brown (7.5YR 5/8) masses of iron oxide accumulation in the matrix; strongly acid; clear smooth boundary.

2Bt3—41 to 57 inches; yellowish brown (10YR 5/6) clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many moderately thick brown (10YR 4/3) clay films on faces of peds; few dark iron-manganese oxide concretions; few fine distinct strong brown (7.5YR 5/8) and few fine distinct brownish yellow (10YR 6/8) masses of iron oxide accumulation in the matrix; slightly acid; clear smooth boundary.

2Bt4—57 to 60 inches; yellowish brown (10YR 5/4) clay loam; weak coarse prismatic structure; firm; few fine roots; few dark grayish brown (10YR 4/2) root channel fillings; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 15 inches
Thickness of the solum: More than 60 inches
Depth to carbonates: More than 60 inches
Depth to till: 13 to 34 inches

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

BA or Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—commonly silt loam or loam; ranges to clay loam or silty clay loam

2Bt horizon:
Hue—10YR or 7.5YR; less commonly 2.5Y or 5Y
Value—4 to 6
Chroma—3 to 8
Texture—clay loam, loam, or clay

2C horizon (if it occurs):
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—4 to 8
Texture—clay loam, loam, or silt loam

650B—Prairieville silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less clay in the subsoil
- Soils that have more sand in the lower part of the subsoil
- Soils that have a seasonal high water table within a depth of 4 feet

Dissimilar soils:
- The poorly drained Clyde soils on toeslopes

Properties and Qualities of the Prairieville Soil

Parent material: Loamy eolian deposits over till
Drainage class: Moderately well 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 layer: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: 2 feet, January through May
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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

Rockton Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Rockton soil in map unit 503C2 has a thinner dark surface

layer than is defined as the range for the series. This soil is classified as a fine-loamy, mixed, superactive, mesic Mollic Hapludalf.

Typical Pedon

Rockton silt loam, 2 to 5 percent slopes; at an elevation of 801 feet; 1,635 feet south and 195 feet east of the northwest corner of sec. 31, T. 44 N., R. 5 E.; McHenry County, Illinois; USGS Garden Prairie topographic quadrangle; lat. 42 degrees 15 minutes 03 seconds N. and long. 88 degrees 42 minutes 16 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak medium subangular blocky structure parting to weak fine granular; friable; common very fine roots; neutral; clear smooth boundary.

A—8 to 11 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure parting to moderate fine granular; friable; common very fine roots; many faint black (10YR 2/1) organic coatings on faces of peds; neutral; abrupt smooth boundary.

BA—11 to 14 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure; friable; common very fine roots; common distinct black (10YR 2/1) organic coatings on faces of peds; 1 percent gravel; neutral; abrupt smooth boundary.

Bt1—14 to 18 inches; brown (10YR 4/3) clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few faint dark brown (10YR 3/3) clay films on faces of peds; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; 1 percent gravel; neutral; abrupt smooth boundary.

Bt2—18 to 24 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; firm; common very fine roots; few faint brown (10YR 4/3) and dark brown (10YR 3/3) clay films on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; 3 percent gravel; neutral; clear smooth boundary.

Bt3—24 to 31 inches; dark yellowish brown (10YR 4/4) sandy clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine roots; few faint brown (10YR 4/3) clay films on faces of peds; 5 percent gravel; neutral; abrupt smooth boundary.

2BC—31 to 35 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent brownish yellow (10YR 6/6) clay loam; weak medium subangular blocky structure; firm; common very fine roots; 10 percent gravel; strongly effervescent; slightly alkaline; abrupt smooth boundary.

2R—35 inches; limestone bedrock.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 12 inches
Depth to carbonates: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Thickness of the solum: 20 to 40 inches

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

Bt horizon:
Hue—7.5YR or 10YR

Value—4 or 5
Chroma—3 or 4
Texture—clay loam, loam, or sandy clay loam

2Bt or 2BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—clay loam, silty clay loam, silty clay, or clay

503B—Rockton silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have an eroded surface layer
- Soils that are more than 40 inches deep to bedrock

Dissimilar soils:
- The well drained, very deep Jasper soils in positions similar to those of the Rockton soil
- The somewhat excessively drained Elizabeth soils on backslopes

Properties and Qualities of the Rockton Soil

Parent material: Loamy till over clayey residuum derived from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 6.0 percent
Shrink-swell potential: High
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

503C2—Rockton silt loam, 5 to 10 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more clay in the subsoil
- Soils that are less than 20 inches deep to bedrock
- Soils that are more than 40 inches deep to bedrock

Dissimilar soils:
- The well drained, very deep Jasper soils in positions similar to those of the Rockton soil
- The somewhat excessively drained Elizabeth soils on backslopes

Properties and Qualities of the Rockton Soil

Parent material: Loamy till over clayey residuum derived from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 6.0 percent
Shrink-swell potential: High
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Rodman Series

Taxonomic classification: Sandy-skeletal, mixed, mesic Typic Hapludolls

Typical Pedon

Rodman gravelly loam, 6 to 12 percent slopes, eroded; at an elevation of 530 feet; 2,120 feet south and 740 feet west of the northeast corner of sec. 9, T. 33 N., R. 9 E.; Will County, Illinois; USGS Wilmington topographic quadrangle; lat. 41 degrees 21 minutes 25 seconds N. and long. 88 degrees 11 minutes 43 seconds W., NAD 27:

A—0 to 8 inches; very dark grayish brown (10YR 3/2) gravelly loam, grayish brown (10YR 5/2) dry; weak fine granular structure; very friable; many very fine and common fine roots; 15 percent gravel; neutral; clear smooth boundary.

Bw—8 to 12 inches; dark brown (10YR 3/3) gravelly loam; weak fine subangular blocky structure parting to weak fine granular; very friable; common very fine roots; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; 15 percent gravel; slightly alkaline; abrupt smooth boundary.

C1—12 to 18 inches; brown (10YR 4/3) very gravelly loamy sand; single grain; loose; common very fine roots; few faint very dark grayish brown (10YR 3/2) organic coatings on sand and gravel; 40 percent gravel; slightly effervescent; slightly alkaline; clear wavy boundary.

C2—18 to 60 inches; dark yellowish brown (10YR 4/4) very gravelly sand; single grain; loose; few very fine roots; 45 percent gravel and 15 percent cobbles; slightly effervescent; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 6 to 15 inches
Depth to carbonates: 10 to 15 inches
Thickness of the solum: 10 to 15 inches

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 to 3
Chroma—1 or 2
Texture—loam, sandy loam, gravelly loam, or gravelly sandy loam
Content of gravel—10 to 25 percent

Bw horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 or 3
Texture—loam, sandy loam, gravelly loam, or gravelly sandy loam
Content of gravel—10 to 35 percent

C horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—the very gravelly or extremely gravelly analogs of loamy sand, sand, loamy coarse sand, or coarse sand
Content of gravel—35 to 70 percent

93E—Rodman gravelly sandy loam, 12 to 20 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have a thicker subsoil
- Soils that have slopes of more than 20 percent
- Soils that have lenses of sandy loam in the substratum

Dissimilar soils:
- Soils that are underlain by limestone or sandstone bedrock

Properties and Qualities of the Rodman Soil

Parent material: Calcareous sandy and gravelly outwash
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 2.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Flooding: None
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

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

Ross Series

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

Typical Pedon

Ross silt loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 600 feet; 232 feet north and 1,490 feet west of the southeast corner of sec. 28, T. 23 N., R. 3 W.; 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 or 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 textures

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 more sand throughout

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The poorly drained Ambraw soils in the lower areas

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: Moderate or moderately rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Low
Depth and months of the highest apparent seasonal high water table: 4 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 concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 1
Prime farmland category: 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; at an elevation of 734 feet; 1,281 feet south and 97 feet west of the northeast corner of sec. 14, T. 9 N., R. 3 W.; 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 faint 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/) 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/) 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

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

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

68A—Sable silty clay loam, 0 to 2 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the substratum
- Soils that have a seasonal high water table a depth of more than 2 feet
- Soils that are calcareous

Dissimilar soils:
- Soils that are ponded throughout most of the growing season; in depressions
- The moderately well drained Osco soils on summits and shoulders

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 layer: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Saybrook Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Taxadjunct features: The Saybrook soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

Typical Pedon

Saybrook silt loam, 2 to 5 percent slopes; at an elevation of 698 feet; 2,500 feet south and 1,300 feet east of the northwest corner of sec. 3, T. 16 N., R. 7 E.; Bureau County, Illinois; USGS Manlius topographic quadrangle; lat. 41 degrees 24 minutes 07.2 seconds N. and long. 89 degrees 40 minutes 48.8 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine granular structure; friable; neutral; abrupt smooth boundary.
AB—10 to 15 inches; very dark brown (10YR 2/2) and brown (10YR 4/3) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; friable; neutral; clear wavy boundary.
Bt1—15 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common distinct very dark brown (10YR 2/2) organo-clay films on faces of peds; common faint brown (10YR 4/3) clay films on faces of peds; slightly acid; clear wavy boundary.
Bt2—21 to 26 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; moderately acid; clear wavy boundary.
Bt3—26 to 30 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium and coarse subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common prominent irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; slightly acid; clear wavy boundary.
Bt4—30 to 32 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; common faint dark yellowish brown (10YR

4/4) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; common prominent irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; neutral; clear wavy boundary.

2Bt5—32 to 36 inches; brown (7.5YR 4/4) clay loam; weak medium subangular blocky structure; friable; few faint brown (7.5YR 4/3) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; common distinct irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; slightly effervescent; slightly alkaline; clear wavy boundary.

2C—36 to 60 inches; brown (7.5YR 4/4) loam; massive; friable; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; many medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; common distinct irregular black (7.5YR 2.5/1) very weakly cemented masses of iron and manganese accumulation throughout; slightly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 6 to 15 inches
Depth to till: 20 to 40 inches
Depth to carbonates: Less than 40 inches

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

Bt horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 6
Texture—silt loam or silty clay loam

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

2C horizon:
Hue—10YR, 2.5Y, or 7.5YR
Value—4 or 5
Chroma—2 to 4
Texture—clay loam or loam
Content of gravel—less than 15 percent

145B2—Saybrook silt loam, 2 to 5 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the subsoil
- Soils that are not calcareous within a depth of 40 inches
- Soils that have a thicker surface layer

Dissimilar soils:
- The somewhat poorly drained Flanagan soils on footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Saybrook Soil

Parent material: Loess and the underlying loamy till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: 24 to 40 inches to dense material
Available water capacity: About 8.5 inches to a depth of 60 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 perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

145C2—Saybrook silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the subsoil

- Soils that are not calcareous within a depth of 40 inches
- Soils in which the substratum is within a depth of 24 inches

Dissimilar soils:
- The somewhat poorly drained Flanagan soils on footslopes
- The poorly drained Drummer soils on toeslopes

Properties and Qualities of the Saybrook Soil

Parent material: Loess and the underlying loamy till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive layer: 24 to 40 inches to dense material
Available water capacity: About 8.9 inches to a depth of 60 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 perched seasonal high water table: 2 feet, February through April
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Selma Series

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

Typical Pedon

Selma loam, 0 to 2 percent slopes; at an elevation of 656 feet; 52 feet south and 160 feet west of the northeast corner of sec. 18, T. 28 N., R. 10 E.; Iroquois County, Illinois; USGS Piper City NE topographic quadrangle; lat. 40 degrees 54 minutes 35 seconds N. and long. 88 degrees 06 minutes 43 seconds W., NAD 27:

Ap—0 to 6 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; neutral; gradual smooth boundary.
A—6 to 13 inches; black (10YR 2/1) clay loam, dark gray (10YR 4/1) dry; weak fine subangular blocky structure; friable; common fine roots; neutral; gradual wavy boundary.
Btg1—13 to 19 inches; dark grayish brown (2.5Y 4/2) clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; many faint very dark gray (2.5Y 3/1) organo-clay films on faces of peds and in pores; few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation in the matrix; neutral; gradual wavy boundary.
Btg2—19 to 28 inches; grayish brown (2.5Y 5/2) loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common fine roots; many faint dark gray (2.5Y 4/1) clay films on faces of peds; few fine light

olive brown (2.5Y 5/4) iron and manganese nodules throughout; common medium distinct olive brown (2.5Y 4/4) masses of iron accumulation in the matrix; slightly alkaline; gradual wavy boundary.

Btg3—28 to 39 inches; grayish brown (2.5Y 5/2) loam; weak fine and medium subangular blocky structure; friable; common fine roots; few faint dark gray (2.5Y 4/1) clay films on faces of peds; black (N 2.5/) krotovina from a depth of 30 inches to a depth of 39 inches; few fine dark yellowish brown (10YR 4/6) iron and manganese nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; slightly alkaline; gradual wavy boundary.

BCtg—39 to 44 inches; grayish brown (2.5Y 5/2) loam; weak medium subangular blocky structure; friable; few very fine roots; few faint dark gray (2.5Y 4/1) clay films on faces of peds; few fine dark yellowish brown (10YR 4/6) iron and manganese nodules throughout; few fine prominent light olive brown (2.5Y 5/6) masses of iron accumulation in the matrix; strongly effervescent; slightly alkaline; gradual wavy boundary.

Cg1—44 to 54 inches; 55 percent dark gray (2.5Y 4/1), 35 percent gray (2.5Y 5/1), and 10 percent light yellowish brown (2.5Y 6/4), stratified sandy loam and loamy sand; massive in the sandy loam and single grain in the loamy sand; friable in the sandy loam and loose in the loamy sand; few very fine roots; very strongly effervescent; moderately alkaline; gradual wavy boundary.

Cg2—54 to 80 inches; 45 percent dark gray (2.5Y 4/1), 45 percent gray (2.5Y 5/1), and 10 percent light olive brown (2.5Y 5/6), stratified silt loam, sandy loam, and loamy sand; massive in the silt loam and sandy loam and single grain in the loamy sand; friable; few very fine roots; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to carbonates: More than 30 inches
Thickness of the solum: 35 to 55 inches

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

Bg, Btg, or BCtg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—loam, clay loam, silt loam, or sandy loam
Content of gravel—less than 10 percent

Cg or C horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—stratified sandy loam, loam, silt loam, or loamy sand
Content of gravel—less than 15 percent

125A—Selma loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Toeslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the surface layer and subsoil
- Soils that have more clay in the lower part of the subsoil and in the substratum
- Soils that have less clay
- Soils in which the dark surface layer is more than 24 inches thick
- Soils that have carbonates high in the profile

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

Properties and Qualities of the Selma Soil

Parent material: Outwash
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 layer: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Senachwine Series

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

Typical Pedon

Senachwine silt loam, 10 to 18 percent slopes, eroded; at an elevation of 863 feet; 860 feet west and 1,300 feet south of the northeast corner of sec. 21, T. 15 N., R. 8 E.; Bureau County, Illinois; USGS Wyanet topographic quadrangle; lat. 41 degrees 16 minutes 25 seconds N. and long. 89 degrees 34 minutes 18 seconds W., NAD 27:

Ap—0 to 6 inches; mixed brown (10YR 4/3) and yellowish brown (10YR 5/4) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; common fine roots; neutral; abrupt smooth boundary.

Bt1—6 to 15 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; common faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt2—15 to 28 inches; brown (7.5YR 5/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots; many faint brown (7.5YR 4/4) clay films on faces of peds; few fine rounded black (N 2.5/) weakly cemented iron and manganese concretions throughout; neutral; clear smooth boundary.

2BCt—28 to 34 inches; brown (7.5YR 5/4) loam; weak coarse prismatic structure; firm; few fine roots; common faint brown (7.5YR 4/4) clay films on faces of peds; 5 percent gravel; slightly effervescent; slightly alkaline; clear smooth boundary.

2C—34 to 60 inches; brown (7.5YR 5/4) loam; massive; firm; 5 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the loess: Less than 18 inches
Depth to the base of the argillic horizon: 24 to 40 inches
Depth to carbonates: 20 to 40 inches

Ap or A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam, fine sandy loam, or clay loam
Reaction—moderately acid to neutral

Bt, 2Bt, BC, or 2BCt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam, loam, or clay loam
Reaction—strongly acid to slightly alkaline

C or 2C horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—3 or 4
Texture—clay loam or loam
Reaction—slightly alkaline or moderately alkaline

618B—Senachwine silt loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less sand in the subsoil

Dissimilar soils:
- The moderately well drained Birkbeck soils in positions similar to those of the Senachwine soil
- The somewhat poorly drained Odell soils on footslopes

Properties and Qualities of the Senachwine Soil

Parent material: Till and a thin mantle of loess
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 layer: More than 80 inches
Available water capacity: About 6.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

618C2—Senachwine silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less sand in the subsoil
- Soils that have a thicker subsoil
- Soils that have a stratified substratum that contains more sand

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The well drained Whalan soils on backslopes

Properties and Qualities of the Senachwine Soil

Parent material: Till and a thin mantle of loess
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 layer: More than 80 inches
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

618D3—Senachwine clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less sand in the subsoil
- Soils that have a stratified substratum that contains more sand

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The well drained, moderately deep Whalan soils on backslopes

Properties and Qualities of the Senachwine Soil

Parent material: Till
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 layer: More than 80 inches
Available water capacity: About 4.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.

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

Interpretive Groups

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

618F—Senachwine silt loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have less sand in the subsoil
- Soils that have a stratified substratum that contains more sand

Dissimilar soils:
- The somewhat poorly drained Lawson soils on footslopes
- The well drained, moderately deep Whalan soils on backslopes

Properties and Qualities of the Senachwine Soil

Parent material: Till
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 layer: More than 80 inches
Available water capacity: About 6.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

757B2—Senachwine fine sandy loam, 2 to 5 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more sand in the upper part of the subsoil
- Soils that have a severely eroded surface layer that contains more clay and less sand

Dissimilar soils:
- The excessively drained Coloma soils on summits

Properties and Qualities of the Senachwine Soil

Parent material: Till with a thin mantle of eolian material
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

757C2—Senachwine fine sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker sandy surface layer
- Soils that have a severely eroded surface layer that contains more clay and less sand
- Soils that have gravel in the surface layer

Dissimilar soils:
- The excessively drained Coloma soils on summits

Properties and Qualities of the Senachwine Soil

Parent material: Till with a thin mantle of eolian material
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 10.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 2.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

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

Sparta Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls
Taxadjunct features: The Sparta soils in map units 88B2 and 88D2 have a thinner dark surface layer than is defined as the range for the series. These soils are classified as sandy, mixed, mesic Lamellic Eutrudepts.

Typical Pedon

Sparta loamy sand, 0 to 2 percent slopes; at an elevation of 685 feet; 2,150 feet north and 1,939 feet east of the southwest corner of sec. 20, T. 23 N., R. 10 E.; 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: 6 to 20 inches

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

88B2—Sparta loamy sand, 2 to 7 percent slopes, eroded

Setting

Landform: Dunes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a lighter colored surface layer
- Soils that have more clay and less sand in the subsoil
- Soils that have a thicker surface layer

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

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 layer: More than 80 inches
Available water capacity: About 4.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Very low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

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

88D2—Sparta loamy sand, 7 to 15 percent slopes, eroded

Setting

Landform: Dunes

Map Unit Composition

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

Minor Components

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

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

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 layer: More than 80 inches
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: 6s

Prime farmland category: Not prime farmland
Hydric soil status: Not hydric

88E—Sparta loamy sand, 12 to 20 percent slopes

Setting

Landform: Dunes

Map Unit Composition

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

Minor Components

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

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

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 layer: More than 80 inches
Available water capacity: About 4.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

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

St. Charles Series

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

Typical Pedon

St. Charles silt loam, 2 to 5 percent slopes; at an elevation of 635 feet; about 2 miles south and 2.5 miles east of Wyanet; 80 feet north and 2,170 feet west of the southeast corner of sec. 26, T. 16 N., R. 8 E.; Bureau County, Illinois; USGS Wyanet, Illinois, topographic quadrangle: lat. 41 degrees 20 minutes 09 seconds N. and long. 89 degrees 32 minutes 12 seconds W., NAD 27:

Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; few fine roots; moderately acid; abrupt smooth boundary.

Bt1—8 to 15 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; many faint dark brown (10YR 3/3) organic coatings and dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—15 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—21 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few fine roots; many faint dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine rounded dark accumulations of iron and manganese oxides; moderately acid; clear smooth boundary.

Bt4—34 to 44 inches; yellowish brown (10YR 5/4) silt loam; common medium faint brown (7.5YR 4/4) masses of iron; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; many faint dark yellowish brown (10YR 4/4) clay films and many distinct light gray (10YR 7/2) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt5—44 to 50 inches; yellowish brown (10YR 5/4) silt loam; few fine distinct strong brown (7.5YR 5/6) masses of iron; moderate medium subangular blocky structure; friable; many faint dark yellowish brown (10YR 4/4) clay films and distinct light gray (10YR 7/2) silt coatings on faces of peds; moderately acid; clear smooth boundary.

2Bt6—50 to 57 inches; yellowish brown (10YR 5/6), stratified loam, sandy loam, and silt loam; weak medium subangular blocky structure; friable; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2C—57 to 60 inches; yellowish brown (10YR 5/4), stratified loam and silt loam; massive; friable; moderately acid.

Range in Characteristics

Thickness of the solum: 44 to 70 inches
Depth to carbonates: More than 44 inches

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

E horizon (if it occurs):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam

BE or Bt horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

2Bt or 2BC horizon:
Hue—10YR or 7.5YR
Value—4 to 6

Chroma—3 to 6
Texture—commonly stratified loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, or silt loam

2C horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—3 to 6
Texture—commonly stratified loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, or silt loam

243A—St. Charles silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

St. Charles and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils that have slopes of more than 2 percent
- Soils that have more silt and less sand in the substratum
- Soils that have a darker surface layer
- Soils that have more sand in the subsoil

Dissimilar soils:
- Somewhat poorly drained soils on footslopes

Properties and Qualities of the St. Charles Soil

Parent material: Loess and the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

243B—St. Charles silt loam, 2 to 5 percent slopes

Setting

Landform: Outwash plains and stream terraces
Position on the landform: Summits and shoulders

Map Unit Composition

St. Charles and similar soils: 95 percent
Dissimilar soils: 5 percent

Minor Components

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

Dissimilar soils:
- The well drained Palsgrove and Whalan soils on backslopes

Properties and Qualities of the St. Charles Soil

Parent material: Loess and the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive layer: More than 80 inches
Available water capacity: About 11.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Tallmadge Series

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

Typical Pedon

Tallmadge sandy loam, 0 to 2 percent slopes; at an elevation of 633 feet; 1,160 feet north and 1,650 feet east of the southwest corner of sec. 32, T. 31 N., R. 14 E.; Kankakee County, Illinois; USGS St. Anne topographic quadrangle; lat. 41 degrees 07 minutes 25 seconds N. and long. 87 degrees 38 minutes 10 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) sandy loam, dark gray (10YR 4/1) dry; weak fine and medium granular structure; friable; common very fine and fine roots; slightly acid; clear smooth boundary.

A—8 to 14 inches; black (10YR 2/1) sandy clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; friable; common very fine and fine roots; neutral; clear smooth boundary.

AB—14 to 17 inches; black (2.5Y 2.5/1) sandy clay loam, dark gray (2.5Y 4/1) dry; moderate fine and medium subangular blocky structure; friable; common very fine roots; 1 percent gravel; neutral; clear smooth boundary.

Btg1—17 to 25 inches; dark gray (2.5Y 4/1) sandy clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; common very fine roots; common faint very dark gray (2.5Y 3/1) organo-clay films on faces of peds and in pores; many medium prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix and common fine and medium prominent light olive brown (2.5Y 5/4) masses of oxidized iron in the matrix; black (2.5Y 2.5/1) krotovina; 1 percent gravel; neutral; gradual wavy boundary.

Btg2—25 to 33 inches; dark grayish brown (10YR 4/2) sandy clay loam; weak medium and coarse prismatic structure parting to moderate medium and coarse subangular blocky; friable; common very fine roots; few faint dark gray (2.5Y 4/1) clay films on faces of peds and in pores; many medium and coarse prominent yellowish brown (10YR 5/8) masses of oxidized iron in the matrix; black (2.5Y 2.5/1) krotovina; 1 percent light gray (10YR 7/2) decomposed limestone bedrock; 1 percent gravel; slightly alkaline; clear wavy boundary.

2BCg—33 to 43 inches; 70 percent grayish brown (2.5Y 5/2) and 30 percent very dark gray (2.5Y 3/1), stratified very channery loam to very channery loamy sand; weak fine and medium subangular blocky structure; friable; common very fine roots; 4 percent light gray (10YR 7/2) decomposed limestone bedrock; 45 percent channers and 10 percent cobbles; slightly effervescent; slightly alkaline; gradual wavy boundary.

3R—43 inches; white (10YR 8/1) limestone or dolostone bedrock; partially fractured in the upper 1 foot; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to lithic contact: 40 to 60 inches
Thickness of the solum: 40 to 60 inches

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

Btg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—clay loam, sandy clay loam, loam, or sandy loam
Content of gravel—less than 10 percent

2BCg horizon:
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 4
Texture—the gravelly, very gravelly, cobbly, very cobbly, channery, or very channery analogs of sandy loam, loam, clay loam, sandy clay loam, or loamy sand
Content of rock fragments—15 to 60 percent

610A—Tallmadge sandy loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Footslopes

Map Unit Composition

Tallmadge and similar soils: 100 percent

Minor Components

Similar soils:
- Soils that have more clay in the lower part of the subsoil and in the substratum
- Soils that have more clay in the surface layer and subsoil
- Soils that have less clay
- Soils that have a dark surface layer more than 24 inches thick
- Soils that are deeper to bedrock
- Soils that contain fewer rock fragments (gravel or cobbles) in the lower one-third of the profile
- Soils that contain less sand and more silt in the upper one-half of the profile

Properties and Qualities of the Tallmadge Soil

Parent material: Loamy outwash and the underlying cobbly outwash over dolostone
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive layer: 40 to 60 inches to lithic bedrock
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 5.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 0.5 foot, January through May
Flooding: None
Accelerated erosion: Negligible
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: Moderately high

Interpretive Groups

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

Titus Series

Taxonomic classification: Fine, smectitic, mesic Vertic Endoaquolls

Typical Pedon

Titus silty clay loam, 0 to 2 percent slopes, frequently flooded; at an elevation of 582 feet; 20 feet west and 10 feet north of the southeast corner of sec. 28, T. 20 N., R. 3 E.;

Whiteside County, Illinois; USGS Erie NW topographic quadrangle; lat. 41 degrees 41 minutes 10 seconds N. and long. 90 degrees 09 minutes 01 second W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silty clay loam, very dark gray (10YR 3/1) dry; weak medium subangular blocky structure parting to moderate fine granular; friable; few fine roots throughout; neutral; abrupt smooth boundary.

A1—8 to 17 inches; very dark gray (10YR 3/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium and fine subangular blocky structure; friable; few fine roots throughout; many faint black (10YR 2/1) organic coatings on faces of peds; few prominent dark brown (7.5YR 3/4) concretions of iron throughout; neutral; clear smooth boundary.

A2—17 to 22 inches; very dark gray (10YR 3/1) silty clay loam, dark gray (10YR 4/1) dry; strong medium and fine angular blocky structure; firm; few fine roots between peds; many faint black (10YR 2/1) organic coatings on faces of peds; few prominent reddish brown (5YR 4/4) soft masses of iron and few prominent dark brown (7.5YR 3/4) concretions of iron throughout; neutral; clear smooth boundary.

Bg1—22 to 32 inches; dark gray (10YR 4/1) silty clay; strong medium and fine prismatic structure; firm; few faint very dark gray (10YR 3/1) organic coatings and few prominent dark brown (7.5YR 3/4) coatings of iron-manganese on faces of peds; few prominent reddish brown (5YR 4/4) soft masses of iron and dark brown (7.5YR 3/4) concretions of iron in the matrix; few fine prominent strong brown (7.5YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bg2—32 to 46 inches; dark gray (10YR 4/1) silty clay loam; moderate medium prismatic structure parting to moderate coarse subangular blocky; firm; few faint very dark gray (10YR 3/1) organic coatings on faces of peds; strata of mixed dark gray (10YR 4/1) and strong brown (7.5YR 5/6) silty clay loam 1 inch thick at a depth of 39 inches; common fine prominent strong brown (7.5YR 5/6) iron masses in the matrix; neutral; clear smooth boundary.

Bg3—46 to 52 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate coarse and medium subangular blocky structure; friable; few distinct pressure faces; common fine prominent strong brown (7.5YR 4/6 and 5/6) and distinct yellowish brown (10YR 5/4) iron masses in the matrix; neutral; clear smooth boundary.

BCg—52 to 60 inches; stratified grayish brown (2.5Y 5/2) silty clay loam and clay loam; weak coarse angular blocky structure; friable; few fine faint dark gray (10YR 4/1) iron depletions and common medium prominent strong brown (7.5YR 4/6) and common fine distinct yellowish brown (10YR 5/4) iron masses in the matrix; few prominent dark brown (7.5YR 3/4) concretions of iron throughout; neutral; clear smooth boundary.

Cg—60 to 80 inches; stratified grayish brown (2.5Y 5/2) silty clay loam and clay loam; massive; friable; few fine faint dark gray (10YR 4/1) iron depletions and common medium prominent strong brown (7.5YR 4/6) and common fine distinct yellowish brown (10YR 5/4) iron oxide masses in the matrix; few hard masses of iron; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of the solum: 35 to 60 inches

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

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—stratified silty clay loam and clay loam; some strata have more sand or less clay or both

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 more sand and less clay in the surface layer and subsoil

Dissimilar soils:
- The poorly drained, calcareous Hooppole soils on summits

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 layer: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: High
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Vanpetten Series

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

Typical Pedon

Vanpetten loam, 2 to 5 percent slopes; at an elevation of 728 feet; 287 feet north and 2,538 feet west of the southeast corner of sec. 19, T. 21 N., R. 9 E.; Lee County, Illinois; USGS Dixon West topographic quadrangle; lat. 41 degrees 47 minutes 16 seconds N. and long. 89 degrees 30 minutes 15 seconds W., NAD 27:

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

A—6 to 12 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; many fine roots; slightly acid; clear smooth boundary.

Bw1—12 to 16 inches; brown (10YR 4/3) silt loam; moderate fine subangular blocky structure; friable; many fine roots; many thin dark brown (10YR 3/3) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bw2—16 to 24 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common fine roots; few thin dark brown (10YR 3/3) organic coatings on faces of peds; very strongly acid; clear smooth boundary.

Bw3—24 to 28 inches; brown (10YR 4/3) sandy loam; moderate medium subangular blocky structure; friable; common fine roots; few thin dark brown (10YR 3/3) organic coatings on faces of peds; moderately acid; clear smooth boundary.

2Bw4—28 to 37 inches; yellowish brown (10YR 5/4) coarse sand; weak medium subangular blocky structure; very friable; few fine roots; moderately acid; clear smooth boundary.

2Bt—37 to 50 inches; dark yellowish brown (10YR 4/6) loamy coarse sand; weak coarse subangular blocky structure; very friable; few fine roots; common thin dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine faint strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; slightly acid; abrupt smooth boundary.

3Btg—50 to 66 inches; gray (5Y 5/1) clay loam; moderate coarse prismatic structure; friable; few fine roots; few thin dark grayish brown (10YR 4/2) clay films on vertical faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron oxide accumulation in the matrix; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 15 inches
Thickness of the solum: 55 to 70 inches

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

Bw or Bt horizon:
Hue—10YR; 10YR in redoximorphic features
Value—4 or 5; 5 or 6 in redoximorphic features
Chroma—3 or 4; 2 to 6 in redoximorphic features
Texture—silt loam or loam in the upper part; sandy loam, loam, or silt loam in the lower part

2Bw or 2Bt horizon:
Hue—10YR or 7.5YR; 10YR, 7.5YR, or 5YR in redoximorphic features
Value—4 to 6; 4 to 6 in redoximorphic features
Chroma—2 to 6; 1 to 8 in redoximorphic features
Texture—loam to coarse sand in individual subhorizons; loamy subhorizons are less than 5 inches thick

3Btg or 3Bt horizon:
Hue—5Y, 2.5Y, 10YR, or 7.5YR
Value—3 to 7
Chroma—1 to 8
Texture—commonly clay loam but ranges to silt loam, loam, or silty clay loam

357B—Vanpetten loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer and subsurface layer
- Soils that have more clay and less sand in the subsoil
- Soils that have a seasonal high water table within a depth of 3.5 feet

Dissimilar soils:
- Poorly drained soils on toeslopes

Properties and Qualities of the Vanpetten Soil

Parent material: Loamy eolian deposits and/or sandy outwash over 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 layer: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest perched seasonal high water table: 3 feet, February through April
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Warsaw Series

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

Taxadjunct features: The Warsaw soils in map units 290B2 and 290C2 have a thinner dark surface layer than is defined as the range for the series. These soils are classified as fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs.

Typical Pedon

Warsaw loam, 0 to 2 percent slopes; at an elevation of 861 feet; 2,094 feet south and 2,565 feet east of the northwest corner of sec. 8, T. 43 N., R. 7 E.; McHenry County, Illinois; USGS Huntley topographic quadrangle; lat. 42 degrees 13 minutes 12 seconds N. and long. 88 degrees 26 minutes 32 seconds W., NAD 27:

Ap—0 to 6 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure; friable; common very fine roots; few distinct black (10YR 2/1) organic coatings on faces of peds; 1 percent gravel; neutral; clear smooth boundary.

A—6 to 11 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to weak medium granular; friable; common very fine roots; few faint black (10YR 2/1) organic coatings on faces of peds; 1 percent gravel; neutral; clear smooth boundary.

BA—11 to 15 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure; friable; common very fine roots; few faint very dark brown (10YR 2/2) and distinct black (10YR 2/1) organic coatings on faces of peds; 1 percent gravel; slightly acid; clear smooth boundary.

Bt1—15 to 19 inches; brown (10YR 4/3) clay loam; moderate fine and medium subangular blocky structure; friable; common very fine roots; few faint dark brown (10YR 3/3) clay films on faces of peds; common faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores; 1 percent gravel; moderately acid; clear smooth boundary.

Bt2—19 to 31 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common very fine roots; common faint brown (10YR 4/3) clay films and few faint dark brown (10YR 3/3) clay films on faces of peds; 3 percent gravel; slightly acid; abrupt wavy boundary.

2C—31 to 60 inches; yellowish brown (10YR 5/4) very gravelly loamy coarse sand and very gravelly coarse sand; single grain; loose; violently effervescent; 38 percent gravel; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 15 inches
Depth to sandy and gravelly deposits: 24 to 40 inches
Depth to carbonates: 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—silt loam or loam

Bt horizon:
Hue—7.5YR or 10YR

Value—4 or 5
Chroma—3 or 4
Texture—clay loam, loam, sandy clay loam, or silty clay loam
Content of gravel—less than 15 percent

2C horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—2 to 4
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand
Content of gravel—15 to 75 percent

290A—Warsaw loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains and outwash terraces
Position on the landform: Summits

Map Unit Composition

Warsaw and similar soils: 88 percent
Dissimilar soils: 12 percent

Minor Components

Similar soils:
- Soils that have more silt and less sand in the subsoil
- Soils that have a thicker surface layer and subsoil
- Soils that have a thinner subsoil

Dissimilar soils:
- The poorly drained Selma soils in swales

Properties and Qualities of the Warsaw Soil

Parent material: Loamy outwash over sandy and gravelly outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.5 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: Moderate
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

290B2—Warsaw silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

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

Dissimilar soils:
- The excessively drained Rodman soils on backslopes

Properties and Qualities of the Warsaw Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 7.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

290C2—Warsaw loam, 5 to 10 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Backslopes and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are more acid in the substratum
- Soils that have more silt and clay and less sand in the substratum
- Soils that have a thicker surface layer and subsoil

Dissimilar soils:
- The excessively drained Rodman soils on backslopes

Properties and Qualities of the Warsaw Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: 24 to 40 inches to strongly contrasting textural stratification
Available water capacity: About 6.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 3e
Prime farmland category: 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; at an elevation of 650 feet; 180 feet north and 360 feet west of the southeast corner of sec. 36, T. 21 N., R. 7 E.; 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, sandy clay loam, or loam; 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 6
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
Position on the landform: Summits

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 layer and in the upper part of the subsoil

Dissimilar soils:
- The somewhat poorly drained La Hogue soils on footslopes
- The poorly drained Selma soils on toeslopes

Properties and Qualities of the Waukee Soil

Parent material: Outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 7.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 4.0 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: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Waukegan Series

Taxonomic classification: Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Dystric Eutrudepts
Taxadjunct features: The Waukegan soils in this survey area have a thinner dark surface layer than is defined as the range for the series.

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.; 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) iron bands between the 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 carbonates: 40 to 70 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

2BC 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

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 are deeper to sand and gravel
- Soils that are shallower to sand and gravel

Dissimilar soils:
- Rodman soils on the steeper backslopes

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 layer: More than 80 inches
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 5.0 percent
Shrink-swell potential: Low
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Low
Hazard of corrosion: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

Waupecan Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Typic Argiudolls
Taxadjunct features: The Waupecan soil in map unit 369B2 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

Waupecan silt loam, 0 to 2 percent slopes; at an elevation of 880 feet; 225 feet south and 1,455 feet west of the northeast corner of sec. 21, T. 42 N., R. 6 E.; Kane County, Illinois; USGS Hampshire topographic quadrangle; lat. 42 degrees 06 minutes 34 seconds N. and long. 88 degrees 32 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; moderate medium granular structure; friable; common very fine roots; neutral; 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 granular structure; friable; common very fine roots; slightly acid; clear smooth boundary.

BA—13 to 19 inches; brown (10YR 4/3) silt loam; weak very fine subangular blocky structure; firm; common very fine roots; common faint very dark grayish brown (10YR 3/2) organic coatings in pores; slightly acid; clear smooth boundary.

Bt1—19 to 28 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common very fine roots; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—28 to 38 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium and coarse subangular blocky structure; firm; few very fine roots; common faint brown (10YR 4/3) clay films on faces of peds; moderately acid; abrupt smooth boundary.

2Bt3—38 to 44 inches; dark yellowish brown (10YR 4/4) clay loam; moderate medium and coarse subangular blocky structure; firm; few very fine roots; common faint brown (7.5YR 4/3) clay films on faces of peds; 1 percent dolomitic pebbles; moderately acid; clear smooth boundary.

2Bt4—44 to 49 inches; brown (7.5YR 4/4) sandy clay loam; weak coarse subangular blocky structure; friable; few very fine roots; many faint dark brown (7.5YR 3/4) clay films on faces of peds; 2 percent dolomitic pebbles; slightly acid; clear smooth boundary.

2Bt5—49 to 55 inches; brown (7.5YR 4/4) sandy loam; weak coarse subangular blocky structure; friable; many faint dark brown (7.5YR 3/3) clay films on faces of peds; 8 percent dolomitic pebbles; neutral; abrupt smooth boundary.

3C—55 to 70 inches; brown (10YR 5/3) gravelly sand; single grain; loose; 32 percent dolomitic pebbles and cobblestones; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 8 to 13 inches
Thickness of the loess or silty material: 24 to 48 inches
Depth to sandy and gravelly deposits: 40 to 60 inches
Depth to carbonates: 40 to 60 inches
Thickness of the solum: 40 to 65 inches

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

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

2Bt horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Texture—loam, clay loam, sandy clay loam, sandy loam, or loamy sand or the gravelly analogs of these textures
Content of gravel—less than 35 percent

3C horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand
Content of gravel—15 to 70 percent

369A—Waupecan silt loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer
- Soils that have more silt and clay and less sand and gravel in the substratum

Dissimilar soils:
- The poorly drained Dunham soils on toeslopes
- The somewhat poorly drained Grundelein soils on footslopes

Properties and Qualities of the Waupecan Soil

Parent material: Loess and the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 8.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Flooding: None
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

369B2—Waupecan silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Outwash plains
Position on the landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker surface layer
- Soils that have more silt and clay and less sand and gravel in the substratum

Dissimilar soils:
- The poorly drained Dunham soils on toeslopes
- The somewhat poorly drained Grundelein soils on footslopes

Properties and Qualities of the Waupecan Soil

Parent material: Loess and the underlying outwash
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive layer: More than 80 inches
Available water capacity: About 8.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 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: The surface layer has been thinned by erosion.
Potential for frost action: High
Hazard of corrosion: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: 2e
Prime farmland category: 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; at an elevation of 690 feet; 840 feet west and 60 feet north of the southeast corner of sec. 6, T. 21 N., R. 4 E.; 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 prominent 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 faint brown (10YR 4/3) clay films on faces of peds; common faint 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—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, clay loam, or 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 and summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that contain more sand in the surface layer

Dissimilar soils:
- The well drained, very deep Martinsville soils on backslopes
- The somewhat excessively drained Elizabeth soils on backslopes
- The poorly drained Faxon soils on flood plains

Properties and Qualities of the Whalan Soil

Parent material: Till over residuum derived from limestone

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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 category: Prime farmland
Hydric soil status: Not hydric

509D—Whalan loam, 10 to 18 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

Whalan and similar soils: 80 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils that are more than 40 inches deep to bedrock
- Soils that have less sand in the upper part of the subsoil
- Soils that have more sand in the subsoil

Dissimilar soils:
- The well drained, very deep Martinsville and St. Charles soils on summits and shoulders
- The somewhat excessively drained Elizabeth soils on backslopes

Properties and Qualities of the Whalan Soil

Parent material: Till over residuum derived from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: Medium

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

Interpretive Groups

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

509F—Whalan loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

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

Dissimilar soils:
- The well drained, very deep Martinsville soils on backslopes
- The somewhat excessively drained Elizabeth soils on backslopes

Properties and Qualities of the Whalan Soil

Parent material: Till over residuum derived from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately rapid or rapid
Depth to restrictive layer: 20 to 40 inches to lithic bedrock
Available water capacity: About 5.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 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: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

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

Will Series

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

Typical Pedon

Will loam, 0 to 2 percent slopes; at an elevation of 720 feet; 85 feet north and 2,020 feet west of the southeast corner of sec. 13, T. 43 N., R. 2 E.; Winnebago County, Illinois; USGS Cherry Valley topographic quadrangle; lat. 42 degrees 11 minutes 47 seconds N. and 88 degrees 56 minutes 45 seconds W., NAD 27:

Ap—0 to 8 inches; black (N 2.5/) loam, very dark gray (10YR 3/1) dry; moderate very fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

A—8 to 14 inches; black (N 2.5/) loam, very dark gray (10YR 3/1) dry; moderate very fine and fine subangular blocky structure; friable; many fine roots; neutral; clear smooth boundary.

Btg1—14 to 19 inches; dark grayish brown (2.5Y 4/2) loam; moderate fine subangular blocky structure; friable; common fine roots; common distinct black (10YR 2/1) organo-clay films on faces of peds; common black (N 2.5/) wormcasts; few fine black (10YR 2/1) iron and manganese oxide concretions throughout; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; neutral; clear smooth boundary.

Btg2—19 to 25 inches; grayish brown (2.5Y 5/2) sandy clay loam; moderate fine and medium subangular blocky structure; friable; common fine roots; many faint dark grayish brown (2.5Y 4/2) clay films on faces of peds; common black (N 2.5/) wormcasts; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; 10 percent gravel; neutral; abrupt smooth boundary.

BCg—25 to 28 inches; 65 percent dark grayish brown (2.5Y 4/2) and 35 percent very dark brown (10YR 2/2) sandy loam; weak medium subangular blocky structure; very friable; few fine roots; 12 percent gravel; slightly effervescent; slightly alkaline; abrupt smooth boundary.

2Cg1—28 to 32 inches; light olive brown (2.5Y 5/3) gravelly sand; single grain; loose; few fine prominent dark reddish gray (5YR 4/2) iron depletions in the matrix; 20 percent gravel; strongly effervescent; moderately alkaline; abrupt smooth boundary.

2Cg2—32 to 36 inches; dark grayish brown (2.5Y 4/2) gravelly sandy loam with three $^{1}/_{4}$-inch-thick strata of black (10YR 2/1) sandy loam; massive; friable; 25 percent gravel; strongly effervescent; moderately alkaline; abrupt smooth boundary.

2Cg3—36 to 60 inches; 60 percent light olive brown (2.5Y 5/3) and 40 percent light brownish gray (2.5Y 6/2) very gravelly sand; single grain; loose; 45 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to sandy and gravelly deposits: 20 to 40 inches
Depth to carbonates: 20 to 40 inches
Thickness of the solum: 24 to 40 inches

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

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

Texture—clay loam, loam, sandy clay loam, or silty clay loam
Content of gravel—less than 15 percent

2Cg horizon:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—the gravelly, very gravelly, or extremely gravelly analogs of sand, loamy sand, coarse sand, or loamy coarse sand; finer textured strata in subhorizons
Content of gravel—30 to 70 percent

329A—Will loam, 0 to 2 percent slopes

Setting

Landform: Outwash plains
Position on the landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thicker subsoil
- Soils that have more silt and clay and less sand in the subsoil

Dissimilar soils:
- Soils that are subject to flooding

Properties and Qualities of the Will Soil

Parent material: Loamy outwash over sandy and gravelly 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 layer: More than 80 inches
Available water capacity: About 6.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Depth and months of the highest apparent seasonal high water table: At the surface, January through May
Deepest ponding (depth, months): 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 category: Prime farmland where drained
Hydric soil status: Hydric

Wyanet Series

Taxonomic classification: Fine-loamy, mixed, active, mesic Typic Argiudolls
Taxadjunct features: The Wyanet soils in map units 622B2, 622C2, and 756C2 have a thinner dark surface layer than is defined as the range for the series. These soils are classified as fine-loamy, mixed, active, mesic Mollic Hapludalfs.

Typical Pedon

Wyanet silt loam, 2 to 5 percent slopes; at an elevation of 743 feet; 1,300 feet east and 225 feet south of the northwest corner of sec. 31, T. 22 N., R. 14 W.; Champaign County, Illinois; USGS Penfield topographic quadrangle; lat. 40 degrees 19 minutes 37 seconds N. and long. 87 degrees 59 minutes 01 second 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 granular structure; friable; common very fine and fine roots; 1 percent fine gravel; neutral; abrupt smooth boundary.
Bt1—10 to 14 inches; brown (10YR 4/3) clay loam; moderate fine subangular blocky structure; firm; common fine roots; few fine pores; common faint very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; 3 percent fine gravel; slightly acid; clear smooth boundary.
Bt2—14 to 27 inches; light olive brown (2.5Y 5/4) clay loam; moderate medium subangular blocky structure; firm; few fine roots; common fine pores; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds; few prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; 7 percent fine and medium gravel; slightly acid; clear smooth boundary.
BC—27 to 31 inches; light olive brown (2.5Y 5/4) loam; weak medium subangular blocky structure; firm; 7 percent fine and medium gravel; slightly effervescent; slightly alkaline; gradual smooth boundary.
C—31 to 80 inches; light olive brown (2.5Y 5/4) loam; massive; very firm; common prominent irregular light gray (10YR 7/1) very weakly cemented calcium carbonate nodules in pores; few fine and medium rounded red (2.5YR 4/8) weakly cemented iron oxide nodules throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; 7 percent fine and medium gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 7 to 12 inches
Depth to carbonates: 20 to 40 inches
Thickness of the loess: Less than 18 inches
Thickness of the solum: 20 to 40 inches

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

Bt or 2Bt horizon:
Hue—10YR, 2.5Y, or 7.5YR
Value—4 or 5
Chroma—4 to 6
Texture—commonly loam or clay loam; ranges to silty clay loam in the upper part

Content of gravel—0 to 10 percent
Moist bulk density—1.5 to 1.7 g/cm^3

C or 2C horizon:
Hue—10YR, 2.5Y, or 7.5YR
Value—4 to 7
Chroma—3 or 4
Texture—loam
Content of clay—10 to 20 percent
Content of sand—30 to 40 percent
Content of gravel—0 to 10 percent
Moist bulk density—1.60 to 1.85 g/cm^3

622B—Wyanet silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay and less sand in the subsoil
- Soils that have a thinner subsoil
- Soils that have a thinner surface layer

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

Properties and Qualities of the Wyanet Soil

Parent material: Till with a thin mantle of loess
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 layer: More than 80 inches
Available water capacity: About 9.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 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: 2e
Prime farmland category: Prime farmland
Hydric soil status: Not hydric

622B2—Wyanet silt loam, 2 to 5 percent slopes, eroded

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have a lighter colored surface layer
- Soils that have a thicker surface layer
- Soils that have less sand in the upper part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Flanagan and Odell soils on footslopes

Properties and Qualities of the Wyanet Soil

Parent material: Till with a thin mantle of loess
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 layer: More than 80 inches
Available water capacity: About 8.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and 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 category: Prime farmland
Hydric soil status: Not hydric

622C2—Wyanet silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner subsoil
- Soils that have gravel in the surface layer
- Soils that have less sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Flanagan and Odell soils on footslopes

Properties and Qualities of the Wyanet Soil

Parent material: Till with a thin mantle of loess
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 layer: More than 80 inches
Available water capacity: About 8.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

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

756B—Wyanet fine sandy loam, 2 to 5 percent slopes

Setting

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

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer and subsoil
- Soils that have more sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Odell soils on footslopes
- The excessively drained Sparta soils on summits

Properties and Qualities of the Wyanet Soil

Parent material: Till
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 layer: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 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: Moderately high

Interpretive Groups

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

756C2—Wyanet fine sandy loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on the landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have a thinner surface layer and subsoil
- Soils that have more sand in the subsoil

Dissimilar soils:
- The excessively drained Sparta soils on summits

Properties and Qualities of the Wyanet Soil

Parent material: Till
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 layer: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Moderate
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Hazard of corrosion: High for steel and moderate for concrete

Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: 3e
Prime farmland category: 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 in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

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

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

Interpretive Ratings

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

Rating Class Terms

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

Numerical Ratings

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

Crops and Pasture

General management needed for crops and 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 (fig. 8), 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.

Figure 8.—No-till farming leaves crop residue on the surface, which protects the soil from the explosive impact of raindrops. (Photo by Rich Sanders, NRCS)

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

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

Over the past few decades, a trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses (fig. 9). The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

About 402,250 acres, or roughly 86 percent of the total acreage in the survey area, meets the requirements for prime farmland.

The map units in the survey area that are considered prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On

Figure 9.—Encroachment of urban development into prime farmland in an area of Prairieville silt loam, 2 to 5 percent slopes.

some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 5. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Soil Series and Detailed Soil Map Units.”

Hydric Soils

Table 8 lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

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 all 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, under natural conditions, 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, 2002). These criteria are used to identify map unit components that normally are 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, 2003) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time 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 are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 2002).

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 dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Forestland Productivity and Management

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

Forestland Productivity

Table 9 can help woodland owners or forest managers plan the use of soils for wood crops. Only those soils commonly used for wood crops are listed.

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 woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

The *volume*, a number, is the yield likely to be produced by the most important trees. This number, expressed as cubic feet per acre per year, indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to plant are those that are suitable for commercial wood production.

Forestland Management

In tables 10a through 10e, 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 aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect 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 management aspect. 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 management aspect. 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 management aspect 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 aspect of forestland management (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. 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.

Table 10a

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.

Table 10b

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.

Table 10c

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.

Table 10d

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.

Table 10e

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 11 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in table 11 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 the Cooperative Extension Service or from a commercial nursery.

Recreation

The soils of the survey area are rated in tables 12a and 12b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

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

The information in tables 12a and 12b 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 13, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

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

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

Grain and seed crops are domestic grains and seed-producing herbaceous plants. 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, 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 fescue, lovegrass, bromegrass, clover, and alfalfa.

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 bluestem, goldenrod, beggarweed, wheatgrass, and grama.

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, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian-olive, autumn-olive, and crabapple.

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 juniper.

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, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

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, and ponds.

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

Habitat for openland wildlife consists of cropland (fig. 10), 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 bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, 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, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

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

Figure 10.—This riparian buffer strip of grasses, legumes, and trees reduces the amount of sediment and pesticides in runoff from cropland fields. It also provides habitat for openland and woodland wildlife.

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 gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

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

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

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 14a and 14b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a 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

Tables 15a and 15b show 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 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).

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 reclamation material, roadfill, topsoil, and sand. Normal compaction, minor processing, and other standard construction practices are assumed.

In table 16a, 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.

Sand is a natural aggregate suitable for commercial use with a minimum of processing. It is used in many kinds of construction. Specifications for each use vary widely. In table 16b, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand, the soil is considered a likely source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

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

Water Management

Tables 17a, 17b, and 17c 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; tile drains and underground outlets; and irrigation. 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).

Table 17a

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.

Table 17b

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 (fig.11). Slope, wetness, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of

Figure 11.—Parallel terraces help to control erosion by reducing the effective length of the slope in this area of Osco silt loam, 5 to 10 percent slopes, eroded.

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.

Table 17c

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

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

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

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

Engineering Index Properties

Table 18 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

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

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter (fig. 12). "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, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

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

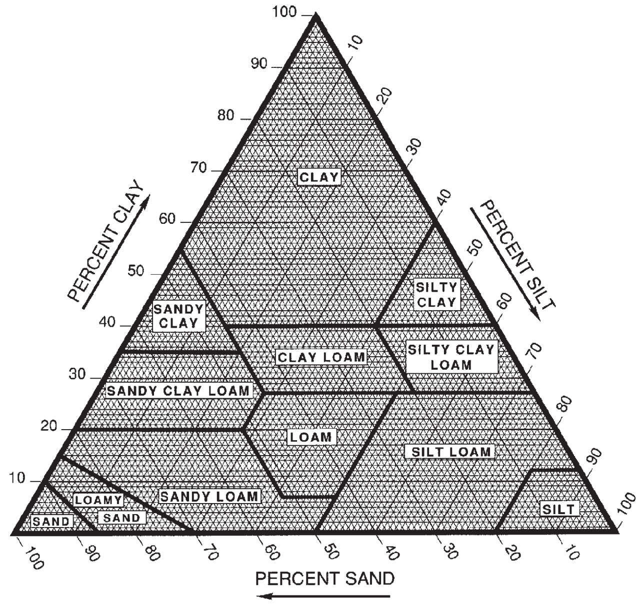


Figure 12.—Percentages of clay, silt, and sand in the basic USDA soil textural classes.

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 the table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The 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. The groups are described in the “National Soil Survey Handbook” (USDA, NRCS).

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.

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

Soil reaction is a measure of acidity or alkalinity. 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.

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.

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* of flooding 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.

Water table refers to a saturated zone in the soil. Table 21 indicates the depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone for the specified *months* 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.

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. The table indicates the hardness of the restrictive layer, which can significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

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

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

Ablation till. Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

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. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

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 toward which a slope faces. Also called slope aspect.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Beach deposits. Material, such as sand and gravel, that is generally laid down parallel to an active or relict shoreline of a postglacial or glacial lake.

Beach ridge. A low, essentially continuous mound of beach or beach-and-dune material accumulated by the action of waves and currents on the backshore of a beach, beyond the present limit of storm waves or the reach of ordinary tides, 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 plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

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.

Blowout. A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed; the adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Bog. Waterlogged, spongy ground, consisting primarily of mosses, containing acidic, decaying vegetation (such as sphagnum, sedges, and heaths) that develops into peat.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

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 and under similar climatic conditions but that 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.

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. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

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. See Redoximorphic features.

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.

Coprogenous earth (sedimentary peat). A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). 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.

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.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

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.

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 general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Drift. A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

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.

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 deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

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. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Esker. A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Excess lime (in tables). Excess carbonates in the soil restrict the growth of some plants.

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.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Footslope. The concave surface at the base of a hillslope. 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.

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 in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. 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 to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

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, which 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.

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.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., 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. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation include:

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Kame. A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

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. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

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 proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

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 at depth in the earth's crust. 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. A kind of map unit 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. In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, 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 can not be recognized.

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. See Redoximorphic features.

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. Stratified and sorted sediments (chiefly sand and gravel) removed or "washed out" from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain. An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Parent material. The unconsolidated organic and mineral material in which soil forms.

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.

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.

Pore linings. See Redoximorphic features.

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 as 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. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:

A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*

B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).

3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Rise. A slight increase in elevation of the land surface, typically with a broad summit and gently sloping sides.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

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.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (K_{sat}). See Permeability.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

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 that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

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 convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

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 (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

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 (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

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 alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

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 due to 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. An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation). 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 (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

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. Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain. An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. 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. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Paw Paw, 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----	26.1	10.1	18.1	52	-20	0	1.37	0.51	2.16	3	8.8
February---	31.6	15.5	23.6	59	-15	0	1.24	.53	1.85	2	5.9
March------	43.5	25.6	34.6	75	1	15	2.28	1.13	3.29	5	4.0
April------	57.6	36.0	46.8	84	17	73	3.54	2.08	4.90	7	1.0
May--------	70.0	47.4	58.7	90	30	288	4.29	2.40	6.13	7	.0
June-------	79.6	57.2	68.4	95	41	546	4.46	2.19	6.72	7	.0
July-------	82.5	61.4	72.0	96	47	680	3.74	1.69	5.53	6	.0
August-----	80.0	59.2	69.6	93	45	604	4.27	1.95	6.34	6	.0
September--	73.7	51.2	62.5	90	34	379	3.84	1.95	5.50	5	.0
October----	61.7	39.2	50.4	84	22	118	2.65	1.27	3.83	5	.2
November---	45.1	28.2	36.6	71	6	15	3.00	1.15	4.71	6	2.4
December---	31.4	16.1	23.7	58	-12	1	2.16	1.03	3.19	5	8.3
Yearly:											
Average---	56.9	37.3	47.1	---	---	---	---	---	---	---	---
Extreme---	101	-33	---	97	-21	---	---	---	---	---	---
Total-----	---	---	---	---	---	2,719	36.85	29.83	41.45	64	30.6

* 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 Paw Paw, 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. 16	Apr. 30	May 11
2 years in 10 later than--	Apr. 12	Apr. 25	May 6
5 years in 10 later than--	Apr. 5	Apr. 14	Apr. 26
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 15	Oct. 5	Sept. 26
2 years in 10 earlier than--	Oct. 21	Oct. 10	Oct. 1
5 years in 10 earlier than--	Oct. 31	Oct. 21	Oct. 10

Table 3.--Growing Season

(Recorded in the period 1971-2000 at Paw Paw, 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	189	163	145
8 years in 10	195	171	152
5 years in 10	207	187	165
2 years in 10	219	203	178
1 year in 10	225	212	185

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
Adrian	Sandy or sandy-skeletal, mixed, euic, mesic Terric Haplosaprists
Ambraw	Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls
Arrowsmith	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Ashdale	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Ashdale	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
*Assumption	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Ayr	Sandy over loamy, mixed, superactive, mesic Arenic Argiudolls
Billett	Coarse-loamy, mixed, superactive, mesic Mollic Hapludalfs
*Billett	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Binghampton	Fine-loamy over sandy or sandy-skeletal, mixed, active, mesic Aquollic Hapludalfs
Birkbeck	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Blackberry	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Boone	Mesic, uncoated Typic Quartzipsamments
Buckhart	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Catlin	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
*Catlin	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Clyde	Fine-loamy, mixed, superactive, mesic Typic Endoaquolls
Cohoctah	Coarse-loamy, mixed, active, mesic Fluvaquentic Endoaquolls
Coloma	Mixed, mesic Lamellic Udipsamments
Comfrey	Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls
*Dakota	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs
Danabrook	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
*Danabrook	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Denny	Fine, smectitic, mesic Mollic Albaqualfs
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
Dunham	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Elburn	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Eleva	Coarse-loamy, mixed, active, mesic Typic Hapludalfs
Elizabeth	Loamy-skeletal, mixed, superactive, mesic Lithic Hapludolls
Elpaso	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Fayette	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Fella	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Flanagan	Fine, smectitic, mesic Aquic Argiudolls
Friesland	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Gilford	Coarse-loamy, mixed, superactive, mesic Typic Endoaquolls
Greenbush	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
*Griswold	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Grundelein	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Harpster	Fine-silty, mixed, superactive, mesic Typic Calciaquolls
Hartsburg	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Hitt	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Hoopeston	Coarse-loamy, mixed, superactive, mesic Aquic Hapludolls
Hooppole	Fine-loamy, mixed, superactive, calcareous, mesic Typic Endoaquolls
Houghton	Euic, mesic Typic Haplosaprists
Jasper	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Jasper	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Kidami	Fine-loamy, mixed, active, mesic Oxyaquic Hapludalfs
Kidder	Fine-loamy, mixed, active, mesic Typic Hapludalfs
La Hogue	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
La Rose	Fine-loamy, mixed, active, mesic Typic Argiudolls
Lawler	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Aquic Hapludolls
Lawson	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
Martinsville	Fine-loamy, mixed, active, mesic Typic Hapludalfs

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Medway	Fine-loamy, mixed, superactive, mesic Fluvaquentic Hapludolls
Millington	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Morocco	Mixed, mesic Aquic Udipsamments
Muscatune	Fine-silty, mixed, superactive, mesic Aquic Argiudolls
Nachusa	Fine-loamy, mixed, active, mesic Aquic Argiudolls
Normandy	Fine-loamy, mixed, superactive, calcareous, mesic Fluvaquentic Endoaquolls
Oakville	Mixed, mesic Typic Udipsamments
Odell	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
Orio	Fine-loamy, mixed, active, mesic Mollic Endoaqualfs
Osco	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Osco	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Otter	Fine-silty, mixed, superactive, mesic Cumulic Endoaquolls
Palsgrove	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Parkway	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Parkway	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
*Parr	Fine-loamy, mixed, active, mesic Mollic Oxyaquic Hapludalfs
Peotone	Fine, smectitic, mesic Cumulic Vertic Endoaquolls
*Plano	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Prairieville	Fine-loamy, mixed, active, mesic Oxyaquic Argiudolls
Rockton	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
*Rockton	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Rodman	Sandy-skeletal, mixed, mesic Typic Hapludolls
Ross	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Sable	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
*Saybrook	Fine-silty, mixed, superactive, mesic Mollic Oxyaquic Hapludalfs
Selma	Fine-loamy, mixed, superactive, mesic Typic Endoaquolls
Senachwine	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Sparta	Sandy, mixed, mesic Entic Hapludolls
*Sparta	Sandy, mixed, mesic Lamellic Eutrudepts
St. Charles	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Tallmadge	Fine-loamy, mixed, superactive, mesic Typic Argiaquolls
Titus	Fine, smectitic, mesic Vertic Endoaquolls
Vanpetten	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
Warsaw	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Argiudolls
*Warsaw	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Mollic Hapludalfs
Waukee	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Hapludolls
*Waukegan	Fine-silty over sandy or sandy-skeletal, mixed, superactive, mesic Dystric Eutrudepts
Waupecan	Fine-silty, mixed, superactive, mesic Typic Argiudolls
*Waupecan	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Whalan	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Will	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls
Wyanet	Fine-loamy, mixed, active, mesic Typic Argiudolls
*Wyanet	Fine-loamy, mixed, active, mesic Mollic Hapludalfs

Table 5.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
45A	Denny silt loam, 0 to 2 percent slopes	370	*
51A	Muscatune silt loam, 0 to 2 percent slopes	18,634	4.0
60B2	La Rose silt loam, 2 to 5 percent slopes, eroded	675	0.1
60C2	La Rose silt loam, 5 to 10 percent slopes, eroded	3,289	0.7
67A	Harpster silty clay loam, 0 to 2 percent slopes	3,428	0.7
68A	Sable silty clay loam, 0 to 2 percent slopes	12,540	2.7
86B	Osco silt loam, 2 to 5 percent slopes	28,679	6.1
86C2	Osco silt loam, 5 to 10 percent slopes, eroded	3,810	0.8
87A	Dickinson sandy loam, 0 to 2 percent slopes	2,330	0.5
87B	Dickinson sandy loam, 2 to 5 percent slopes	5,497	1.2
87B2	Dickinson sandy loam, 2 to 7 percent slopes, eroded	209	*
88B2	Sparta loamy sand, 2 to 7 percent slopes, eroded	6,891	1.5
88D2	Sparta loamy sand, 7 to 15 percent slopes, eroded	1,122	0.2
88E	Sparta loamy sand, 12 to 20 percent slopes	51	*
93E	Rodman gravelly sandy loam, 12 to 20 percent slopes	331	*
102A	La Hogue loam, 0 to 2 percent slopes	5,527	1.2
103A	Houghton muck, 0 to 2 percent slopes	364	*
106B	Hitt sandy loam, 2 to 5 percent slopes	554	0.1
125A	Selma loam, 0 to 2 percent slopes	7,974	1.7
145B2	Saybrook silt loam, 2 to 5 percent slopes, eroded	14,736	3.2
145C2	Saybrook silt loam, 5 to 10 percent slopes, eroded	1,756	0.4
152A	Drummer silty clay loam, 0 to 2 percent slopes	17,470	3.7
152A+	Drummer silt loam, 0 to 2 percent slopes, overwash	680	0.1
154A	Flanagan silt loam, 0 to 2 percent slopes	5,846	1.3
171B	Catlin silt loam, 2 to 5 percent slopes	31,161	6.7
171C2	Catlin silt loam, 5 to 10 percent slopes, eroded	1,947	0.4
172A	Hoopeston sandy loam, 0 to 2 percent slopes	4,637	1.0
198A	Elburn silt loam, 0 to 2 percent slopes	12,642	2.7
199C2	Plano silt loam, 5 to 10 percent slopes, eroded	433	*
200A	Orio loam, 0 to 2 percent slopes	5,998	1.3
201A	Gilford fine sandy loam, 0 to 2 percent slopes	4,817	1.0
204B2	Ayr sandy loam, 2 to 5 percent slopes, eroded	3,754	0.8
221B2	Parr silt loam, 2 to 5 percent slopes, eroded	27	*
221C2	Parr silt loam, 5 to 10 percent slopes, eroded	76	*
233B	Birkbeck silt loam, 2 to 5 percent slopes	1,308	0.3
233C2	Birkbeck silt loam, 5 to 10 percent slopes, eroded	2,672	0.6
243A	St. Charles silt loam, 0 to 2 percent slopes	214	*
243B	St. Charles silt loam, 2 to 5 percent slopes	439	*
244A	Hartsburg silty clay loam, 0 to 2 percent slopes	166	*
259C2	Assumption silt loam, 5 to 10 percent slopes, eroded	390	*
280B	Fayette silt loam, 2 to 5 percent slopes	3,119	0.7
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	1,478	0.3
280D	Fayette silt loam, 10 to 18 percent slopes	349	*
290A	Warsaw loam, 0 to 2 percent slopes	424	*
290B2	Warsaw silt loam, 2 to 5 percent slopes, eroded	1,001	0.2
290C2	Warsaw loam, 5 to 10 percent slopes, eroded	410	*
329A	Will loam, 0 to 2 percent slopes	795	0.2
330A	Peotone silty clay loam, 0 to 2 percent slopes	76	*
332A	Billett fine sandy loam, 0 to 2 percent slopes	552	0.1
332B	Billett fine sandy loam, 2 to 5 percent slopes	1,601	0.3
332C2	Billett fine sandy loam, 5 to 10 percent slopes, eroded	622	0.1
355A	Binghampton sandy loam, 0 to 2 percent slopes	7,803	1.7
356A	Elpaso silty clay loam, 0 to 2 percent slopes	12,662	2.7
357B	Vanpetten loam, 2 to 5 percent slopes	6,860	1.5
361D2	Kidder loam, 6 to 12 percent slopes, eroded	727	0.2
363D2	Griswold loam, 6 to 12 percent slopes, eroded	1,514	0.3
369A	Waupecan silt loam, 0 to 2 percent slopes	5,195	1.1
369B2	Waupecan silt loam, 2 to 5 percent slopes, eroded	468	0.1
379B2	Dakota sandy loam, 2 to 5 percent slopes, eroded	5,161	1.1
397D	Boone loamy fine sand, 7 to 15 percent slopes	191	*
397F	Boone loamy fine sand, 15 to 35 percent slopes	453	*
403D	Elizabeth loam, 10 to 18 percent slopes	298	*

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
403F	Elizabeth loam, 18 to 35 percent slopes	675	0.1
411B	Ashdale silt loam, 2 to 5 percent slopes	463	*
411C2	Ashdale silt loam, 5 to 10 percent slopes, eroded	290	*
429C	Palsgrove silt loam, 5 to 10 percent slopes	195	*
440A	Jasper loam, 0 to 2 percent slopes	1,909	0.4
440B	Jasper loam, 2 to 5 percent slopes	6,426	1.4
440C2	Jasper loam, 5 to 10 percent slopes, eroded	1,015	0.2
488A	Hooppole loam, 0 to 2 percent slopes	1,826	0.4
490A	Odell silt loam, 0 to 2 percent slopes	4,583	1.0
501A	Morocco loamy fine sand, 0 to 2 percent slopes	732	0.2
503B	Rockton silt loam, 2 to 5 percent slopes	1,065	0.2
503C2	Rockton silt loam, 5 to 10 percent slopes, eroded	553	0.1
509B	Whalan loam, 2 to 5 percent slopes	260	*
509D	Whalan loam, 10 to 18 percent slopes	831	0.2
509F	Whalan loam, 18 to 35 percent slopes	279	*
512B	Danabrook silt loam, 2 to 5 percent slopes	558	0.1
512C2	Danabrook silt loam, 5 to 10 percent slopes, eroded	21	*
523A	Dunham silty clay loam, 0 to 2 percent slopes	8,841	1.9
526A	Grundelein silt loam, 0 to 2 percent slopes	3,255	0.7
527B	Kidami silt loam, 2 to 4 percent slopes	9	*
527C2	Kidami loam, 4 to 6 percent slopes, eroded	111	*
564C2	Waukegan silt loam, 5 to 10 percent slopes, eroded	13	*
570A	Martinsville silt loam, 0 to 2 percent slopes	468	0.1
570B	Martinsville silt loam, 2 to 5 percent slopes	1,460	0.3
570C2	Martinsville silt loam, 5 to 10 percent slopes, eroded	615	0.1
570D	Martinsville silt loam, 10 to 18 percent slopes	446	*
610A	Tallmadge sandy loam, 0 to 2 percent slopes	309	*
618B	Senachwine silt loam, 2 to 5 percent slopes	263	*
618C2	Senachwine silt loam, 5 to 10 percent slopes, eroded	2,061	0.4
618D3	Senachwine clay loam, 10 to 18 percent slopes, severely eroded	732	0.2
618F	Senachwine silt loam, 18 to 35 percent slopes	470	0.1
622B	Wyanet silt loam, 2 to 5 percent slopes	6,479	1.4
622B2	Wyanet silt loam, 2 to 5 percent slopes, eroded	10,151	2.2
622C2	Wyanet silt loam, 5 to 10 percent slopes, eroded	7,141	1.5
647A	Lawler loam, 0 to 2 percent slopes	86	*
648A	Clyde clay loam, 0 to 2 percent slopes	15,335	3.3
649A	Nachusa silt loam, 0 to 2 percent slopes	7,583	1.6
650B	Prairieville silt loam, 2 to 5 percent slopes	3,992	0.9
675B	Greenbush silt loam, 2 to 5 percent slopes	4,786	1.0
679A	Blackberry silt loam, 0 to 2 percent slopes	1,555	0.3
679B	Blackberry silt loam, 2 to 5 percent slopes	5,274	1.1
686B	Parkway silt loam, 2 to 5 percent slopes	1,142	0.2
686C2	Parkway silt loam, 5 to 10 percent slopes, eroded	1,077	0.2
689B	Coloma sand, 1 to 7 percent slopes	7,463	1.6
689D	Coloma sand, 7 to 15 percent slopes	3,998	0.9
689F	Coloma sand, 20 to 30 percent slopes	379	*
705A	Buckhart silt loam, 0 to 2 percent slopes	3,776	0.8
715A	Arrowsmith silt loam, 0 to 2 percent slopes	24	*
727A	Waukee loam, 0 to 2 percent slopes	4,894	1.0
741D3	Oakville fine sand, 7 to 20 percent slopes, severely eroded	605	0.1
742B2	Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded	1,705	0.4
742C2	Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes, eroded	364	*
756B	Wyanet fine sandy loam, 2 to 5 percent slopes	3,759	0.8
756C2	Wyanet fine sandy loam, 5 to 10 percent slopes, eroded	1,044	0.2
757B2	Senachwine fine sandy loam, 2 to 5 percent slopes, eroded	598	0.1
757C2	Senachwine fine sandy loam, 5 to 10 percent slopes, eroded	464	*
761D	Eleva fine sandy loam, 7 to 15 percent slopes	480	0.1
761F	Eleva fine sandy loam, 15 to 35 percent slopes	226	*
777A	Adrian muck, 0 to 2 percent slopes	613	0.1
781B	Friesland fine sandy loam, 2 to 5 percent slopes	849	0.2
802A	Orthents, loamy, nearly level	2,135	0.5
864	Pits, quarries	671	0.1
865	Pits, gravel	209	*

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
1082A	Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded	656	0.1
1200A	Orio mucky sandy loam, undrained, 0 to 2 percent slopes	1,246	0.3
1776A	Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded	2,284	0.5
3076A	Otter silt loam, 0 to 2 percent slopes, frequently flooded	83	*
3302A	Ambraw silty clay loam, 0 to 2 percent slopes, frequently flooded	5	*
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded	1,300	0.3
7073A	Ross silt loam, 0 to 2 percent slopes, rarely flooded	1,172	0.3
7682A	Medway loam, 0 to 2 percent slopes, rarely flooded	901	0.2
8067A	Harpster silty clay loam, 0 to 2 percent slopes, occasionally flooded	5,858	1.3
8076A	Otter silt loam, 0 to 2 percent slopes, occasionally flooded	1,285	0.3
8166A	Cohoctah loam, 0 to 2 percent slopes, occasionally flooded	11,202	2.4
8302A	Ambraw loam, 0 to 2 percent slopes, occasionally flooded	15,376	3.3
8321A	Du Page silt loam, 0 to 2 percent slopes, occasionally flooded	331	*
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	936	0.2
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	188	*
8492A	Normandy loam, 0 to 2 percent slopes, occasionally flooded	4,715	1.0
8499A	Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded	4,851	1.0
8776A	Comfrey loam, 0 to 2 percent slopes, occasionally flooded	6,054	1.3
M-W	Miscellaneous water	21	*
W	Water	3,242	0.7
	Total	466,500	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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
45A:							
Denny	3w	143	47	58	69	4.41	6.5
51A:							
Muscatune	1	180	57	68	94	5.42	8.0
60B2:							
La Rose	2e	136	45	54	64	4.60	7.7
60C2:							
La Rose	3e	133	44	53	62	4.20	6.1
67A:							
Harpster	2w	164	52	61	80	4.86	7.2
68A:							
Sable	2w	173	57	67	89	5.20	7.7
86B:							
Osco	2e	170	53	67	91	6.16	9.1
86C2:							
Osco	3e	160	50	63	86	5.78	8.3
87A:							
Dickinson	2s	128	42	51	67	3.05	4.5
87B:							
Dickinson	2e	127	42	51	66	3.80	6.4
87B2:							
Dickinson	2e	122	40	48	64	2.90	4.3
88B2:							
Sparta	4s	102	35	43	49	3.44	5.1
88D2:							
Sparta	6s	---	---	---	---	3.30	4.9
88E:							
Sparta	7s	---	---	---	---	3.20	4.7
93E:							
Rodman	6s	---	---	---	---	2.20	3.6
102A:							
La Hogue	1	146	47	64	72	4.75	7.0
103A:							
Houghton	3w	158	52	---	---	---	7.0
106B:							
Hitt	2e	135	45	54	71	4.30	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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
125A:							
Selma---------------	2w	157	51	62	80	4.75	7.0
145B2:							
Saybrook------------	2e	154	48	59	82	5.37	7.9
145C2:							
Saybrook------------	3e	151	47	58	80	5.25	7.7
152A:							
Drummer-------------	2w	175	57	66	90	5.09	7.5
152A+:							
Drummer-------------	2w	175	57	66	90	5.10	7.5
154A:							
Flanagan------------	1	175	56	69	92	5.30	7.8
171B:							
Catlin--------------	2e	166	52	65	88	6.00	8.9
171C2:							
Catlin--------------	3e	156	49	61	83	5.67	8.3
172A:							
Hoopeston-----------	2s	132	43	53	66	4.29	6.3
198A:							
Elburn--------------	1	178	55	67	85	5.20	7.7
199C2:							
Plano---------------	3e	163	50	62	87	5.89	8.6
200A:							
Orio----------------	2w	133	43	53	64	4.18	6.2
201A:							
Gilford-------------	2w	133	44	53	66	4.10	6.0
204B2:							
Ayr-----------------	2e	125	41	51	61	4.30	7.2
221B2:							
Parr----------------	2e	137	45	55	58	4.70	6.8
221C2:							
Parr----------------	3e	134	44	54	57	4.60	6.6
233B:							
Birkbeck------------	2e	149	47	59	78	4.58	6.8
233C2:							
Birkbeck------------	3e	140	44	56	74	4.31	6.3
243A:							
St. Charles---------	1	151	47	59	78	4.68	6.8
243B:							
St. Charles---------	2e	149	47	58	77	4.58	6.8

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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
244A:							
Hartsburg-----------	2w	164	53	61	80	4.86	7.2
259C2:							
Assumption----------	3e	137	44	55	70	3.99	5.8
280B:							
Fayette-------------	2e	149	47	59	76	4.70	6.9
280C2:							
Fayette-------------	3e	140	44	56	72	4.42	6.4
280D:							
Fayette-------------	3e	136	43	55	70	4.30	6.3
290A:							
Warsaw--------------	2s	145	46	58	73	4.63	6.8
290B2:							
Warsaw--------------	2e	138	44	55	69	4.40	6.5
290C2:							
Warsaw--------------	3e	135	43	54	68	4.30	7.2
329A:							
Will----------------	2w	157	52	61	79	4.40	6.5
330A:							
Peotone-------------	2w	148	49	55	70	4.50	6.7
332A:							
Billett-------------	3s	121	40	49	58	3.70	6.1
332B:							
Billett-------------	3e	120	40	49	57	3.60	6.0
332C2:							
Billett-------------	3e	113	37	46	54	3.50	5.8
355A:							
Binghampton---------	2s	128	40	53	68	4.50	7.2
356A:							
Elpaso--------------	2w	176	57	60	92	5.20	7.7
357B:							
Vanpetten-----------	2e	131	41	55	71	4.30	7.2
361D2:							
Kidder--------------	3e	114	38	47	53	2.90	4.2
363D2:							
Griswold------------	3e	130	43	53	63	4.00	5.7
369A:							
Waupecan------------	1	170	53	67	92	6.22	9.2
369B2:							
Waupecan------------	2e	162	50	64	87	5.91	8.7

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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
379B2:							
Dakota	2e	128	43	52	64	4.30	7.2
397D:							
Boone	6s	---	---	---	---	2.60	3.8
397F:							
Boone	7s	---	---	---	---	2.20	3.2
403D:							
Elizabeth	6s	---	---	---	---	2.20	4.0
403F:							
Elizabeth	7s	---	---	---	---	1.70	3.1
411B:							
Ashdale	2e	152	48	60	83	4.70	6.9
411C2:							
Ashdale	3e	142	45	57	78	5.00	8.3
429C:							
Palsgrove	3e	123	40	---	64	4.30	7.2
440A:							
Jasper	1	158	51	64	85	5.20	7.7
440B:							
Jasper	2e	156	51	63	84	4.10	8.7
440C2:							
Jasper	3e	147	47	60	79	5.10	8.4
488A:							
Hooppole	2w	147	48	58	70	4.52	6.7
490A:							
Odell	1	158	51	61	81	4.60	6.8
501A:							
Morocco	4s	101	35	45	53	4.00	5.8
503B:							
Rockton	2e	120	41	53	67	4.30	6.6
503C2:							
Rockton	3e	113	38	49	63	4.10	4.5
509B:							
Whalan	2e	110	35	45	58	2.68	3.9
509D:							
Whalan	3e	101	32	41	54	3.90	6.5
509F:							
Whalan	7e	---	---	---	---	3.00	5.0
512B:							
Danabrook	2e	166	52	65	89	5.70	8.4

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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
512C2:							
Danabrook	3e	156	49	61	84	5.40	7.8
523A:							
Dunham	2w	160	52	62	81	4.80	7.0
526A:							
Grundelein	1	168	55	64	88	4.80	7.0
527B:							
Kidami	2e	141	45	52	68	4.10	5.9
527C2:							
Kidami	2e	133	42	50	65	3.90	5.6
564C2:							
Waukegan	3e	136	44	53	68	3.68	5.4
570A:							
Martinsville	1	140	44	57	68	4.80	8.0
570B:							
Martinsville	2e	139	44	56	67	4.03	5.9
570C2:							
Martinsville	3e	130	41	53	63	4.50	7.8
570D:							
Martinsville	4e	127	38	52	62	4.50	7.4
610A:							
Tallmadge	2w	141	46	55	72	4.40	6.3
618B:							
Senachwine	2e	131	43	52	62	---	---
618C2:							
Senachwine	3e	123	40	48	59	2.94	4.3
618D3:							
Senachwine	4e	104	34	41	50	4.00	6.6
618F:							
Senachwine	6e	---	---	---	---	2.24	3.4
622B:							
Wyanet	2e	144	47	58	70	3.80	7.6
622B2:							
Wyanet	2e	138	45	56	68	4.51	6.7
622C2:							
Wyanet	3e	135	44	55	66	4.42	6.4
647A:							
Lawler	2s	141	47	57	69	4.75	7.0
648A:							
Clyde	2w	168	56	69	90	5.00	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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
649A:							
Nachusa-------------	1	165	55	66	85	4.80	7.0
650B:							
Prairieville--------	2e	157	51	62	85	5.60	9.3
675B:							
Greenbush-----------	2e	164	51	62	86	4.81	7.1
679A:							
Blackberry----------	1	177	55	67	83	6.33	9.3
679B:							
Blackberry----------	2e	173	53	66	88	6.27	9.1
686B:							
Parkway-------------	2e	166	52	65	88	6.04	8.8
686C2:							
Parkway-------------	3e	156	49	61	83	5.67	8.2
689B:							
Coloma--------------	4s	86	27	38	44	3.05	4.4
689D:							
Coloma--------------	6s	---	---	---	---	2.98	4.3
689F:							
Coloma--------------	7s	---	---	---	---	2.50	3.6
705A:							
Buckhart------------	1	176	55	68	93	5.80	8.6
715A:							
Arrowsmith----------	1	171	55	67	87	5.09	7.5
727A:							
Waukee--------------	2s	133	44	53	61	3.62	5.3
741D3:							
Oakville------------	6s	---	---	---	---	2.60	3.8
742B2:							
Dickinson-----------	2e	126	40	47	65	4.20	8.1
742C2:							
Dickinson-----------	3e	124	39	46	63	4.10	7.6
756B:							
Wyanet--------------	2e	115	40	52	---	4.00	7.4
756C2:							
Wyanet--------------	3e	100	35	45	---	3.40	7.1
757B2:							
Senachwine----------	2e	105	37	47	60	3.40	6.7
757C2:							
Senachwine----------	3e	95	32	40	55	3.00	6.3

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	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
761D:							
Eleva---------------	4e	97	33	39	42	2.90	4.3
761F:							
Eleva---------------	6e	---	---	---	---	2.40	3.7
777A:							
Adrian--------------	4w	132	44	---	---	---	5.8
781B:							
Friesland-----------	2e	142	47	57	71	4.37	6.4
802A:							
Orthents------------	2e	---	---	---	---	---	---
864, 865.							
Pits							
1082A:							
Millington----------	5w	---	---	---	---	---	---
1200A:							
Orio----------------	5w	---	---	---	---	---	---
1776A:							
Comfrey-------------	5w	---	---	---	---	---	---
3076A:							
Otter---------------	3w	151	50	---	---	4.95	6.8
3302A:							
Ambraw--------------	3w	124	42	---	---	4.08	6.0
3451A:							
Lawson--------------	3w	154	50	---	---	4.68	6.9
7073A:							
Ross----------------	1	163	53	64	80	4.86	7.2
7682A:							
Medway--------------	1	159	51	62	77	5.09	7.5
8067A:							
Harpster------------	2w	164	52	61	80	4.90	7.2
8076A:							
Otter---------------	2w	168	55	64	84	5.10	7.5
8166A:							
Cohoctah------------	2w	159	54	67	84	4.41	6.5
8302A:							
Ambraw--------------	2w	138	45	55	68	4.52	6.7
8321A:							
Du Page-------------	2w	153	49	59	73	4.75	7.0
8404A:							
Titus---------------	3w	143	47	55	68	4.41	6.5

See footnote at end of table.

Table 6.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Oats	Grass-legume hay	Grass-legume pasture
		Bu	Bu	Bu	Bu	Tons	AUM*
8451A:							
Lawson-------------	2w	171	55	66	87	5.15	7.5
8492A:							
Normandy-----------	2w	151	48	60	75	4.52	6.7
8499A:							
Fella--------------	2w	165	53	62	84	4.86	6.2
8776A:							
Comfrey------------	2w	166	55	62	80	5.00	7.3
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
45A	Denny silt loam, 0 to 2 percent slopes (where drained)
51A	Muscatune silt loam, 0 to 2 percent slopes
60B2	La Rose silt loam, 2 to 5 percent slopes, eroded
67A	Harpster silty clay loam, 0 to 2 percent slopes (where drained)
68A	Sable silty clay loam, 0 to 2 percent slopes (where drained)
86B	Osco silt loam, 2 to 5 percent slopes
87A	Dickinson sandy loam, 0 to 2 percent slopes
87B	Dickinson sandy loam, 2 to 5 percent slopes
87B2	Dickinson sandy loam, 2 to 7 percent slopes, eroded
102A	La Hogue loam, 0 to 2 percent slopes
106B	Hitt sandy loam, 2 to 5 percent slopes
125A	Selma loam, 0 to 2 percent slopes (where drained)
145B2	Saybrook silt loam, 2 to 5 percent slopes, eroded
152A	Drummer silty clay loam, 0 to 2 percent slopes (where drained)
152A+	Drummer silt loam, 0 to 2 percent slopes, overwash (where drained)
154A	Flanagan silt loam, 0 to 2 percent slopes
171B	Catlin silt loam, 2 to 5 percent slopes
172A	Hoopeston sandy loam, 0 to 2 percent slopes
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)
204B2	Ayr sandy loam, 2 to 5 percent slopes, eroded
221B2	Parr silt loam, 2 to 5 percent slopes, eroded
221C2	Parr silt loam, 5 to 10 percent slopes, eroded
233B	Birkbeck silt loam, 2 to 5 percent slopes
243A	St. Charles silt loam, 0 to 2 percent slopes
243B	St. Charles silt loam, 2 to 5 percent slopes
244A	Hartsburg silty clay loam, 0 to 2 percent slopes (where drained)
280B	Fayette silt loam, 2 to 5 percent slopes
290A	Warsaw loam, 0 to 2 percent slopes
290B2	Warsaw silt loam, 2 to 5 percent slopes, eroded
329A	Will loam, 0 to 2 percent slopes (where drained)
330A	Peotone silty clay loam, 0 to 2 percent slopes (where drained)
332A	Billett fine sandy loam, 0 to 2 percent slopes
332B	Billett fine sandy loam, 2 to 5 percent slopes
355A	Binghampton sandy loam, 0 to 2 percent slopes
356A	Elpaso silty clay loam, 0 to 2 percent slopes (where drained)
357B	Vanpetten loam, 2 to 5 percent slopes
369A	Waupecan silt loam, 0 to 2 percent slopes
369B2	Waupecan silt loam, 2 to 5 percent slopes, eroded
379B2	Dakota sandy loam, 2 to 5 percent slopes, eroded
411B	Ashdale silt loam, 2 to 5 percent slopes
440A	Jasper loam, 0 to 2 percent slopes
440B	Jasper loam, 2 to 5 percent slopes
488A	Hooppole loam, 0 to 2 percent slopes (where drained)
490A	Odell silt loam, 0 to 2 percent slopes
501A	Morocco loamy fine sand, 0 to 2 percent slopes (where irrigated)
503B	Rockton silt loam, 2 to 5 percent slopes
509B	Whalan loam, 2 to 5 percent slopes
512B	Danabrook silt loam, 2 to 5 percent slopes
523A	Dunham silty clay loam, 0 to 2 percent slopes (where drained)
526A	Grundelein silt loam, 0 to 2 percent slopes
527B	Kidami silt loam, 2 to 4 percent slopes
527C2	Kidami loam, 4 to 6 percent slopes, eroded
570A	Martinsville silt loam, 0 to 2 percent slopes
570B	Martinsville silt loam, 2 to 5 percent slopes
610A	Tallmadge sandy loam, 0 to 2 percent slopes (where drained)
618B	Senachwine silt loam, 2 to 5 percent slopes
622B	Wyanet silt loam, 2 to 5 percent slopes

Table 7.--Prime Farmland--Continued

Map symbol	Soil name
622B2	Wyanet silt loam, 2 to 5 percent slopes, eroded
647A	Lawler loam, 0 to 2 percent slopes
648A	Clyde clay loam, 0 to 2 percent slopes (where drained)
649A	Nachusa silt loam, 0 to 2 percent slopes
650B	Prairieville silt loam, 2 to 5 percent slopes
675B	Greenbush silt loam, 2 to 5 percent slopes
679A	Blackberry silt loam, 0 to 2 percent slopes
679B	Blackberry silt loam, 2 to 5 percent slopes
686B	Parkway silt loam, 2 to 5 percent slopes
705A	Buckhart silt loam, 0 to 2 percent slopes
715A	Arrowsmith silt loam, 0 to 2 percent slopes
727A	Waukee loam, 0 to 2 percent slopes
742B2	Dickinson sandy loam, loamy substratum, 2 to 5 percent slopes, eroded
742C2	Dickinson sandy loam, loamy substratum, 5 to 10 percent slopes, eroded
756B	Wyanet fine sandy loam, 2 to 5 percent slopes
756C2	Wyanet fine sandy loam, 5 to 10 percent slopes, eroded
757B2	Senachwine fine sandy loam, 2 to 5 percent slopes, eroded
781B	Friesland fine sandy loam, 2 to 5 percent slopes
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)
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)
3451A	Lawson silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
7073A	Ross silt loam, 0 to 2 percent slopes, rarely flooded
7682A	Medway loam, 0 to 2 percent slopes, rarely flooded
8067A	Harpster silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8076A	Otter silt loam, 0 to 2 percent slopes, occasionally flooded (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
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded
8492A	Normandy loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8499A	Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8776A	Comfrey loam, 0 to 2 percent slopes, occasionally flooded (where drained)

Table 8.--Hydric Soils

(Only the map units that have hydric components are listed. See text for a description of hydric qualities and definitions of the codes in the hydric criteria column)

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
45A:				
Denny silt loam, 0 to 2 percent slopes	Denny	Depressions, ground moraines	Yes	2B3
51A:				
Muscatune silt loam, 0 to 2 percent slopes	Muscatune	Ground moraines	No	---
	Denny	Depressions	Yes	2B3
	Edgington	Ground moraines	Yes	2B3,3
	Sable	Depressions	Yes	2B3
60B2:				
La Rose silt loam, 2 to 5 percent slopes, eroded	La Rose	Ground moraines	No	---
	Drummer	Outwash plains	Yes	2B3
60C2:				
La Rose silt loam, 5 to 10 percent slopes, eroded	La Rose	Ground moraines	No	---
	Drummer	Swales	Yes	2B3
67A:				
Harpster silty clay loam, 0 to 2 percent slopes	Harpster	Outwash plains	Yes	2B3
68A:				
Sable silty clay loam, 0 to 2 percent slopes	Sable	Ground moraines	Yes	2B3
86B:				
Osco silt loam, 2 to 5 percent slopes	Osco	Ground moraines	No	---
	Denny	Depressions	Yes	2B3
	Sable	Depressions	Yes	2B3
	Virden	Ground moraines	Yes	2B3
86C2:				
Osco silt loam, 5 to 10 percent slopes, eroded	Osco	Ground moraines	No	---
	Virden	Ground moraines	Yes	2B3
	Denny	Depressions	Yes	2B3
	Sable	Drainageways	Yes	2B3
87A:				
Dickinson sandy loam, 0 to 2 percent slopes	Dickinson	Stream terraces	No	---
	Gilford	Depressions	Yes	2B3
87B:				
Dickinson sandy loam, 2 to 5 percent slopes	Dickinson	Stream terraces	No	---
	Gilford	Depressions	Yes	2B3
87B2:				
Dickinson sandy loam, 2 to 7 percent slopes, eroded	Dickinson	Stream terraces	No	---
	Selma	Depressions	Yes	2B3
	Gilford	Depressions	Yes	2B3
88B2:				
Sparta loamy sand, 2 to 7 percent slopes, eroded	Sparta	Dunes	No	---
	Orio	Depressions	Yes	2B3
88D2:				
Sparta loamy sand, 7 to 15 percent slopes, eroded	Sparta	Dunes	No	---
	Orio	Depressions	Yes	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
102A:				
La Hogue loam, 0 to 2 percent slopes	La Hogue	Outwash plains	No	---
	Selma	Outwash plains	Yes	2B3
	Orio	Depressions	Yes	2B3
103A:				
Houghton muck, 0 to 2 percent slopes	Houghton	Outwash plains	Yes	1,3
125A:				
Selma loam, 0 to 2 percent slopes	Selma	Outwash plains	Yes	2B3
145B2:				
Saybrook silt loam, 2 to 5 percent slopes, eroded	Saybrook	Ground moraines	No	---
	Drummer	Swales	Yes	2B3
145C2:				
Saybrook silt loam, 5 to 10 percent slopes, eroded	Saybrook	Ground moraines	No	---
	Drummer	Swales	Yes	2B3
152A:				
Drummer silty clay loam, 0 to 2 percent slopes	Drummer	Outwash plains	Yes	2B3
152A+:				
Drummer silt loam, 0 to 2 percent slopes, overwash	Drummer	Outwash plains	Yes	2B3
154A:				
Flanagan silt loam, 0 to 2 percent slopes	Flanagan	Ground moraines	No	---
	Drummer	Swales	Yes	2B3
171B:				
Catlin silt loam, 2 to 5 percent slopes	Catlin	Swales	No	---
	Drummer	Outwash plains	Yes	2B3
171C2:				
Catlin silt loam, 5 to 10 percent slopes, eroded	Catlin	Ground moraines	No	---
	Drummer	Swales	Yes	2B3
172A:				
Hoopeston sandy loam, 0 to 2 percent slopes	Hoopeston	Outwash plains	No	---
	Gilford	Depressions	Yes	2B3
198A:				
Elburn silt loam, 0 to 2 percent slopes	Elburn	Outwash plains	No	---
	Drummer	Swales	Yes	2B3
199C2:				
Plano silt loam, 5 to 10 percent slopes, eroded	Plano	Outwash plains	No	---
	Sable	Drainageways	Yes	2B3
	Drummer	Drainageways	Yes	2B3
200A:				
Orio loam, 0 to 2 percent slopes	Orio	Depressions	Yes	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
201A:				
Gilford fine sandy loam, 0 to 2 percent slopes	Gilford	Outwash plains	Yes	2B3
221B2:				
Parr silt loam, 2 to 5 percent slopes, eroded	Parr	Ground moraines	No	---
	Elpaso	Swales	Yes	2B3
221C2:				
Parr silt loam, 5 to 10 percent slopes, eroded	Parr	Ground moraines	No	---
	Elpaso	Drainageways	Yes	2B3
233C2:				
Birkbeck silt loam, 5 to 10 percent slopes, eroded	Birkbeck	Ground moraines	No	---
	Sable	Drainageways	Yes	2B3
244A:				
Hartsburg silty clay loam, 0 to 2 percent slopes	Hartsburg	Ground moraines	Yes	2B3
259C2:				
Assumption silt loam, 5 to 10 percent slopes, eroded	Assumption	Ground moraines	No	---
	Coatsburg	Ground moraines	Yes	2B3
290A:				
Warsaw loam, 0 to 2 percent slopes	Warsaw	Outwash terraces	No	---
	Selma	Swales	Yes	2B3
	Edgington	Swales	Yes	2B3,3
329A:				
Will loam, 0 to 2 percent slopes	Will	Outwash plains	Yes	2B3
330A:				
Peotone silty clay loam, 0 to 2 percent slopes	Peotone	Ground moraines	Yes	2B3
332A:				
Billett fine sandy loam, 0 to 2 percent slopes	Billett	Outwash plains	No	---
	Orio	Depressions	Yes	2B3
	Gilford	Outwash plains	Yes	2B3
332B:				
Billett fine sandy loam, 2 to 5 percent slopes	Billett	Outwash plains	No	---
	Orio	Depressions	Yes	2B3
	Gilford	Outwash plains	Yes	2B3
355A:				
Binghampton sandy loam, 0 to 2 percent slopes	Binghampton	Ground moraines	No	---
	Orio	Depressions	Yes	2B3
356A:				
Elpaso silty clay loam, 0 to 2 percent slopes	Elpaso	Ground moraines	Yes	2B3
357B:				
Vanpetten loam, 2 to 5 percent slopes	Vanpetten	Ground moraines	No	---
	Orio	Depressions	Yes	2B3
361D2:				
Kidder loam, 6 to 12 percent slopes, eroded	Kidder	End moraines	No	---
	Pella	Drainageways	Yes	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
397D:				
Boone loamy fine sand, 7 to 15 percent slopes	Boone	Hillslopes	No	---
	Comfrey	Flood plains	Yes	2B3
397F:				
Boone loamy fine sand, 15 to 35 percent slopes	Boone	Hillslopes	No	---
	Comfrey	Flood plains	Yes	2B3
488A:				
Hooppole loam, 0 to 2 percent slopes	Hooppole	Outwash plains	Yes	2B3
490A:				
Odell silt loam, 0 to 2 percent slopes	Odell	Ground moraines	No	---
	Clyde	Drainageways	Yes	2B3
501A:				
Morocco loamy fine sand, 0 to 2 percent slopes	Morocco	Outwash plains	No	---
	Orio	Depressions	Yes	2B3
	Gilford	Outwash plains	Yes	2B3
509B:				
Whalan loam, 2 to 5 percent slopes	Whalan	Ground moraines	No	---
	Faxon	Flood plains	Yes	2B3
512B:				
Danabrook silt loam, 2 to 5 percent slopes	Danabrook	Ground moraines	No	---
	Elpaso	Swales	Yes	2B3
512C2:				
Danabrook silt loam, 5 to 10 percent slopes, eroded	Danabrook	Ground moraines	No	---
	Elpaso	Drainageways	Yes	2B3
523A:				
Dunham silty clay loam, 0 to 2 percent slopes	Dunham	Outwash plains	Yes	2B3
526A:				
Grundelein silt loam, 0 to 2 percent slopes	Grundelein	Outwash plains	No	---
	Dunham	Outwash plains	Yes	2B3
527B:				
Kidami silt loam, 2 to 4 percent slopes	Kidami	Ground moraines	No	---
	Elpaso	Swales	Yes	2B3
527C2:				
Kidami loam, 4 to 6 percent slopes, eroded	Kidami	Ground moraines	No	---
	Elpaso	Drainageways	Yes	2B3
610A:				
Tallmadge sandy loam, 0 to 2 percent slopes	Tallmadge	Outwash plains	Yes	2B3
647A:				
Lawler loam, 0 to 2 percent slopes	Lawler	Outwash plains	No	---
	Marshan	Swales	Yes	2B3
648A:				
Clyde clay loam, 0 to 2 percent slopes	Clyde	Drainageways	Yes	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
649A:				
Nachusa silt loam, 0 to 2 percent slopes	Nachusa	Ground moraines	No	---
	Orio	Depressions	Yes	2B3
	Clyde	Drainageways	Yes	2B3
650B:				
Prairieville silt loam, 2 to 5 percent slopes	Prairieville	Ground moraines	No	---
	Clyde	Drainageways	Yes	2B3
675B:				
Greenbush silt loam, 2 to 5 percent slopes	Greenbush	Ground moraines	No	---
	Sable	Ground moraines	Yes	2B3
	Denny	Depressions	Yes	2B3
679A:				
Blackberry silt loam, 0 to 2 percent slopes	Blackberry	Outwash plains, stream terraces	No	---
	Drummer	Swales	Yes	2B3
679B:				
Blackberry silt loam, 2 to 5 percent slopes	Blackberry	Outwash plains, stream terraces	No	---
	Drummer	Swales	Yes	2B3
686B:				
Parkway silt loam, 2 to 5 percent slopes	Parkway	Ground moraines	No	---
	Drummer	Swales	Yes	2B3
705A:				
Buckhart silt loam, 0 to 2 percent slopes	Buckhart	Ground moraines, knolls	No	---
	Sable	Depressions	Yes	2B3
	Virden	Ground moraines	Yes	2B3
	Denny	Depressions	Yes	2B3
715A:				
Arrowsmith silt loam, 0 to 2 percent slopes	Arrowsmith	Ground moraines	No	---
	Spaulding	Depressions	Yes	2B3
	Edgington	Ground moraines	Yes	2B3,3
	Sable	Swales	Yes	2B3
777A:				
Adrian muck, 0 to 2 percent slopes	Adrian	Depressions	Yes	1
1082A:				
Millington silt loam, undrained, 0 to 2 percent slopes, frequently flooded	Millington	Flood plains	Yes	2B3,3
1200A:				
Orio mucky sandy loam, undrained, 0 to 2 percent slopes	Orio	Depressions	Yes	2B3,3
1776A:				
Comfrey silt loam, undrained, 0 to 2 percent slopes, frequently flooded	Comfrey	Flood plains	Yes	2B3,3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
3076A:				
Otter silt loam, 0 to 2 percent slopes, frequently flooded	Otter	Flood plains	Yes	2B3
3302A:				
Ambraw silty clay loam, 0 to 2 percent slopes, frequently flooded	Ambraw	Flood plains	Yes	2B3
3451A:				
Lawson silt loam, 0 to 2 percent slopes, frequently flooded	Lawson	Flood plains	No	---
	Sawmill	Swales	Yes	2B3
	Otter	Swales	Yes	2B3
	Zook	Swales	Yes	2B3
	Birds	Flood plains	Yes	2B3,3
7073A:				
Ross silt loam, 0 to 2 percent slopes, rarely flooded	Ross	Flood plains	No	---
	Ambraw	Flood plains	Yes	2B3
7682A:				
Medway loam, 0 to 2 percent slopes, rarely flooded	Medway	Flood plains	No	---
	Ambraw	Flood plains	Yes	2B3
8067A:				
Harpster silty clay loam, 0 to 2 percent slopes, occasionally flooded	Harpster	Flood plains	Yes	2B3
8076A:				
Otter silt loam, 0 to 2 percent slopes, occasionally flooded	Otter	Flood plains	Yes	2B3
8166A:				
Cohoctah loam, 0 to 2 percent slopes, occasionally flooded	Cohoctah	Flood plains	Yes	2B3
8302A:				
Ambraw loam, 0 to 2 percent slopes, occasionally flooded	Ambraw	Flood plains	Yes	2B3
8321A:				
Du Page silt loam, 0 to 2 percent slopes, occasionally flooded	Du Page	Flood plains	No	---
	Ambraw	Flood plains	Yes	2B3
	Millington	Flood plains	Yes	2B3
8404A:				
Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	Titus	Flood plains	Yes	2B3
8451A:				
Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	Lawson	Flood plains	No	---
	Otter	Swales	Yes	2B3
	Beaucoup	Depressions	Yes	2B3
8492A:				
Normandy loam, 0 to 2 percent slopes, occasionally flooded	Normandy	Flood plains	Yes	2B3

Table 8.--Hydric Soils--Continued

Map symbol and map unit name	Component	Landform	Hydric status	Hydric criteria
8499A:				
Fella silty clay loam, 0 to 2 percent slopes, occasionally flooded	Fella	Flood plains	Yes	2B3
8776A:				
Comfrey loam, 0 to 2 percent slopes, occasionally flooded	Comfrey	Flood plains	Yes	2B3

Table 9.--Forestland Productivity

(Only the soils commonly used for the production of commercial trees are listed)

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
88B2:				
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	---	---	
88D2:				
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	---	---	
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	---	---	
93E:				
Rodman	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple.
	Northern red oak	70	57	
	Red pine	75	143	
	White oak	70	57	
103A:				
Houghton	Silver maple	82	29	Eastern cottonwood, green ash, pin oak, swamp white oak.
	Quaking aspen	60	57	
	White ash	56	43	
	Red maple	56	29	
	Arborvitae	37	57	
	Green ash	---	---	
233B:				
Birkbeck	Green ash	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	---	---	
	White oak	86	72	
233C2:				
Birkbeck	White oak	86	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Green ash	---	---	
	Northern red oak	---	---	
243A:				
St. Charles	Green ash	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	85	72	
	Sweetgum	---	---	
	Tuliptree	95	100	
	White oak	85	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
243B:				
St. Charles	Green ash	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	85	72	
	Sweetgum	---	---	
	Tuliptree	95	100	
	White oak	85	72	
280B:				
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	
280C2:				
Fayette	Northern red oak	80	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	White oak	80	57	
	Black walnut	---	---	
	Tuliptree	90	86	
280D:				
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	
332A:				
Billett	Black oak	70	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Scarlet oak	70	57	
	White oak	70	57	
332B:				
Billett	Black oak	70	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Scarlet oak	70	57	
	White oak	70	57	
332C2:				
Billett	Black oak	70	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Scarlet oak	70	57	
	White oak	70	57	
361D2:				
Kidder	Northern red oak	63	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Shagbark hickory	---	---	
	White ash	---	---	
	White oak	---	---	
397D:				
Boone	Black oak	56	43	Black oak, common hackberry, eastern white pine, green ash, red pine.
	Eastern redcedar	---	---	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
397F:				
Boone	Black oak	56	43	Black oak, common hackberry, eastern white pine, green ash, red pine.
	Eastern redcedar	---	---	
429C:				
Palsgrove	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	70	57	
	White oak	70	57	
509B:				
Whalan	American basswood	65	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Bitternut hickory	69	---	
	Black cherry	57	29	
	Black walnut	55	---	
	Eastern white pine	58	114	
	Northern red oak	79	86	
	Paper birch	55	57	
	Quaking aspen	75	86	
	White oak	78	72	
509D:				
Whalan	American basswood	65	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Bitternut hickory	69	---	
	Black cherry	57	29	
	Black walnut	55	---	
	Eastern white pine	58	114	
	Northern red oak	79	86	
	Paper birch	55	57	
	Quaking aspen	75	86	
	White oak	78	72	
509F:				
Whalan	American basswood	55	43	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Bur oak	52	29	
	Eastern white pine	55	100	
	Northern red oak	47	29	
527B:				
Kidami	Northern red oak	69	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	American beech	---	---	
	Shagbark hickory	---	---	
	Sugar maple	---	---	
	White ash	---	---	
	White oak	---	---	
527C2:				
Kidami	Northern red oak	69	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	American beech	---	---	
	Shagbark hickory	---	---	
	Sugar maple	---	---	
	White ash	---	---	
	White oak	---	---	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
570A:				
Martinsville	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	80	57	
570B:				
Martinsville	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	80	57	
570C2:				
Martinsville	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	80	57	
570D:				
Martinsville	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	80	57	
618B:				
Senachwine	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
618C2:				
Senachwine	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
618D3:				
Senachwine	Northern red oak	90	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
618F:				
Senachwine	Sweetgum	76	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
675B:				
Greenbush	White oak	80	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Northern red oak	80	57	
	Black walnut	---	---	
	Tuliptree	90	86	
689B:				
Coloma	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine.
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
689D:				
Coloma	Eastern white pine	85	200	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine.
	Jack pine	68	100	
	Red pine	78	143	
	White oak	70	72	
689F:				
Coloma	---	---	---	Common hackberry, eastern redcedar, eastern white pine, green ash, red maple, red pine, shortleaf pine.
741D3:				
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	
757B2:				
Senachwine	Northern red oak	90	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
757C2:				
Senachwine	Northern red oak	90	72	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Tuliptree	98	100	
	White oak	90	72	
761D:				
Eleva	Black oak	45	29	Black oak, common hackberry, eastern white pine, green ash, red pine.
	Jack pine	---	---	
	Northern pin oak	---	---	
	Northern red oak	---	---	
761F:				
Eleva	Black oak	45	29	Black oak, common hackberry, eastern white pine, green ash, red pine.
	Jack pine	---	---	
	Northern pin oak	---	---	
	Northern red oak	---	---	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
777A:				
Adrian	Black willow	---	---	Arborvitae, baldcypress, eastern cottonwood, green ash, red maple, silver maple, tamarack, white ash.
	Quaking aspen	56	57	
	Red maple	51	29	
	Silver maple	76	29	
	White ash	51	29	
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	
1200A:				
Orio	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.
1776A:				
Comfrey	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.
3076A:				
Otter	Silver maple	94	43	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.
3302A:				
Ambraw	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.
3451A:				
Lawson	Silver maple	70	29	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak.
	White ash	---	---	
7073A:				
Ross	Black cherry	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak.
	Black walnut	---	---	
	Northern red oak	86	72	
	Sugar maple	85	57	
	Tuliptree	96	100	
	White ash	---	---	
	White oak	---	---	
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	---	---	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to plant
			cu ft/ac	
8076A:				
Otter	Silver maple	94	43	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, 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.
8321A:				
Du Page	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pin oak, swamp white oak.
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	
8451A:				
Lawson	Silver maple	70	29	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak.
	White ash	---	---	
8492A:				
Normandy	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.
8499A:				
Fella	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.
8776A:				
Comfrey	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum.

Table 10a.--Forestland Management

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

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88B2:						
Sparta	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
88D2:						
Sparta	Moderate		Poorly suited		Moderate	
	Sandiness	0.50	Slope	1.00	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		
93E:						
Rodman	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50				
103A:						
Houghton	Severe		Poorly suited		Severe	
	Low strength	1.00	Ponding	1.00	Low strength	1.00
			Low strength	1.00		
			Wetness	1.00		
233B:						
Birkbeck	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
233C2:						
Birkbeck	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
243A:						
St. Charles	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
243B:						
St. Charles	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
332A:						
Billett	Slight		Well suited		Moderate	
					Low strength	0.50
332B:						
Billett	Slight		Well suited		Moderate	
					Low strength	0.50

Table 10a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
332C2:						
Billett-------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
361D2:						
Kidder--------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
397D:						
Boone---------------	Severe		Poorly suited		Moderate	
	Restrictive layer	1.00	Slope	1.00	Low strength	0.50
397F:						
Boone---------------	Severe		Poorly suited		Moderate	
	Restrictive layer	1.00	Slope	1.00	Low strength	0.50
	Slope	0.50				
	Sandiness	0.50				
429C:						
Palsgrove-----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
501A:						
Morocco-------------	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
509B:						
Whalan--------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
	Restrictive layer	0.50				
509D:						
Whalan--------------	Moderate		Poorly suited		Severe	
	Restrictive layer	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
509F:						
Whalan--------------	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Restrictive layer	0.50	Low strength	0.50		
	Stickiness/slope	0.50				
	Low strength	0.50				
527B:						
Kidami--------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
527C2:						
Kidami--------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
570A:						
Martinsville--------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 10a.--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
570B:						
Martinsville--------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
570C2:						
Martinsville--------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
570D:						
Martinsville--------	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
618B:						
Senachwine----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
618C2:						
Senachwine----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
618D3:						
Senachwine----------	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
618F:						
Senachwine----------	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
675B:						
Greenbush-----------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
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		
689F:						
Coloma--------------	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
741D3:						
Oakville------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
			Sandiness	0.50		
757B2:						
Senachwine----------	Slight		Well suited		Moderate	
					Low strength	0.50

Table 10a.--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
757C2:						
Senachwine----------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
761D:						
Eleva---------------	Moderate		Moderately suited		Moderate	
	Restrictive layer	0.50	Slope	0.50	Low strength	0.50
761F:						
Eleva---------------	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
	Restrictive layer	0.50				
777A:						
Adrian--------------	Severe		Poorly suited		Severe	
	Low strength	1.00	Ponding	1.00	Low strength	1.00
			Low strength	1.00		
			Wetness	1.00		
781B:						
Friesland-----------	Slight		Well suited		Moderate	
					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		
1776A:						
Comfrey-------------	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		
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		
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		

Table 10a.--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
7073A:						
Ross----------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
7682A:						
Medway--------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
8076A:						
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		
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		
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		
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		
8492A:						
Normandy------------	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		

Table 10a.--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		
8776A:						
Comfrey-------------	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		

Table 10b.--Forestland Management

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

Map symbol and soil name	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
88B2:						
Sparta	Slight		Slight		Moderately suited	
					Sandiness	0.50
88D2:						
Sparta	Slight		Moderate		Poorly suited	
			Slope/erodibility	0.50	Slope	1.00
					Sandiness	0.50
88E:						
Sparta	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Sandiness	0.50
93E:						
Rodman	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
103A:						
Houghton	Very severe		Very severe		Poorly suited	
	Content of organic matter	1.00	Content of organic matter	1.00	Ponding	1.00
					Low strength	1.00
					Wetness	1.00
233B:						
Birkbeck	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
233C2:						
Birkbeck	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
243A:						
St. Charles	Slight		Slight		Moderately suited	
					Low strength	0.50
243B:						
St. Charles	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
332A:						
Billett	Slight		Slight		Well suited	
332B:						
Billett	Slight		Slight		Well suited	
332C2:						
Billett	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
361D2:						
Kidder	Slight		Severe		Moderately suited	
			Slope/erodibility	0.95	Slope	0.50
					Low strength	0.50
397D:						
Boone	Slight		Moderate		Poorly suited	
			Slope/erodibility	0.50	Slope	1.00
397F:						
Boone	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
429C:						
Palsgrove	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
501A:						
Morocco	Slight		Slight		Moderately suited	
					Wetness	0.50
509B:						
Whalan	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
509D:						
Whalan	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
509F:						
Whalan	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
527B:						
Kidami	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
527C2:						
Kidami	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
570A:						
Martinsville	Slight		Slight		Moderately suited	
					Low strength	0.50
570B:						
Martinsville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
570C2:						
Martinsville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
570D:						
Martinsville--------	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
618B:						
Senachwine----------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
618C2:						
Senachwine----------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
618D3:						
Senachwine----------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
618F:						
Senachwine----------	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	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
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
689F:						
Coloma--------------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Sandiness	0.50
741D3:						
Oakville------------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Sandiness	0.50
757B2:						
Senachwine----------	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
757C2:						
Senachwine----------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
761D:						
Eleva---------------	Slight		Severe		Moderately suited	
			Slope/erodibility	0.95	Slope	0.50

Table 10b.--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
761F:						
Eleva	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
777A:						
Adrian	Very severe		Very severe		Poorly suited	
	Content of organic matter	1.00	Content of organic matter	1.00	Ponding	1.00
					Low strength	1.00
					Wetness	1.00
781B:						
Friesland	Slight		Slight		Well suited	
1082A:						
Millington	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
1776A:						
Comfrey	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
3302A:						
Ambraw	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50
3451A:						
Lawson	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
7073A:						
Ross	Slight		Slight		Moderately suited	
					Low strength	0.50
7682A:						
Medway	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50

Table 10b.--Forestland Management--Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
8076A:						
Otter	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					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
8321A:						
Du Page	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
8404A:						
Titus	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8451A:						
Lawson	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8492A:						
Normandy	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8499A:						
Fella	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Ponding	0.50
					Low strength	0.50

Table 10b.--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
8776A:						
Comfrey-------------	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50

Table 10c.--Forestland Management

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

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88B2:						
Sparta	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
88D2:						
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		
93E:						
Rodman	Well suited		Poorly suited		Well suited	
			Slope	0.75		
			Rock fragments	0.50		
103A:						
Houghton	Well suited		Well suited		Poorly suited	
					Low strength	1.00
233B:						
Birkbeck	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
233C2:						
Birkbeck	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
			Stickiness; high plasticity index	0.50		
243A:						
St. Charles	Well suited		Well suited		Moderately suited	
					Low strength	0.50
243B:						
St. Charles	Well suited		Well suited		Moderately suited	
					Low strength	0.50
280B:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
280C2:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
			Stickiness; high plasticity index	0.50		

Table 10c.--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
280D:						
Fayette-------------	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
332A:						
Billett-------------	Well suited		Well suited		Well suited	
332B:						
Billett-------------	Well suited		Well suited		Well suited	
332C2:						
Billett-------------	Well suited		Moderately suited		Well suited	
			Slope	0.50		
361D2:						
Kidder--------------	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
397D:						
Boone---------------	Moderately suited		Moderately suited		Well suited	
	Sandiness	0.50	Slope	0.50		
			Sandiness	0.50		
397F:						
Boone---------------	Well suited		Poorly suited		Moderately suited	
			Slope	0.75	Slope	0.50
429C:						
Palsgrove-----------	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
			Stickiness; high plasticity index	0.50		
509B:						
Whalan--------------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
509D:						
Whalan--------------	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
509F:						
Whalan--------------	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
527B:						
Kidami--------------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
527C2:						
Kidami--------------	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
570A:						
Martinsville--------	Well suited		Well suited		Moderately suited	
					Low strength	0.50

Table 10c.--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
570B:						
Martinsville	Well suited		Well suited		Moderately suited	
					Low strength	0.50
570C2:						
Martinsville	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
570D:						
Martinsville	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
618B:						
Senachwine	Well suited		Well suited		Moderately suited	
					Low strength	0.50
618C2:						
Senachwine	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
618D3:						
Senachwine	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
618F:						
Senachwine	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
675B:						
Greenbush	Well suited		Well suited		Moderately suited	
					Low strength	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		
689F:						
Coloma	Moderately suited		Poorly suited		Moderately suited	
	Sandiness	0.50	Slope	0.75	Sandiness	0.50
			Sandiness	0.50	Slope	0.50
741D3:						
Oakville	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
757B2:						
Senachwine	Well suited		Well suited		Well suited	
757C2:						
Senachwine	Well suited		Moderately suited		Well suited	
			Slope	0.50		

Table 10c.--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
761D:						
Eleva	Well suited		Moderately suited		Well suited	
			Slope	0.50		
761F:						
Eleva	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Slope	0.50
777A:						
Adrian	Well suited		Well suited		Poorly suited	
					Low strength	1.00
1082A:						
Millington	Well suited		Well suited		Moderately suited	
					Low strength	0.50
1200A:						
Orio	Well suited		Well suited		Well suited	
1776A:						
Comfrey	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3076A:						
Otter	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3302A:						
Ambraw	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
3451A:						
Lawson	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7073A:						
Ross	Well suited		Well suited		Moderately suited	
					Low strength	0.50
7682A:						
Medway	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8067A:						
Harpster	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
8076A:						
Otter	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8166A:						
Cohoctah	Well suited		Well suited		Moderately suited	
					Low strength	0.50

Table 10c.--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
8302A:						
Ambraw	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
8321A:						
Du Page	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8404A:						
Titus	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
8451A:						
Lawson	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8492A:						
Normandy	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8499A:						
Fella	Well suited		Well suited		Moderately suited	
					Low strength	0.50
8776A:						
Comfrey	Well suited		Well suited		Moderately suited	
					Low strength	0.50

Table 10d.--Forestland Management

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

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
88B2:				
Sparta	Well suited		Well suited	
88D2:				
Sparta	Well suited		Well suited	
88E:				
Sparta	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
93E:				
Rodman	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
103A:				
Houghton	Well suited		Well suited	
233B:				
Birkbeck	Well suited		Well suited	
233C2:				
Birkbeck	Well suited		Well suited	
243A:				
St. Charles	Well suited		Well suited	
243B:				
St. Charles	Well suited		Well suited	
280B:				
Fayette	Well suited		Well suited	
280C2:				
Fayette	Well suited		Well suited	
280D:				
Fayette	Well suited		Well suited	
332A:				
Billett	Well suited		Well suited	
332B:				
Billett	Well suited		Well suited	
332C2:				
Billett	Well suited		Well suited	
361D2:				
Kidder	Well suited		Well suited	
397D:				
Boone	Well suited		Well suited	

Table 10d.--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
397F:				
Boone	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
429C:				
Palsgrove	Well suited		Well suited	
509B:				
Whalan	Well suited		Well suited	
509D:				
Whalan	Well suited		Well suited	
509F:				
Whalan	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
527B:				
Kidami	Well suited		Well suited	
527C2:				
Kidami	Well suited		Well suited	
570A:				
Martinsville	Well suited		Well suited	
570B:				
Martinsville	Well suited		Well suited	
570C2:				
Martinsville	Well suited		Well suited	
570D:				
Martinsville	Well suited		Well suited	
618B:				
Senachwine	Well suited		Well suited	
618C2:				
Senachwine	Well suited		Well suited	
618D3:				
Senachwine	Well suited		Well suited	
618F:				
Senachwine	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
675B:				
Greenbush	Well suited		Well suited	
689B:				
Coloma	Well suited		Well suited	
689D:				
Coloma	Well suited		Well suited	
689F:				
Coloma	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50

Table 10d.--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
741D3:				
Oakville	Well suited		Well suited	
757B2:				
Senachwine	Well suited		Well suited	
757C2:				
Senachwine	Well suited		Well suited	
761D:				
Eleva	Well suited		Well suited	
761F:				
Eleva	Poorly suited		Poorly suited	
	Slope	0.50	Slope	0.50
777A:				
Adrian	Well suited		Well suited	
1082A:				
Millington	Well suited		Well suited	
1200A:				
Orio	Well suited		Well suited	
1776A:				
Comfrey	Well suited		Well suited	
3076A:				
Otter	Well suited		Well suited	
3302A:				
Ambraw	Well suited		Well suited	
3451A:				
Lawson	Well suited		Well suited	
7073A:				
Ross	Well suited		Well suited	
7682A:				
Medway	Well suited		Well suited	
8067A:				
Harpster	Well suited		Well suited	
8076A:				
Otter	Well suited		Well suited	
8166A:				
Cohoctah	Well suited		Well suited	
8302A:				
Ambraw	Well suited		Well suited	
8321A:				
Du Page	Well suited		Well suited	
8404A:				
Titus	Well suited		Well suited	

Table 10d.--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
8451A:				
Lawson	Well suited		Well suited	
8492A:				
Normandy	Well suited		Well suited	
8499A:				
Fella	Well suited		Well suited	
8776A:				
Comfrey	Well suited		Well suited	

Table 10e.--Forestland Management

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

Map symbol and soil name	Potential for seedling mortality	
	Rating class and limiting features	Value
88B2:		
Sparta	Low	
88D2:		
Sparta	Low	
88E:		
Sparta	Low	
93E:		
Rodman	Moderate	
	Lime	0.50
103A:		
Houghton	High	
	Wetness	1.00
	Soil reaction	1.00
233B:		
Birkbeck	Low	
233C2:		
Birkbeck	Low	
243A:		
St. Charles	Low	
243B:		
St. Charles	Low	
280B:		
Fayette	Low	
280C2:		
Fayette	Low	
280D:		
Fayette	Low	
332A:		
Billett	Low	
332B:		
Billett	Low	
332C2:		
Billett	Low	

Table 10e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
361D2:		
Kidder	Low	
397D:		
Boone	Low	
397F:		
Boone	Low	
429C:		
Palsgrove	Low	
509B:		
Whalan	Low	
509D:		
Whalan	Low	
509F:		
Whalan	Low	
527B:		
Kidami	Low	
527C2:		
Kidami	Low	
570A:		
Martinsville	Low	
570B:		
Martinsville	Low	
570C2:		
Martinsville	Low	
570D:		
Martinsville	Low	
618B:		
Senachwine	Low	
618C2:		
Senachwine	Low	
618D3:		
Senachwine	Low	
618F:		
Senachwine	Low	
675B:		
Greenbush	Low	
689B:		
Coloma	Low	
689D:		
Coloma	Low	

Table 10e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Value
689F:		
Coloma	Low	
741D3:		
Oakville	Low	
757B2:		
Senachwine	Low	
757C2:		
Senachwine	Low	
761D:		
Eleva	Low	
761F:		
Eleva	Low	
777A:		
Adrian	High	
	Wetness	1.00
	Soil reaction	1.00
1082A:		
Millington	High	
	Wetness	1.00
	Soil reaction	0.50
1200A:		
Orio	High	
	Wetness	1.00
1776A:		
Comfrey	High	
	Wetness	1.00
3076A:		
Otter	High	
	Wetness	1.00
3302A:		
Ambraw	High	
	Wetness	1.00
3451A:		
Lawson	Low	
7073A:		
Ross	Low	
7682A:		
Medway	Low	
8067A:		
Harpster	High	
	Wetness	1.00
	Soil reaction	0.50

Table 10e.--Forestland Management--Continued

Map symbol and soil name	Potential for seedling mortality: Rating class and limiting features	Value
8076A:		
Otter	High	
	Wetness	1.00
8166A:		
Cohoctah	High	
	Wetness	1.00
8302A:		
Ambraw	High	
	Wetness	1.00
8321A:		
Du Page	Low	
8404A:		
Titus	High	
	Wetness	1.00
8451A:		
Lawson	Low	
8492A:		
Normandy	High	
	Wetness	1.00
	Soil reaction	0.50
8499A:		
Fella	High	
	Wetness	1.00
8776A:		
Comfrey	High	
	Wetness	1.00

Table 11.--Windbreaks and Environmental Plantings

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
45A:					
Denny	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
51A:					
Muscatune	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
60B2:					
La Rose	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 11.--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
60C2:					
La Rose	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
67A:					
Harpster	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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
68A:					
Sable	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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:					
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
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:					
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	---
87B:					
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	---

Table 11.--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
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	---
88B2:					
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
88D2:					
Sparta	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine

Table 11.--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
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
93E:					
Rodman	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
102A:					
La Hogue	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 11.--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
103A:					
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	Green ash, pin oak, river birch, swamp white oak	Carolina poplar, eastern cottonwood
106B:					
Hitt	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, red pine, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
125A:					
Selma	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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
145B2:					
Saybrook	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
145C2:					
Saybrook	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
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
154A:					
Flanagan	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
171B:					
Catlin	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 11.--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
171C2:					
Catlin-----------------	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
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, cherrybark oak, eastern cottonwood, pin oak
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

Table 11.--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
199C2: Plano	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
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
204B2:					
Ayr	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
221B2:					
Parr	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
221C2:					
Parr	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
233B:					
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 11.--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
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
243A:					
St. Charles	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
243B:					
St. Charles	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
244A:					
Hartsburg	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 11.--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
259C2:					
Assumption	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
280B:					
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
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
280D:					
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

Table 11.--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
290A:					
Warsaw	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	---
290B2:					
Warsaw	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	---
290C2:					
Warsaw	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 11.--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
329A:					
Will	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, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
330A:					
Peotone	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, shingle oak	Green ash, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
332A:					
Billett	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
332B:					
Billett	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine

Table 11.--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
332C2: Billett	American hazelnut, black chokeberry, common winterberry, coralberry, gray dogwood, mapleleaf viburnum	American plum, American witchhazel, Arnold hawthorn, blackhaw, common chokecherry, common serviceberry, prairie crabapple	Douglas fir, arborvitae, black walnut, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
355A: Binghampton	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
356A: Elpaso	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, shingle oak	Green ash, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
357B:					
Vanpetten	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	---
361D2:					
Kidder	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
363D2:					
Griswold	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
369A:					
Waupecan	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 11.--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
369B2:					
Waupecan	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
379B2:					
Dakota	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash, red pine	Carolina poplar	---
397D:					
Boone	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	---
397F:					
Boone	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 11.--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
403D:					
Elizabeth	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, green ash, thornless honeylocust	---	---
403F:					
Elizabeth	American plum, black chokeberry, blackhaw, common juniper, gray dogwood, mapleleaf viburnum	Cockspur hawthorn, common serviceberry, eastern redcedar, nannyberry, prairie crabapple	Bur oak, chinkapin oak, green ash, thornless honeylocust	---	---
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
411C2:					
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

Table 11.--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
429C:					
Palsgrove	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
440A:					
Jasper	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
440B:					
Jasper	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
440C2:					
Jasper	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 11.--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
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	---
490A:					
Odell	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
501A:					
Morocco	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
503B:					
Rockton	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash, red pine	Carolina poplar	---

Table 11.--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
503C2:					
Rockton	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash, red pine	Carolina poplar	---
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
509D:					
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
509F:					
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 11.--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
512B:					
Danabrook	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
512C2:					
Danabrook	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
523A:					
Dunham	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, shingle oak	Green ash, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
526A:					
Grundelein	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, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
527B:					
Kidami	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
527C2:					
Kidami	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 11.--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
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	---
570A:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
570B:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
570C2:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

Table 11.--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
570D:					
Martinsville	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
610A:					
Tallmadge	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, shingle oak	Green ash, red maple, river birch, swamp white oak	Carolina poplar, eastern cottonwood, pin oak
618B:					
Senachwine	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 11.--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
618C2:					
Senachwine	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
618D3:					
Senachwine	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
618F:					
Senachwine	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
622B:					
Wyanet	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 11.--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
622B2:					
Wyanet	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
622C2:					
Wyanet	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
647A:					
Lawler	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
648A:					
Clyde	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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
649A:					
Nachusa	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
650B:					
Prairieville	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 11.--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
675B:					
Greenbush	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
679A:					
Blackberry	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
679B:					
Blackberry	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
686B:					
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

Table 11.--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
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:					
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
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

Table 11.--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
689F:					
Coloma	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine
705A:					
Buckhart	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
715A:					
Arrowsmith	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 11.--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
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	---
741D3:					
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
742B2:					
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	---

Table 11.--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
742C2:					
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	---
756B:					
Wyanet	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
756C2:					
Wyanet	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
757B2:					
Senachwine	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 11.--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
757C2:					
Senachwine	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
761D:					
Eleva	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	---
761F:					
Eleva	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 11.--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
781B:					
Friesland	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
802A. Orthents					
864, 865. Pits					
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
1200A: 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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
1776A: Comfrey	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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3076A: Otter	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
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
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

Table 11.--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
8067A:					
Harpster	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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8076A:					
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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 white-cedar, 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 white-cedar, 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

Table 11.--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 white-cedar, shingle oak	Green ash, red maple, river birch, 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
8492A:					
Normandy	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	---
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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

Table 11.--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
8776A:					
Comfrey	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 white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
M-W. Miscellaneous water					
W. Water					

Table 12a.--Recreational Development

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

Map symbol and 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
45A:						
Denny	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
51A:						
Muscatune	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
60B2:						
La Rose	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
60C2:						
La Rose	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
					Restricted permeability	0.21
67A:						
Harpster	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
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
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	
87B:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
87B2:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.28
88B2:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
					Slope	0.72
88D2:						
Sparta	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Slope	1.00
	Slope	0.63	Slope	0.63	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
93E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.17	Gravel content	0.17	Gravel content	1.00
102A:						
La Hogue	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
103A:						
Houghton	Very limited		Very limited		Very limited	
	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
106B:						
Hitt	Not limited		Not limited		Somewhat limited	
					Slope	0.28
125A:						
Selma	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
145B2:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.50
	Depth to saturated zone	0.03	Depth to saturated zone	0.02	Restricted permeability	0.21
					Depth to saturated zone	0.03
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
	Depth to saturated zone	0.03	Depth to saturated zone	0.02	Restricted permeability	0.21
					Depth to saturated zone	0.03

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
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
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
154A:						
Flanagan	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
171B:						
Catlin	Not limited		Not limited		Somewhat limited	
					Slope	0.28
171C2:						
Catlin	Not limited		Not limited		Very limited	
					Slope	1.00
172A:						
Hoopeston	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
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
199C2:						
Plano	Not limited		Not limited		Very limited	
					Slope	1.00
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
204B2:						
Ayr	Not limited		Not limited		Somewhat limited	
					Slope	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
221B2:						
Parr	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
221C2:						
Parr	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
					Restricted permeability	0.21
233B:						
Birkbeck	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.28	Depth to saturated zone	0.14	Depth to saturated zone	0.28
					Slope	0.28
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
243A:						
St. Charles	Not limited		Not limited		Not limited	
243B:						
St. Charles	Not limited		Not limited		Somewhat limited	
					Slope	0.28
244A:						
Hartsburg	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
259C2:						
Assumption	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.43	Restricted permeability	0.43	Slope	1.00
					Restricted permeability	0.43
280B:						
Fayette	Not limited		Not limited		Somewhat limited	
					Slope	0.28
280C2:						
Fayette	Not limited		Not limited		Very limited	
					Slope	1.00
280D:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
290A:						
Warsaw	Not limited		Not limited		Not limited	
290B2:						
Warsaw	Not limited		Not limited		Somewhat limited	
					Slope	0.28

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
290C2:						
Warsaw	Not limited		Not limited		Very limited	
					Slope	1.00
329A:						
Will	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
330A:						
Peotone	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
332A:						
Billett	Not limited		Not limited		Not limited	
332B:						
Billett	Not limited		Not limited		Somewhat limited	
					Slope	0.28
332C2:						
Billett	Not limited		Not limited		Very limited	
					Slope	1.00
355A:						
Binghampton	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
356A:						
Elpaso	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
357B:						
Vanpetten	Not limited		Not limited		Somewhat limited	
					Slope	0.28
361D2:						
Kidder	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
363D2:						
Griswold	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
369A:						
Waupecan	Not limited		Not limited		Not limited	
369B2:						
Waupecan	Not limited		Not limited		Somewhat limited	
					Slope	0.50

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
379B2:						
Dakota	Not limited		Not limited		Somewhat limited	
					Slope	0.28
397D:						
Boone	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.50	Too sandy	0.50	Slope	1.00
	Slope	0.37	Slope	0.37	Too sandy	0.50
					Depth to bedrock	0.16
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.50	Too sandy	0.50	Depth to bedrock	0.95
					Too sandy	0.50
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Depth to bedrock	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Gravel content	0.83
					Restricted permeability	0.43
					Content of large stones	0.01
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Gravel content	0.83
					Restricted permeability	0.43
					Content of large stones	0.01
411B:						
Ashdale	Not limited		Not limited		Somewhat limited	
					Slope	0.28
411C2:						
Ashdale	Not limited		Not limited		Very limited	
					Slope	1.00
429C:						
Palsgrove	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.96	Restricted permeability	0.96	Slope	1.00
					Restricted permeability	0.96
440A:						
Jasper	Not limited		Not limited		Not limited	
440B:						
Jasper	Not limited		Not limited		Somewhat limited	
					Slope	0.28
440C2:						
Jasper	Not limited		Not limited		Very limited	
					Slope	1.00

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
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
490A:						
Odell	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
501A:						
Morocco	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Too sandy	0.50	Too sandy	0.50	Too sandy	0.50
503B:						
Rockton	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.54
					Slope	0.28
503C2:						
Rockton	Not limited		Not limited		Very limited	
					Slope	1.00
					Depth to bedrock	0.90
509B:						
Whalan	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.43	Restricted permeability	0.43	Restricted permeability	0.43
					Depth to bedrock	0.29
					Slope	0.28
509D:						
Whalan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Depth to bedrock	0.95
					Restricted permeability	0.43
509F:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Depth to bedrock	0.54
					Restricted permeability	0.43
512B:						
Danabrook	Not limited		Not limited		Somewhat limited	
					Slope	0.28
512C2:						
Danabrook	Not limited		Not limited		Very limited	
					Slope	1.00

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
523A:						
Dunham	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
526A:						
Grundelein	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
527B:						
Kidami	Not limited		Not limited		Somewhat limited	
					Slope	0.12
527C2:						
Kidami	Not limited		Not limited		Somewhat limited	
					Slope	0.88
564C2:						
Waukegan	Not limited		Not limited		Very limited	
					Slope	1.00
570A:						
Martinsville	Not limited		Not limited		Not limited	
570B:						
Martinsville	Not limited		Not limited		Somewhat limited	
					Slope	0.28
570C2:						
Martinsville	Not limited		Not limited		Very limited	
					Slope	1.00
570D:						
Martinsville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
610A:						
Tallmadge	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
618B:						
Senachwine	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
618C2:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
					Restricted permeability	0.21
618D3:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

Table 12a.--Recreational Development--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
618F:						
Senachwine----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
622B:						
Wyanet--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
622B2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
622C2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
					Restricted permeability	0.21
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
648A:						
Clyde---------------	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
649A:						
Nachusa-------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.78	Depth to saturated zone	0.99
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
650B:						
Prairieville--------	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
675B:						
Greenbush-----------	Not limited		Not limited		Somewhat limited	
					Slope	0.28
679A:						
Blackberry----------	Not limited		Not limited		Not limited	
679B:						
Blackberry----------	Not limited		Not limited		Somewhat limited	
					Slope	0.28

Table 12a.--Recreational Development--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
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
689F:						
Coloma--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Slope	1.00
	Too sandy	1.00	Slope	1.00	Too sandy	1.00
705A:						
Buckhart------------	Not limited		Not limited		Not limited	
715A:						
Arrowsmith----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
727A:						
Waukee--------------	Not limited		Not limited		Not limited	
741D3:						
Oakville------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.91	Slope	0.91	Too sandy	1.00
742B2:						
Dickinson-----------	Not limited		Not limited		Somewhat limited	
					Slope	0.12
742C2:						
Dickinson-----------	Not limited		Not limited		Very limited	
					Slope	1.00
756B:						
Wyanet--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
756C2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
					Restricted permeability	0.21

Table 12a.--Recreational Development--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
757B2:						
Senachwine----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
757C2:						
Senachwine----------	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	1.00
					Restricted permeability	0.21
761D:						
Eleva---------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
					Depth to bedrock	0.29
761F:						
Eleva---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Depth to bedrock	0.29
777A:						
Adrian--------------	Very limited		Very limited		Very limited	
	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
781B:						
Friesland-----------	Not limited		Not limited		Somewhat limited	
					Slope	0.28
802A:						
Orthents------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
864, 865:						
Pits----------------	Not rated		Not rated		Not rated	
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
1200A:						
Orio----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
1776A:						
Comfrey	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
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
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
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
7073A:						
Ross	Very limited		Not limited		Not limited	
	Flooding	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				
8067A:						
Harpster	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00			Flooding	0.60
8076A:						
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			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
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Flooding	0.60

Table 12a.--Recreational Development--Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
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
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
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
8492A:						
Normandy	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
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
8776A:						
Comfrey	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
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 12b.--Recreational Development

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

Map symbol and 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
45A:						
Denny	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
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
60B2:						
La Rose	Not limited		Not limited		Not limited	
60C2:						
La Rose	Not limited		Not limited		Not limited	
67A:						
Harpster	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
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
86B:						
Osco	Not limited		Not limited		Not limited	
86C2:						
Osco	Not limited		Not limited		Not limited	
87A:						
Dickinson	Not limited		Not limited		Not limited	
87B:						
Dickinson	Not limited		Not limited		Not limited	
87B2:						
Dickinson	Not limited		Not limited		Not limited	
88B2:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.23
88D2:						
Sparta	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Slope	0.63
					Droughty	0.26

Table 12b.--Recreational Development--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
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
93E:						
Rodman	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Slope	1.00
					Droughty	1.00
					Gravel content	0.17
102A:						
La Hogue	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
103A:						
Houghton	Very limited		Very limited		Very limited	
	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	Ponding	1.00
106B:						
Hitt	Not limited		Not limited		Not limited	
125A:						
Selma	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
145B2:						
Saybrook	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.02
145C2:						
Saybrook	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.02
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
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
154A:						
Flanagan	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 12b.--Recreational Development--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
171B:						
Catlin	Not limited		Not limited		Not limited	
171C2:						
Catlin	Not limited		Not limited		Not limited	
172A:						
Hoopeston	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
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
199C2:						
Plano	Not limited		Not limited		Not limited	
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
204B2:						
Ayr	Not limited		Not limited		Not limited	
221B2:						
Parr	Not limited		Not limited		Not limited	
221C2:						
Parr	Not limited		Not limited		Not limited	
233B:						
Birkbeck	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.14
233C2:						
Birkbeck	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.14
243A:						
St. Charles	Not limited		Not limited		Not limited	
243B:						
St. Charles	Not limited		Not limited		Not limited	

Table 12b.--Recreational Development--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
244A:						
Hartsburg-----------	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
259C2:						
Assumption----------	Not limited		Not limited		Not limited	
280B:						
Fayette-------------	Not limited		Not limited		Not limited	
280C2:						
Fayette-------------	Not limited		Not limited		Not limited	
280D:						
Fayette-------------	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
290A:						
Warsaw--------------	Not limited		Not limited		Not limited	
290B2:						
Warsaw--------------	Not limited		Not limited		Not limited	
290C2:						
Warsaw--------------	Not limited		Not limited		Not limited	
329A:						
Will----------------	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
330A:						
Peotone-------------	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
332A:						
Billett-------------	Not limited		Not limited		Not limited	
332B:						
Billett-------------	Not limited		Not limited		Not limited	
332C2:						
Billett-------------	Not limited		Not limited		Not limited	
355A:						
Binghampton---------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
356A:						
Elpaso--------------	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

Table 12b.--Recreational Development--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
357B:						
Vanpetten	Not limited		Not limited		Not limited	
361D2:						
Kidder	Not limited		Not limited		Somewhat limited	
					Slope	0.04
363D2:						
Griswold	Not limited		Not limited		Somewhat limited	
					Slope	0.04
369A:						
Waupecan	Not limited		Not limited		Not limited	
369B2:						
Waupecan	Not limited		Not limited		Not limited	
379B2:						
Dakota	Not limited		Not limited		Not limited	
397D:						
Boone	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Droughty	0.97
					Slope	0.37
					Depth to bedrock	0.16
397F:						
Boone	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Too sandy	0.50	Slope	1.00
	Too sandy	0.50			Droughty	1.00
					Depth to bedrock	0.95
403D:						
Elizabeth	Not limited		Not limited		Very limited	
					Depth to bedrock	1.00
					Slope	0.96
					Droughty	0.92
					Content of large stones	0.01
403F:						
Elizabeth	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.02	Depth to bedrock	1.00
					Slope	1.00
					Droughty	1.00
					Content of large stones	0.01
411B:						
Ashdale	Not limited		Not limited		Not limited	
411C2:						
Ashdale	Not limited		Not limited		Not limited	
429C:						
Palsgrove	Not limited		Not limited		Not limited	
440A:						
Jasper	Not limited		Not limited		Not limited	

Table 12b.--Recreational Development--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
440B:						
Jasper	Not limited		Not limited		Not limited	
440C2:						
Jasper	Not limited		Not limited		Not limited	
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
490A:						
Odell	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
501A:						
Morocco	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Depth to saturated zone	0.75
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Droughty	0.32
503B:						
Rockton	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.54
503C2:						
Rockton	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.90
509B:						
Whalan	Not limited		Not limited		Somewhat limited	
					Depth to bedrock	0.29
509D:						
Whalan	Not limited		Not limited		Somewhat limited	
					Slope	0.96
					Depth to bedrock	0.95
509F:						
Whalan	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.02	Slope	1.00
					Depth to bedrock	0.54
512B:						
Danabrook	Not limited		Not limited		Not limited	
512C2:						
Danabrook	Not limited		Not limited		Not limited	
523A:						
Dunham	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
526A:						
Grundelein	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 12b.--Recreational Development--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
527B:						
Kidami--------------	Not limited		Not limited		Not limited	
527C2:						
Kidami--------------	Not limited		Not limited		Not limited	
564C2:						
Waukegan------------	Not limited		Not limited		Not limited	
570A:						
Martinsville--------	Not limited		Not limited		Not limited	
570B:						
Martinsville--------	Not limited		Not limited		Not limited	
570C2:						
Martinsville--------	Not limited		Not limited		Not limited	
570D:						
Martinsville--------	Not limited		Not limited		Somewhat limited	
					Slope	0.96
610A:						
Tallmadge-----------	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
618B:						
Senachwine----------	Not limited		Not limited		Not limited	
618C2:						
Senachwine----------	Not limited		Not limited		Not limited	
618D3:						
Senachwine----------	Not limited		Not limited		Somewhat limited	
					Slope	0.96
					Droughty	0.06
618F:						
Senachwine----------	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.02		
622B:						
Wyanet--------------	Not limited		Not limited		Not limited	
622B2:						
Wyanet--------------	Not limited		Not limited		Not limited	
622C2:						
Wyanet--------------	Not limited		Not limited		Not limited	
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

Table 12b.--Recreational Development--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
648A:						
Clyde	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
649A:						
Nachusa	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
650B:						
Prairieville	Not limited		Not limited		Not limited	
675B:						
Greenbush	Not limited		Not limited		Not limited	
679A:						
Blackberry	Not limited		Not limited		Not limited	
679B:						
Blackberry	Not limited		Not limited		Not limited	
686B:						
Parkway	Not limited		Not limited		Not limited	
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
689F:						
Coloma	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	1.00			Droughty	0.58
					Too sandy	0.50
705A:						
Buckhart	Not limited		Not limited		Not limited	
715A:						
Arrowsmith	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
727A:						
Waukee	Not limited		Not limited		Not limited	

Table 12b.--Recreational Development--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
741D3:						
Oakville------------	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Slope	0.91
					Droughty	0.49
742B2:						
Dickinson-----------	Not limited		Not limited		Not limited	
742C2:						
Dickinson-----------	Not limited		Not limited		Not limited	
756B:						
Wyanet--------------	Not limited		Not limited		Not limited	
756C2:						
Wyanet--------------	Not limited		Not limited		Not limited	
757B2:						
Senachwine----------	Not limited		Not limited		Not limited	
757C2:						
Senachwine----------	Not limited		Not limited		Not limited	
761D:						
Eleva---------------	Not limited		Not limited		Somewhat limited	
					Slope	0.37
					Depth to bedrock	0.29
761F:						
Eleva---------------	Very limited		Not limited		Very limited	
	Slope	1.00			Slope	1.00
					Depth to bedrock	0.29
777A:	Very limited		Very limited		Very limited	
Adrian--------------	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	Ponding	1.00
781B:						
Friesland-----------	Not limited		Not limited		Not limited	
802A:						
Orthents------------	Not limited		Not limited		Not limited	
864, 865:						
Pits----------------	Not rated		Not rated		Not rated	
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
1200A:						
Orio----------------	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

Table 12b.--Recreational Development--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
1776A:						
Comfrey-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
					Flooding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40		
3076A:						
Otter---------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
					Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00		
	Flooding	0.40	Flooding	0.40	Ponding	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
					Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00		
	Flooding	0.40	Flooding	0.40	Ponding	1.00
3451A:						
Lawson--------------	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
					Depth to saturated zone	0.75
	Flooding	0.40	Flooding	0.40		
7073A:						
Ross----------------	Not limited		Not limited		Not limited	
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
8067A:						
Harpster------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
					Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00		
					Flooding	0.60
8076A:						
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
					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

Table 12b.--Recreational Development--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
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
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
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
8492A:						
Normandy	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
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
8776A:						
Comfrey	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
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 13.--Wildlife Habitat

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

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
45A:										
Denny	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
51A:										
Muscatune	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
60B2:										
La Rose	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
60C2:										
La Rose	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
67A:										
Harpster	Fair	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
68A:										
Sable	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
86B:										
Osco	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
86C2:										
Osco	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87A:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87B:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
87B2:										
Dickinson	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
88B2:										
Sparta	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
88D2:										
Sparta	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
88E:										
Sparta	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
93E:										
Rodman	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.

Table 13.--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
102A: La Hogue	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor.
103A: Houghton	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
106B: Hitt	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
125A: Selma	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
145B2: Saybrook	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
145C2: Saybrook	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
152A: Drummer	Fair	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
152A+: Drummer	Fair	Fair	Good	Fair	Fair	Good	Good	Fair	Fair	Good.
154A: Flanagan	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
171B: Catlin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
171C2: Catlin	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
172A: Hoopeston	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
198A: Elburn	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
199C2: Plano	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
200A: Orio	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
201A: Gilford	Fair	Poor	Poor	Poor	Poor	Good	Good	Fair	Poor	Good.
204B2: Ayr	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
221B2: Parr	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--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
221C2:										
Parr	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
233B:										
Birkbeck	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
233C2:										
Birkbeck	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
243A:										
St. Charles	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
243B:										
St. Charles	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
244A:										
Hartsburg	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
259C2:										
Assumption	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Fair	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.
280D:										
Fayette	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
290A:										
Warsaw	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
290B2:										
Warsaw	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
290C2:										
Warsaw	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
329A:										
Will	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
330A:										
Peotone	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
332A:										
Billett	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
332B:										
Billett	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
332C2:										
Billett	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
355A:										
Binghampton	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
356A:										
Elpaso	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
357B:										
Vanpetten	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
361D2:										
Kidder	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
363D2:										
Griswold	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
369A:										
Waupecan	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
369B2:										
Waupecan	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
379B2:										
Dakota	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
397D:										
Boone	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
397F:										
Boone	Very poor.	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
403D:										
Elizabeth	Very poor.	Very poor.	Poor	---	---	Very poor.	Very poor.	Very poor.	---	Very poor.
403F:										
Elizabeth	Very poor.	Very poor.	Poor	---	---	Very poor.	Very poor.	Very poor.	---	Very poor.
411B:										
Ashdale	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
411C2:										
Ashdale	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
429C:										
Palsgrove	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
440A:										
Jasper------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
440B:										
Jasper------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
440C2:										
Jasper------------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
488A:										
Hooppole----------	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
490A:										
Odell-------------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
501A:										
Morocco-----------	Poor	Fair	Good	Fair	Fair	Fair	Very poor.	Fair	Fair	Poor.
503B:										
Rockton-----------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
503C2:										
Rockton-----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
509B:										
Whalan------------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
509D:										
Whalan------------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
509F:										
Whalan------------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
512B:										
Danabrook---------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
512C2:										
Danabrook---------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
523A:										
Dunham------------	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
526A:										
Grundelein--------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
527B:										
Kidami------------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
527C2:										
Kidami------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
564C2:										
Waukegan----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
570A:										
Martinsville------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
570B:										
Martinsville------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
570C2:										
Martinsville------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
570D:										
Martinsville------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
610A:										
Tallmadge---------	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
618B:										
Senachwine--------	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
618C2:										
Senachwine--------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
618D3:										
Senachwine--------	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
618F:										
Senachwine--------	Very poor.	Poor	Good	Good	Good	Very poor.	Very poor.	Poor	Good	Very poor.
622B:										
Wyanet------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
622B2:										
Wyanet------------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
622C2:										
Wyanet------------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
647A:										
Lawler------------	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
648A:										
Clyde-------------	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
649A: Nachusa	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
650B: Prairieville	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
675B: Greenbush	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
679A: Blackberry	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
679B: Blackberry	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
686B: Parkway	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
686C2: Parkway	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
689B: Coloma	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
689D: Coloma	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
689F: Coloma	Very poor.	Fair	Fair	Fair	Good	Very poor.	Very poor.	Fair	Fair	Very poor.
705A: Buckhart	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
715A: Arrowsmith	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
727A: Waukee	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
741D3: Oakville	Poor	Poor	Fair	Poor	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
742B2: Dickinson	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor.
742C2: Dickinson	Fair	Good	Good	Good	Good	Very poor.	Poor	Fair	Fair	Very poor.

Table 13.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
756B:										
Wyanet	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
756C2:										
Wyanet	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
757B2:										
Senachwine	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
757C2:										
Senachwine	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
761D:										
Eleva	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
761F:										
Eleva	Poor	Poor	Fair	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
777A:										
Adrian	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.
781B:										
Friesland	Good	Good	Good	Poor	Poor	Very poor.	Very poor.	Good	Poor	Very poor.
802A.										
Orthents										
864, 865.										
Pits										
1082A:										
Millington	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
1200A:										
Orio	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
1776A:										
Comfrey	Very poor.	Poor	Poor	Very poor.	Very poor.	Good	Good	Very poor.	Very poor.	Good.
3076A:										
Otter	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3302A:										
Ambraw	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
3451A:										
Lawson	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
7073A:										
Ross	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

Table 13.--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
7682A: Medway	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
8067A: Harpster	Fair	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair.
8076A: Otter	Poor	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.
8404A: Titus	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8451A: Lawson	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
8492A: Normandy	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8499A: Fella	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
8776A: Comfrey	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
M-W. Miscellaneous water										
W. Water										

Table 14a.--Building Site Development

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

Map symbol and 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
45A:						
Denny	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
51A:						
Muscatune	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
60B2:						
La Rose	Not limited		Not limited		Not limited	
60C2:						
La Rose	Not limited		Not limited		Somewhat limited	
					Slope	0.97
67A:						
Harpster	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
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
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:						
Dickinson	Not limited		Not limited		Not limited	
87B:						
Dickinson	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
87B2:						
Dickinson	Not limited		Not limited		Not limited	
88B2:						
Sparta	Not limited		Not limited		Somewhat limited	
					Slope	0.03
88D2:						
Sparta	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.63	Slope	0.63	Slope	1.00
88E:						
Sparta	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
93E:						
Rodman	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
102A:						
La Hogue	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
103A:						
Houghton	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
106B:						
Hitt	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to hard bedrock	0.13		
125A:						
Selma	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
145B2:						
Saybrook	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.03			Depth to saturated zone	0.03
145C2:						
Saybrook	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	0.97
	Depth to saturated zone	0.03			Shrink-swell	0.50
					Depth to saturated zone	0.03

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
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
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
154A:						
Flanagan	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
	Depth to saturated zone	0.98	Shrink-swell	1.00	Depth to saturated zone	0.98
171B:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
171C2:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.97
			Shrink-swell	0.50	Shrink-swell	0.50
172A:						
Hoopeston	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
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
199C2:						
Plano	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					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

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
204B2:						
Ayr	Not limited		Not limited		Not limited	
221B2:						
Parr	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
221C2:						
Parr	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.97
					Shrink-swell	0.50
233B:						
Birkbeck	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.28	Shrink-swell	0.50	Depth to saturated zone	0.28
233C2:						
Birkbeck	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	0.97
	Depth to saturated zone	0.28	Shrink-swell	0.50	Shrink-swell	0.50
					Depth to saturated zone	0.28
243A:						
St. Charles	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
243B:						
St. Charles	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
244A:						
Hartsburg	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
259C2:						
Assumption	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
			Depth to saturated zone	0.99	Slope	0.97
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
280D:						
Fayette	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

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
290A:						
Warsaw	Not limited		Not limited		Not limited	
290B2:						
Warsaw	Not limited		Not limited		Not limited	
290C2:						
Warsaw	Not limited		Not limited		Somewhat limited	
					Slope	0.97
329A:						
Will	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
330A:						
Peotone	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
332A:						
Billett	Not limited		Not limited		Not limited	
332B:						
Billett	Not limited		Not limited		Not limited	
332C2:						
Billett	Not limited		Not limited		Somewhat limited	
					Slope	0.97
355A:						
Binghampton	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
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
357B:						
Vanpetten	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.61	Shrink-swell	0.50
			Shrink-swell	0.50		
361D2:						
Kidder	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
363D2:						
Griswold	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	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
369A:						
Waupecan------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
369B2:						
Waupecan------------	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
379B2:						
Dakota--------------	Not limited		Not limited		Not limited	
397D:						
Boone---------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
			Depth to soft bedrock	0.15		
397F:						
Boone---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to soft bedrock	0.95		
403D:						
Elizabeth-----------	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
					Depth to hard bedrock	1.00
	Slope	0.96	Slope	0.96		
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
403F:						
Elizabeth-----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
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		
411C2:						
Ashdale-------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to hard bedrock	0.42	Shrink-swell	0.50
429C:						
Palsgrove-----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to hard bedrock	0.96	Slope	0.97
					Shrink-swell	0.50
			Shrink-swell	0.50		
440A:						
Jasper--------------	Not limited		Not limited		Not limited	
440B:						
Jasper--------------	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
440C2:						
Jasper	Not limited		Not limited		Somewhat limited	
					Slope	0.97
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
490A:						
Odell	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
501A:						
Morocco	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
503B:						
Rockton	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
503C2:						
Rockton	Somewhat limited		Very limited		Somewhat limited	
	Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Slope	0.97
	Shrink-swell	0.50	Shrink-swell	0.50	Depth to hard bedrock	0.90
					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	0.29	Shrink-swell	0.50	Depth to hard bedrock	0.29
509D:						
Whalan	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
	Slope	0.96	Depth to hard bedrock	1.00	Shrink-swell	1.00
	Depth to hard bedrock	0.95	Slope	0.96	Depth to hard bedrock	0.95
509F:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to hard bedrock	0.54	Depth to hard bedrock	1.00	Depth to hard bedrock	0.54
512B:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	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
512C2:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.97
					Shrink-swell	0.50
523A:						
Dunham	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
526A:						
Grundelein	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
527B:						
Kidami	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
527C2:						
Kidami	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50	Slope	0.12
564C2:						
Waukegan	Not limited		Not limited		Somewhat limited	
					Slope	0.97
570A:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
570B:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
570C2:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
					Shrink-swell	0.50
570D:						
Martinsville	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
610A:						
Tallmadge	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
			Depth to hard bedrock	0.42		

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
618B:						
Senachwine----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
618C2:						
Senachwine----------	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
618D3:						
Senachwine----------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
618F:						
Senachwine----------	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
622B:						
Wyanet--------------	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
622B2:						
Wyanet--------------	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
622C2:						
Wyanet--------------	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					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
648A:						
Clyde---------------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
649A:						
Nachusa-------------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
650B:						
Prairieville--------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
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		

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
679A:						
Blackberry	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
679B:						
Blackberry	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			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
689F:						
Coloma	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
705A:						
Buckhart	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
715A:						
Arrowsmith	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
727A:						
Waukee	Not limited		Not limited		Not limited	
741D3:						
Oakville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.91	Slope	0.91	Slope	1.00
742B2:						
Dickinson	Not limited		Not limited		Not limited	
742C2:						
Dickinson	Not limited		Not limited		Somewhat limited	
					Slope	0.97

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
756B:						
Wyanet	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
756C2:						
Wyanet	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
					Shrink-swell	0.50
757B2:						
Senachwine	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
757C2:						
Senachwine	Not limited		Not limited		Somewhat limited	
					Slope	0.97
761D:						
Eleva	Somewhat limited		Very limited		Very limited	
	Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
	Depth to hard bedrock	0.29	Slope	0.37	Depth to hard bedrock	0.29
761F:						
Eleva	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
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
781B:						
Friesland	Not limited		Not limited		Not limited	
802A:						
Orthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
864, 865:						
Pits	Not rated		Not rated		Not rated	
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
1200A:						
Orio	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50			Shrink-swell	0.50

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
1776A:						
Comfrey	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
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
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
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		
7073A:						
Ross	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
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
8067A:						
Harpster	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
8076A:						
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		Dwellings with basements		Small commercial buildings	
	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	
	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		
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
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		
8492A:						
Normandy------------	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
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
8776A:						
Comfrey-------------	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		

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
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water---------------	Not rated		Not rated		Not rated	

Table 14b.--Building Site Development

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

Map symbol and 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
45A:						
Denny	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	1.00				
51A:						
Muscatune	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
60B2:						
La Rose	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
60C2:						
La Rose	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
67A:						
Harpster	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	Cutbanks cave	0.10		
	Low strength	1.00				
	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				
86B:						
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				
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				

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
87A:						
Dickinson-----------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
87B:						
Dickinson-----------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
87B2:						
Dickinson-----------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
88B2:						
Sparta--------------	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.23
88D2:						
Sparta--------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.63	Cutbanks cave	1.00	Slope	0.63
			Slope	0.63	Droughty	0.26
88E:						
Sparta--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	0.11
93E:						
Rodman--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	0.99
					Gravel content	0.17
102A:						
La Hogue------------	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				
103A:						
Houghton------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Cutbanks cave	0.10	Cutbanks cave	0.10
106B:						
Hitt----------------	Very limited		Very limited		Not limited	
	Low strength	1.00	Too clayey	1.00		
	Shrink-swell	0.50	Depth to hard bedrock	0.13		
	Frost action	0.50	Cutbanks cave	0.10		

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
125A:						
Selma---------------	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				
	Low strength	0.22				
145B2:						
Saybrook------------	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Depth to saturated zone	0.02				
145C2:						
Saybrook------------	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.02
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Depth to saturated zone	0.02				
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				
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				
154A:						
Flanagan------------	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				
	Shrink-swell	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
171B:						
Catlin--------------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		

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
171C2:						
Catlin	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00	Cutbanks cave	0.10		
	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	0.75
	Depth to saturated zone	0.75	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				
199C2:						
Plano	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	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		
204B2:						
Ayr	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
221B2:						
Parr	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Frost action	0.50	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
221C2:						
Parr	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Frost action	0.50	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		

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
233B:						
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				
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				
243A:						
St. Charles	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
243B:						
St. Charles	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
244A:						
Hartsburg	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	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
259C2:						
Assumption	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Shrink-swell	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
280B:						
Fayette	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
280C2:						
Fayette	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
280D:						
Fayette	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.10		
	Slope	0.96				
	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
290A:						
Warsaw--------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
290B2:						
Warsaw--------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
290C2:						
Warsaw--------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
329A:						
Will----------------	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	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
330A:						
Peotone-------------	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	Too clayey	0.02		
	Ponding	1.00				
332A:						
Billett-------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
332B:						
Billett-------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
332C2:						
Billett-------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
355A:						
Binghampton---------	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		
	Shrink-swell	0.50	Dense layer	0.50		
356A:						
Elpaso--------------	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	Cutbanks cave	0.10		
	Low strength	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
357B:						
Vanpetten-----------	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50	Depth to saturated zone	0.61		
	Frost action	0.50	Dense layer	0.50		
361D2:						
Kidder--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
	Slope	0.04	Slope	0.04		
363D2:						
Griswold------------	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Cutbanks cave	0.10	Slope	0.04
	Frost action	0.50	Slope	0.04		
	Slope	0.04				
369A:						
Waupecan------------	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
369B2:						
Waupecan------------	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
379B2:						
Dakota--------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
397D:						
Boone---------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.37	Cutbanks cave	1.00	Droughty	0.97
			Slope	0.37	Slope	0.37
			Depth to soft bedrock	0.15	Depth to bedrock	0.16
397F:						
Boone---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Cutbanks cave	1.00	Droughty	1.00
			Depth to soft bedrock	0.95	Depth to bedrock	0.95
403D:						
Elizabeth-----------	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
	Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	0.92
	Frost action	0.50			Content of large stones	0.01

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
403F:						
Elizabeth-----------	Very limited		Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	0.10	Droughty	0.99
					Content of large stones	0.01
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		
411C2:						
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		
429C:						
Palsgrove-----------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to hard bedrock	0.96		
	Low strength	1.00	Too clayey	0.88		
	Shrink-swell	0.50	Cutbanks cave	0.10		
440A:						
Jasper--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50				
440B:						
Jasper--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50				
440C2:						
Jasper--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Frost action	0.50				
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	0.78				
	Shrink-swell	0.50				
490A:						
Odell---------------	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
	Depth to saturated zone	0.78	Dense layer	0.50		
			Cutbanks cave	0.10		

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
501A:						
Morocco	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.75	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.32
503B:						
Rockton	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.54
	Depth to hard bedrock	0.54	Too clayey	0.32		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
503C2:						
Rockton	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.90
	Depth to hard bedrock	0.90	Too clayey	0.32		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
509B:						
Whalan	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Depth to bedrock	0.29
	Shrink-swell	0.50	Too clayey	0.32		
	Frost action	0.50	Cutbanks cave	0.10		
	Depth to hard bedrock	0.29				
509D:						
Whalan	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to hard bedrock	1.00	Slope	0.96
	Shrink-swell	1.00	Slope	0.96	Depth to bedrock	0.95
	Slope	0.96	Too clayey	0.32		
	Depth to hard bedrock	0.95	Cutbanks cave	0.10		
	Frost action	0.50				
509F:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Low strength	0.78	Slope	1.00	Depth to bedrock	0.54
	Depth to hard bedrock	0.54	Too clayey	0.32		
	Frost action	0.50	Cutbanks cave	0.10		
512B:						
Danabrook	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
512C2:						
Danabrook	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		

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
523A:						
Dunham--------------	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				
526A:						
Grundelein----------	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				
	Shrink-swell	0.50				
527B:						
Kidami--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Frost action	0.50	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
527C2:						
Kidami--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Frost action	0.50	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
564C2:						
Waukegan------------	Very limited		Very limited		Not limited	
	Low strength	1.00	Cutbanks cave	1.00		
570A:						
Martinsville--------	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
570B:						
Martinsville--------	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
570C2:						
Martinsville--------	Somewhat limited		Somewhat limited		Not limited	
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
570D:						
Martinsville--------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	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
610A:						
Tallmadge-----------	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	Depth to hard bedrock	0.42		
618B:						
Senachwine----------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
618C2:						
Senachwine----------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
618D3:						
Senachwine----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Frost action	0.50	Dense layer	0.50	Droughty	0.06
			Cutbanks cave	0.10		
618F:						
Senachwine----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
622B:						
Wyanet--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
622B2:						
Wyanet--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
622C2:						
Wyanet--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
647A:						
Lawler--------------	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Depth to saturated zone	0.75	Cutbanks cave	1.00		

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
648A:						
Clyde	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	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
649A:						
Nachusa	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	0.10		
	Depth to saturated zone	0.78				
	Shrink-swell	0.50				
650B:						
Prairieville	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
675B:						
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				
679A:						
Blackberry	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50				
679B:						
Blackberry	Very limited		Very limited		Not limited	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50				
686B:						
Parkway	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				
686C2:						
Parkway	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				
689B:						
Coloma	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Too sandy	0.50
					Droughty	0.49

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
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
689F:						
Coloma--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Cutbanks cave	1.00	Droughty	0.58
					Too sandy	0.50
705A:						
Buckhart------------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
715A:						
Arrowsmith----------	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	0.50		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
727A:						
Waukee--------------	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
741D3:						
Oakville------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.91	Cutbanks cave	1.00	Slope	0.91
			Slope	0.91	Droughty	0.49
742B2:						
Dickinson-----------	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
742C2:						
Dickinson-----------	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Cutbanks cave	0.10		
756B:						
Wyanet--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
756C2:						
Wyanet--------------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
757B2:						
Senachwine----------	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Dense layer	0.50		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				

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

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
757C2:						
Senachwine	Somewhat limited		Somewhat limited		Not limited	
	Frost action	0.50	Dense layer	0.50		
			Cutbanks cave	0.10		
761D:						
Eleva	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to hard bedrock	1.00	Slope	0.37
	Slope	0.37	Slope	0.37	Depth to bedrock	0.29
	Depth to hard bedrock	0.29	Cutbanks cave	0.10		
761F:						
Eleva	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00	Depth to bedrock	0.29
	Depth to hard bedrock	0.29	Cutbanks cave	0.10		
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		
781B:						
Friesland	Somewhat limited		Somewhat limited		Not limited	
	Low strength	0.78	Cutbanks cave	0.10		
	Frost action	0.50				
802A:						
Orthents	Very limited		Somewhat limited		Not limited	
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
864, 865:						
Pits	Not rated		Not rated		Not rated	
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				
1200A:						
Orio	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	Cutbanks cave	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
1776A:						
Comfrey	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				
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				
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				
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				
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				
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				
8067A:						
Harpster	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		
	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
8076A:						
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
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Low strength	1.00	Cutbanks cave	0.10		
	Ponding	1.00				
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		
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		
	Low strength	1.00				
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		
8492A:						
Normandy------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
	Flooding	1.00	Flooding	0.60		
	Low strength	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
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				
8776A:						
Comfrey	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
	Flooding	1.00	Flooding	0.60		
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 15a.--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 limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
45A:				
Denny	Very limited		Very limited	
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00		
51A:				
Muscatune	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
60B2:				
La Rose	Very limited		Somewhat limited	
	Restricted permeability	1.00	Seepage	0.53
			Slope	0.18
60C2:				
La Rose	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
			Seepage	0.53
67A:				
Harpster	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
68A:				
Sable	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53
86B:				
Osco	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
86C2:				
Osco	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53
87A:				
Dickinson	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
87B:				
Dickinson	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	0.18
87B2:				
Dickinson	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Slope	0.18
88B2:				
Sparta	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Slope	0.50
88D2:				
Sparta	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Slope	0.63		
88E:				
Sparta	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Slope	1.00		
93E:				
Rodman	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Slope	1.00		
102A:				
La Hogue	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.72	Seepage	1.00

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
103A:				
Houghton------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Subsidence	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
106B:				
Hitt----------------	Very limited		Somewhat limited	
	Restricted permeability	1.00	Seepage	0.53
	Depth to bedrock	0.59	Slope	0.18
			Depth to hard bedrock	0.13
125A:				
Selma---------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46		
145B2:				
Saybrook------------	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Restricted permeability	1.00	Depth to saturated zone	0.361
			Slope	0.32
145C2:				
Saybrook------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Seepage	0.53
			Depth to saturated zone	0.36
152A:				
Drummer-------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53
152A+:				
Drummer-------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
154A:				
Flanagan	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
171B:				
Catlin	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
			Slope	0.18
	Restricted permeability	1.00	Depth to saturated zone	0.04
171C2:				
Catlin	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
			Seepage	0.53
	Restricted permeability	1.00	Depth to saturated zone	0.08
172A:				
Hoopeston	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00		
198A:				
Elburn	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46		
199C2:				
Plano	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	1.00
	Restricted permeability	0.46		
200A:				
Orio	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Ponding	1.00
	Restricted permeability	1.00		
	Ponding	1.00		
201A:				
Gilford	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Ponding	1.00
	Ponding	1.00		

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
204B2:				
Ayr-----------------	Somewhat limited		Very limited	
	Restricted permeability	0.46	Seepage	1.00
			Slope	0.18
221B2:				
Parr----------------	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
			Slope	0.18
	Restricted permeability	1.00	Depth to saturated zone	0.04
221C2:				
Parr----------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
			Seepage	0.53
	Restricted permeability	1.00	Depth to saturated zone	0.04
233B:				
Birkbeck------------	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.68
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
233C2:				
Birkbeck------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
			Depth to saturated zone	0.68
	Restricted permeability	1.00	Seepage	0.53
243A:				
St. Charles---------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
243B:				
St. Charles---------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
244A:				
Hartsburg-----------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
259C2:				
Assumption----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
			Seepage	0.53
	Restricted permeability	1.00	Depth to saturated zone	0.04

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
280B:				
Fayette-------------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
280C2:				
Fayette-------------	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
280D:				
Fayette-------------	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
290A:				
Warsaw--------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46		
290B2:				
Warsaw--------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	0.18
	Restricted permeability	0.46		
290C2:				
Warsaw--------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	1.00
	Restricted permeability	0.46		
329A:				
Will----------------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00		
	Restricted permeability	0.46		
330A:				
Peotone-------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00		
332A:				
Billett-------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
332B:				
Billett	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	0.18
332C2:				
Billett	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	1.00
355A:				
Binghampton	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
356A:				
Elpaso	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
357B:				
Vanpetten	Very limited		Very limited	
	Restricted permeability	1.00	Seepage	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.71
			Slope	0.18
361D2:				
Kidder	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
	Slope	0.04	Slope	1.00
363D2:				
Griswold	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46	Slope	1.00
	Slope	0.04		
369A:				
Waupecan	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46		
369B2:				
Waupecan	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46	Slope	0.32

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
379B2:				
Dakota	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	0.18
397D:				
Boone	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Filtering capacity	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Slope	0.37		
397F:				
Boone	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
403D:				
Elizabeth	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.96	Slope	1.00
403F:				
Elizabeth	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
411B:				
Ashdale	Somewhat limited		Somewhat limited	
	Depth to bedrock	0.78	Seepage	0.53
	Restricted permeability	0.46	Depth to hard bedrock	0.42
			Slope	0.18
411C2:				
Ashdale	Somewhat limited		Very limited	
	Depth to bedrock	0.78	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
			Depth to hard bedrock	0.42
429C:				
Palsgrove	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Depth to bedrock	0.99	Depth to hard bedrock	0.96
			Seepage	0.53
440A:				
Jasper	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
440B:				
Jasper	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
440C2:				
Jasper	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
488A:				
Hooppole	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46		
490A:				
Odell	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.53
501A:				
Morocco	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00		
503B:				
Rockton	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Restricted permeability	0.46	Seepage	1.00
			Slope	0.18
503C2:				
Rockton	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Restricted permeability	0.46	Seepage	1.00
			Slope	1.00
509B:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Restricted permeability	1.00	Seepage	1.00
			Slope	0.18

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
509D:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	0.96	Slope	1.00
			Seepage	1.00
509F:				
Whalan	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
	Restricted permeability	1.00	Seepage	1.00
512B:				
Danabrook	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Restricted permeability	1.00	Slope	0.18
			Depth to saturated zone	0.04
512C2:				
Danabrook	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Seepage	0.53
			Depth to saturated zone	0.04
523A:				
Dunham	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46		
526A:				
Grundelein	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46		
527B:				
Kidami	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.53
	Restricted permeability	1.00	Slope	0.08
			Depth to saturated zone	0.04
527C2:				
Kidami	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Slope	0.68
	Restricted permeability	1.00	Seepage	0.53
			Depth to saturated zone	0.04

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
564C2:				
Waukegan-----------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	1.00
	Restricted permeability	0.46		
570A:				
Martinsville--------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
570B:				
Martinsville--------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
570C2:				
Martinsville--------	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
570D:				
Martinsville--------	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
610A:				
Tallmadge-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Ponding	1.00		
	Depth to bedrock	0.78	Ponding	1.00
	Restricted permeability	0.46	Depth to hard bedrock	0.42
618B:				
Senachwine----------	Very limited		Somewhat limited	
	Restricted permeability	1.00	Seepage	0.53
			Slope	0.18
618C2:				
Senachwine----------	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
			Seepage	0.53
618D3:				
Senachwine----------	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Slope	0.96		
618F:				
Senachwine----------	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	1.00	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
622B:				
Wyanet	Very limited		Somewhat limited	
	Restricted permeability	1.00	Slope	0.18
622B2:				
Wyanet	Very limited		Somewhat limited	
	Restricted permeability	1.00	Slope	0.18
622C2:				
Wyanet	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
647A:				
Lawler	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46		
648A:				
Clyde	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Restricted permeability	0.46	Depth to saturated zone	1.00
649A:				
Nachusa	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
650B:				
Prairieville	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
			Slope	0.18
675B:				
Greenbush	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18
679A:				
Blackberry	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	0.53
	Restricted permeability	0.46		

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
679B:				
Blackberry----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	0.53
			Slope	0.18
	Restricted permeability	0.46		
686B:				
Parkway------------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
	Depth to saturated zone	0.40		
686C2:				
Parkway------------	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
	Depth to saturated zone	0.40		
689B:				
Coloma-------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Slope	0.32
	Filtering capacity	1.00		
689D:				
Coloma-------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Slope	1.00
			Seepage	1.00
	Filtering capacity	1.00		
	Slope	0.37		
689F:				
Coloma-------------	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Filtering capacity	1.00		
705A:				
Buckhart-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
715A:				
Arrowsmith----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
727A:				
Waukee--------------	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46		
741D3:				
Oakville------------	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
			Seepage	1.00
	Seepage (bottom layer)	1.00		
	Slope	0.91		
742B2:				
Dickinson-----------	Somewhat limited		Very limited	
	Restricted permeability	0.46	Seepage	1.00
			Slope	0.08
742C2:				
Dickinson-----------	Somewhat limited		Very limited	
	Restricted permeability	0.46	Seepage	1.00
			Slope	1.00
756B:				
Wyanet--------------	Very limited		Somewhat limited	
	Restricted permeability	1.00	Slope	0.18
756C2:				
Wyanet--------------	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
757B2:				
Senachwine----------	Very limited		Somewhat limited	
	Restricted permeability	1.00	Seepage	0.53
			Slope	0.18
757C2:				
Senachwine----------	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
			Seepage	0.53
761D:				
Eleva---------------	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Seepage (bottom layer)	1.00		
			Slope	1.00
	Slope	0.37	Seepage	1.00
761F:				
Eleva---------------	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00		
	Seepage (bottom layer)	1.00	Slope	1.00
			Seepage	1.00

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
777A:				
Adrian-------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Ponding	1.00
	Seepage (bottom layer)	1.00	Content of organic matter	1.00
	Ponding	1.00		
781B:				
Friesland-----------	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
802A:				
Orthents------------	Very limited		Not limited	
	Restricted permeability	1.00		
864, 865:				
Pits----------------	Not rated		Not rated	
1082A:				
Millington----------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53
1200A:				
Orio----------------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00		
1776A:				
Comfrey-------------	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
3076A:				
Otter---------------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
3302A:				
Ambraw	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
			Seepage	0.28
	Ponding	1.00		
3451A:				
Lawson	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
7073A:				
Ross	Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00
			Flooding	0.40
	Restricted permeability	0.46		
	Depth to saturated zone	0.40		
	Flooding	0.40		
7682A:				
Medway	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
			Flooding	0.40
	Restricted permeability	0.46		
	Flooding	0.40		
8067A:				
Harpster	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
8076A:				
Otter	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
8166A:				
Cohoctah------------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
8302A:				
Ambraw--------------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00	Seepage	0.28
8321A:				
Du Page-------------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40		
8404A:				
Titus---------------	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Restricted permeability	1.00	Flooding	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00		
8451A:				
Lawson--------------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
8492A:				
Normandy------------	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46		

Table 15a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8499A:				
Fella	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage (bottom layer)	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46		
8776A:				
Comfrey	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00
	Restricted permeability	0.46		
M-W:				
Miscellaneous water	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 15b.--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 limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	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
45A:						
Denny	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Hard to compact	1.00
					Too clayey	0.50
51A:						
Muscatune	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
60B2:						
La Rose	Not limited		Not limited		Not limited	
60C2:						
La Rose	Not limited		Not limited		Not limited	
67A:						
Harpster	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	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
	Too clayey	0.50			Too clayey	0.50
86B:						
Osco	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
86C2:						
Osco	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
87A:						
Dickinson	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
87B:						
Dickinson	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
87B2:						
Dickinson	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
88B2:						
Sparta	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
88D2:						
Sparta	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.63	Seepage	1.00
	Slope	0.63			Slope	0.63
88E:						
Sparta	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
93E:						
Rodman	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.96
102A:						
La Hogue	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Seepage	1.00	Seepage	0.21
103A:						
Houghton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Seepage (bottom layer)	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.16
106B:						
Hitt	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.14	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.14
125A:						
Selma	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
145B2:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.93	Depth to saturated zone	0.36	Depth to saturated zone	0.62
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.93	Depth to saturated zone	0.36	Depth to saturated zone	0.62
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
	Too clayey	0.50			Too clayey	0.50
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
	Too sandy	0.50			Too sandy	0.50
154A:						
Flanagan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
171B:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
171C2:						
Catlin	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.76	Depth to saturated zone	0.08	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.32
172A:						
Hoopeston	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	0.52
198A:						
Elburn	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00			Too clayey	0.50
	Too clayey	0.50				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
199C2:						
Plano	Very limited		Not limited		Somewhat limited	
	Seepage (bottom layer)	1.00			Too clayey	0.50
	Too clayey	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
	Seepage (bottom layer)	1.00	Ponding	1.00	Too sandy	1.00
					Seepage	1.00
	Too sandy	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
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
			Ponding	1.00	Seepage	1.00
	Too sandy	1.00			Ponding	1.00
	Ponding	1.00				
204B2:						
Ayr	Not limited		Very limited		Not limited	
			Seepage	1.00		
221B2:						
Parr	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Depth to saturated zone	0.24
221C2:						
Parr	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Depth to saturated zone	0.24
233B:						
Birkbeck	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.68	Depth to saturated zone	0.82
	Too clayey	0.50			Too clayey	0.50
233C2:						
Birkbeck	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.68	Depth to saturated zone	0.82
	Too clayey	0.50			Too clayey	0.50
243A:						
St. Charles	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
243B:						
St. Charles	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
244A:						
Hartsburg	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
259C2:						
Assumption	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
280B:						
Fayette	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
280C2:						
Fayette	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
280D:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
290A:						
Warsaw	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.18
290B2:						
Warsaw	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.14
290C2:						
Warsaw	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.54
329A:						
Will	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50			Too sandy	0.50
					Gravel content	0.01
330A:						
Peotone	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	1.00	Ponding	1.00	Too clayey	1.00
	Ponding	1.00			Hard to compact	1.00
					Ponding	1.00

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
332A:						
Billett	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
332B:						
Billett	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
332C2:						
Billett	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
355A:						
Binghampton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Depth to saturated zone	1.00	Seepage	1.00
					Depth to saturated zone	1.00
356A:						
Elpaso	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
357B:						
Vanpetten	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Too clayey	0.50	Seepage	1.00		
361D2:						
Kidder	Very limited		Very limited		Somewhat limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	0.52
	Slope	0.04	Slope	0.04	Slope	0.04
363D2:						
Griswold	Very limited		Very limited		Somewhat limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	0.52
	Slope	0.04	Slope	0.04	Slope	0.04
369A:						
Waupecan	Very limited		Very limited		Somewhat limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too clayey	0.50
	Too clayey	0.50				
369B2:						
Waupecan	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	1.00
					Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
379B2:						
Dakota	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
					Seepage	1.00
	Too sandy	1.00				
397D:						
Boone	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Seepage (bottom layer)	1.00	Depth to bedrock	1.00	Too sandy	1.00
			Slope	0.37	Seepage	1.00
	Too sandy	1.00			Slope	0.37
	Slope	0.37				
397F:						
Boone	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Depth to bedrock	1.00	Too sandy	1.00
					Seepage	1.00
	Too sandy	1.00				
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
411B:						
Ashdale	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
411C2:						
Ashdale	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too clayey	0.50
	Too clayey	0.50			Depth to bedrock	0.42
429C:						
Palsgrove	Very limited		Somewhat limited		Somewhat limited	
	Depth to bedrock	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
	Too clayey	0.50			Too clayey	0.50
440A:						
Jasper	Not limited		Not limited		Not limited	
440B:						
Jasper	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
440C2:						
Jasper	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
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
	Seepage (bottom layer)	1.00				
490A:						
Odell	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
501A:						
Morocco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00			Depth to saturated zone	1.00
503B:						
Rockton	Very limited		Very limited		Very limited	
	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
503C2:						
Rockton	Very limited		Very limited		Very limited	
	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
509B:						
Whalan	Very limited		Very limited		Very limited	
	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
509D:						
Whalan	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Seepage	1.00	Depth to bedrock	1.00
	Too clayey	1.00	Depth to bedrock	1.00	Too clayey	1.00
	Slope	0.96	Slope	0.96	Hard to compact	1.00
					Slope	0.96
509F:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Seepage	1.00	Slope	1.00
			Depth to bedrock	1.00		
512B:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
512C2:						
Danabrook	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Depth to saturated zone	0.24

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
523A:						
Dunham	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Too clayey	0.50
	Too clayey	0.50				
526A:						
Grundelein	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Too clayey	0.50
	Too clayey	0.50				
527B:						
Kidami	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
527C2:						
Kidami	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.68	Depth to saturated zone	0.04	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
564C2:						
Waukegan	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
570A:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
570B:						
Martinsville	Not limited		Not limited		Not limited	
570C2:						
Martinsville	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
570D:						
Martinsville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
610A:						
Tallmadge	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 bedrock	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to bedrock	0.42	Depth to bedrock	0.42
618B:						
Senachwine	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
618C2:						
Senachwine	Not limited		Not limited		Not limited	
618D3:						
Senachwine	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
618F:						
Senachwine	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
622B:						
Wyanet	Not limited		Not limited		Not limited	
622B2:						
Wyanet	Not limited		Not limited		Not limited	
622C2:						
Wyanet	Not limited		Not limited		Not limited	
647A:						
Lawler	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
					Seepage	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Depth to saturated zone	1.00
	Too sandy	1.00				
648A:						
Clyde	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00				
			Seepage	1.00		
649A:						
Nachusa	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50			Too clayey	0.50
650B:						
Prairieville	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
					Depth to saturated zone	0.29
	Too clayey	0.50				
675B:						
Greenbush	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
679A:						
Blackberry	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
					Depth to saturated zone	0.24
	Seepage (bottom layer)	1.00				
	Too clayey	0.50				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
679B:						
Blackberry	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Seepage (bottom layer)	1.00			Depth to saturated zone	0.24
	Too clayey	0.50				
686B:						
Parkway	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
686C2:						
Parkway	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
689B:						
Coloma	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
					Seepage	1.00
	Too sandy	1.00				
689D:						
Coloma	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
			Slope	0.37	Seepage	1.00
	Too sandy	1.00			Slope	0.37
	Slope	0.37				
689F:						
Coloma	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
					Seepage	1.00
	Too sandy	1.00				
705A:						
Buckhart	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
					Depth to saturated zone	0.24
	Too clayey	0.50				
715A:						
Arrowsmith	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
727A:						
Waukee	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
					Seepage	1.00
	Too sandy	1.00				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
741D3:						
Oakville------------	Very limited		Very limited		Very limited	
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.91	Seepage	1.00
	Slope	0.91			Slope	0.91
742B2:						
Dickinson-----------	Not limited		Very limited		Somewhat limited	
			Seepage	1.00	Seepage	0.52
742C2:						
Dickinson-----------	Not limited		Very limited		Somewhat limited	
			Seepage	1.00	Seepage	0.52
756B:						
Wyanet--------------	Not limited		Not limited		Not limited	
756C2:						
Wyanet--------------	Not limited		Not limited		Not limited	
757B2:						
Senachwine----------	Not limited		Not limited		Not limited	
757C2:						
Senachwine----------	Not limited		Not limited		Not limited	
761D:						
Eleva---------------	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Slope	0.37
	Slope	0.37	Slope	0.37	Seepage	0.22
761F:						
Eleva---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	0.22
777A:						
Adrian--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Ponding	1.00	Seepage	1.00
	Ponding	1.00			Ponding	1.00
781B:						
Friesland-----------	Not limited		Not limited		Not limited	
802A:						
Orthents------------	Not limited		Not limited		Not limited	
864, 865:						
Pits----------------	Not rated		Not rated		Not rated	

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
1082A:						
Millington----------	Very limited		Very limited		Very limited	
	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		
1200A:						
Orio----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
1776A:						
Comfrey-------------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	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		
3076A:						
Otter---------------	Very limited		Very limited		Very limited	
	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		
3302A:						
Ambraw--------------	Very limited		Very limited		Very limited	
	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	Too clayey	0.50
	Too clayey	0.50				
3451A:						
Lawson--------------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
7073A:						
Ross----------------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.22
	Seepage (bottom layer)	1.00	Seepage	1.00		
	Flooding	0.40	Flooding	0.40		
7682A:						
Medway--------------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.95
	Seepage (bottom layer)	1.00	Seepage	1.00	Seepage	0.22
	Flooding	0.40	Flooding	0.40		

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
8067A:						
Harpster	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	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
	Too clayey	0.50			Too clayey	0.50
8076A:						
Otter	Very limited		Very limited		Very limited	
	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		
8166A:						
Cohoctah	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage (bottom layer)	1.00	Seepage	1.00	Ponding	1.00
	Too sandy	1.00	Ponding	1.00	Seepage	0.52
	Ponding	1.00				
8302A:						
Ambraw	Very limited		Very limited		Very limited	
	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	Too clayey	0.50
	Too clayey	0.50				
8321A:						
Du Page	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
8404A:						
Titus	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	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
	Too clayey	0.50			Too clayey	0.50
8451A:						
Lawson	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
8492A:						
Normandy	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Seepage (bottom layer)	1.00				

Table 15b.--Sanitary Facilities--Continued

Map symbol and soil name	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
8499A:						
Fella	Very limited		Very limited		Very limited	
	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
	Seepage (bottom layer)	1.00	Ponding	1.00	Too clayey	0.50
	Ponding	1.00				
	Too clayey	0.50				
8776A:						
Comfrey	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Seepage (bottom layer)	1.00				
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 16a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and 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
45A:						
Denny	Fair		Poor		Poor	
	Too clayey	0.02	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.01
	Water erosion	0.90	Shrink-swell	0.74		
	Too acid	0.95				
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	Too clayey	0.67
	Low content of organic matter	0.92	Shrink-swell	0.99		
	Water erosion	0.99				
60B2:						
La Rose	Fair		Good		Poor	
	Low content of organic matter	0.12			Hard to reclaim (dense layer)	0.00
	Carbonate content	0.92			Carbonate content	0.92
	Water erosion	0.99				
60C2:						
La Rose	Fair		Good		Poor	
	Low content of organic matter	0.12			Hard to reclaim (dense layer)	0.00
	Carbonate content	0.92			Carbonate content	0.92
	Water erosion	0.99				
67A:						
Harpster	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Carbonate content	0.68	Low strength	0.00	Carbonate content	0.68
	Too clayey	0.82	Shrink-swell	0.87	Too clayey	0.82
	Water erosion	0.90				
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		
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				

Table 16a.--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
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				
87B:						
Dickinson-----------	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.84				
87B2:						
Dickinson-----------	Fair		Good		Good	
	Low content of organic matter	0.12				
	Droughty	0.70				
	Too acid	0.84				
88B2:						
Sparta--------------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Low content of organic matter	0.68				
	Too acid	0.74				
	Droughty	0.98				
88D2:						
Sparta--------------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.16
	Low content of organic matter	0.12				
	Droughty	0.54				
	Too acid	0.97				
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				

Table 16a.--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
93E:						
Rodman	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.98	Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.46			Slope	0.00
					Carbonate content	0.46
102A:						
La Hogue	Fair		Fair		Fair	
	Low content of organic matter	0.50	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.97				
103A:						
Houghton	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.99			Content of organic matter	0.00
106B:						
Hitt	Fair		Poor		Fair	
	Low content of organic matter	0.08	Low strength	0.00	Too clayey	0.52
			Depth to bedrock	0.58		
	Too acid	0.74	Shrink-swell	0.87		
	Too clayey	0.92				
125A:						
Selma	Fair		Poor		Poor	
	Low content of organic matter	0.98	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.78	Hard to reclaim (dense layer)	0.05
			Shrink-swell	0.99		
145B2:						
Saybrook	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.80	Hard to reclaim (dense layer)	0.65
	Too acid	0.84			Depth to saturated zone	0.80
	Water erosion	0.90				
145C2:						
Saybrook	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.80	Depth to saturated zone	0.80
	Water erosion	0.90			Hard to reclaim (dense layer)	0.94
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		

Table 16a.--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
152A+:						
Drummer-------------	Fair		Poor		Poor	
	Carbonate content	0.92	Depth to saturated zone	0.00	Depth to saturated zone	0.00
154A:						
Flanagan------------	Fair		Poor		Fair	
	Too clayey	0.18	Low strength	0.00	Too clayey	0.13
	Low content of organic matter	0.82	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.84	Shrink-swell	0.90		
	Water erosion	0.90				
	Carbonate content	0.92				
171B:						
Catlin--------------	Fair		Poor		Fair	
	Too clayey	0.82	Low strength	0.00	Too clayey	0.64
	Too acid	0.97	Shrink-swell	0.90	Depth to saturated zone	0.98
	Water erosion	0.99	Depth to saturated zone	0.98		
171C2:						
Catlin--------------	Fair		Poor		Fair	
	Too clayey	0.82	Low strength	0.00	Too clayey	0.70
	Too acid	0.95	Shrink-swell	0.87	Depth to saturated zone	0.95
			Depth to saturated zone	0.95		
172A:						
Hoopeston-----------	Fair		Fair		Fair	
	Low content of organic matter	0.68	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.97				
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		
199C2:						
Plano---------------	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Too clayey	0.67
	Too acid	0.97	Shrink-swell	0.99		
	Too clayey	0.98				
	Water erosion	0.99				
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

Table 16a.--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
204B2:						
Ayr	Poor		Good		Good	
	Wind erosion	0.00				
	Low content of organic matter	0.05				
	Too acid	0.99				
221B2:						
Parr	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.98	Hard to reclaim (dense layer)	0.94
	Carbonate content	0.92			Depth to saturated zone	0.98
	Water erosion	0.99				
221C2:						
Parr	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.98	Hard to reclaim (dense layer)	0.80
	Carbonate content	0.92			Depth to saturated zone	0.98
	Water erosion	0.99				
233B:						
Birkbeck	Fair		Poor		Fair	
	Low content of organic matter	0.40	Low strength	0.00	Too clayey	0.52
			Shrink-swell	0.89	Depth to saturated zone	0.98
	Water erosion	0.68	Depth to saturated zone	0.98		
	Too clayey	0.82				
	Too acid	0.84				
233C2:						
Birkbeck	Fair		Poor		Fair	
	Low content of organic matter	0.40	Low strength	0.00	Too clayey	0.52
			Depth to saturated zone	0.59	Depth to saturated zone	0.59
	Water erosion	0.68				
	Too clayey	0.82	Shrink-swell	0.97		
	Too acid	0.84				
	Carbonate content	0.92				
243A:						
St. Charles	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
			Shrink-swell	0.94		
	Too acid	0.88				
	Water erosion	0.90				
	Too clayey	0.98				
243B:						
St. Charles	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
			Shrink-swell	0.95		
	Too acid	0.88				
	Water erosion	0.90				
	Too clayey	0.98				
244A:						
Hartsburg	Fair		Poor		Poor	
	Low content of organic matter	0.18	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Water erosion	0.68	Low strength	0.00	Too clayey	0.82
	Carbonate content	0.68				
	Too clayey	0.82				

Table 16a.--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
259C2:						
Assumption----------	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.64
	Too acid	0.97	Shrink-swell	0.31	Depth to saturated zone	0.98
	Too clayey	0.98	Depth to saturated zone	0.98		
	Water erosion	0.99				
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				
280D:						
Fayette------------	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Slope	0.04
	Water erosion	0.68	Shrink-swell	0.90	Too clayey	0.64
	Too acid	0.68				
	Too clayey	0.98				
290A:						
Warsaw-------------	Fair		Good		Poor	
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92				
	Too acid	0.95				
290B2:						
Warsaw-------------	Fair		Good		Poor	
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Carbonate content	0.92				
	Too acid	0.95				
290C2:						
Warsaw-------------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.08			Hard to reclaim (rock fragments)	0.00
	Droughty	0.88			Rock fragments	0.00
	Carbonate content	0.92			Carbonate content	0.92
	Too acid	0.95				

Table 16a.--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
329A:						
Will	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Carbonate content	0.68			Hard to reclaim (rock fragments)	0.08
					Hard to reclaim (dense layer)	0.46
330A:						
Peotone	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	0.12		
332A:						
Billett	Fair		Good		Good	
	Low content of organic matter	0.12				
	Droughty	0.95				
	Too acid	0.97				
332B:						
Billett	Fair		Good		Good	
	Low content of organic matter	0.12				
	Too acid	0.97				
332C2:						
Billett	Fair		Good		Good	
	Low content of organic matter	0.12				
	Droughty	0.92				
	Too acid	0.97				
355A:						
Binghampton	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.14	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.14
	Water erosion	0.90			Too acid	0.98
356A:						
Elpaso	Fair		Poor		Poor	
	Low content of organic matter	0.24	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.92	Low strength	0.00	Too clayey	0.98
	Too clayey	0.98	Shrink-swell	0.87		
	Carbonate content	0.99				
	Water erosion	0.99				
357B:						
Vanpetten	Fair		Poor		Poor	
	Low content of organic matter	0.24	Low strength	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.39	Depth to saturated zone	0.98	Depth to saturated zone	0.98
					Too acid	0.98

Table 16a.--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
361D2:						
Kidder	Fair		Good		Poor	
	Low content of organic matter	0.12			Rock fragments	0.00
	Carbonate content	0.92			Hard to reclaim (rock fragments)	0.92
					Carbonate content	0.92
					Slope	0.96
363D2:						
Griswold	Fair		Good		Fair	
	Low content of organic matter	0.01			Slope	0.84
	Carbonate content	0.68				
369A:						
Waupecan	Fair		Poor		Poor	
	Low content of organic matter	0.88	Low strength	0.00	Hard to reclaim (rock fragments)	0.00
	Too clayey	0.98			Too clayey	0.70
	Water erosion	0.99				
369B2:						
Waupecan	Fair		Good		Poor	
	Low content of organic matter	0.88			Hard to reclaim (rock fragments)	0.00
	Too clayey	0.98			Too clayey	0.70
	Water erosion	0.99				
379B2:						
Dakota	Fair		Good		Fair	
	Low content of organic matter	0.12			Too sandy	0.44
	Too sandy	0.44				
	Too acid	0.97				
397D:						
Boone	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Droughty	0.00			Slope	0.04
	Depth to bedrock	0.00			Too sandy	0.22
	Low content of organic matter	0.12			Too acid	0.88
	Too sandy	0.22				
	Too acid	0.50				
397F:						
Boone	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to bedrock	0.00	Slope	0.00
	Droughty	0.00	Slope	0.00	Depth to bedrock	0.00
	Depth to bedrock	0.00			Too sandy	0.22
	Low content of organic matter	0.12			Too acid	0.88
	Too sandy	0.22				
	Too acid	0.50				
403D:						
Elizabeth	Poor		Poor		Poor	
	Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Depth to bedrock	0.00	Shrink-swell	0.97	Rock fragments	0.32

Table 16a.--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
403F:						
Elizabeth	Poor		Poor		Poor	
	Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
	Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
					Rock fragments	0.32
411B:						
Ashdale	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.54
			Depth to bedrock	0.58		
	Too clayey	0.82	Shrink-swell	0.93		
	Too acid	0.84				
	Water erosion	0.99				
411C2:						
Ashdale	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.54
			Depth to bedrock	0.58		
	Too clayey	0.82	Shrink-swell	0.87		
	Too acid	0.84				
	Water erosion	0.99				
429C:						
Palsgrove	Fair		Poor		Fair	
	Water erosion	0.68	Low strength	0.00	Too clayey	0.68
	Low content of organic matter	0.75	Depth to bedrock	0.58		
			Shrink-swell	0.95		
	Too acid	0.97				
	Too clayey	0.98				
440A:						
Jasper	Fair		Good		Good	
	Low content of organic matter	0.02				
	Too acid	0.97				
440B:						
Jasper	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.97				
	Too clayey	0.98				
440C2:						
Jasper	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Too acid	0.97				
	Too clayey	0.98				
488A:						
Hooppole	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.22		
			Shrink-swell	0.98		

Table 16a.--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
490A:						
Odell---------------	Fair		Fair		Fair	
	Low content of organic matter	0.02	Depth to saturated zone	0.12	Depth to saturated zone	0.12
	Carbonate content	0.92			Hard to reclaim (dense layer)	0.46
	Too acid	0.95				
	Water erosion	0.99				
501A:						
Morocco-------------	Poor		Fair		Poor	
	Too sandy	0.00	Depth to saturated zone	0.14	Too sandy	0.00
	Wind erosion	0.00			Depth to saturated zone	0.14
	Low content of organic matter	0.02			Too acid	0.98
	Droughty	0.48				
	Too acid	0.54				
503B:						
Rockton-------------	Fair		Poor		Fair	
	Low content of organic matter	0.50	Depth to bedrock	0.00	Depth to bedrock	0.58
	Depth to bedrock	0.58	Low strength	0.00	Too clayey	0.64
	Too acid	0.84	Shrink-swell	0.84		
	Droughty	0.93				
	Too clayey	0.98				
503C2:						
Rockton-------------	Fair		Poor		Fair	
	Low content of organic matter	0.50	Depth to bedrock	0.00	Depth to bedrock	0.58
	Droughty	0.53	Low strength	0.00	Too clayey	0.64
	Depth to bedrock	0.58	Shrink-swell	0.99		
	Too acid	0.84				
	Too clayey	0.98				
509B:						
Whalan--------------	Fair		Poor		Fair	
	Low content of organic matter	0.02	Depth to bedrock	0.00	Too clayey	0.52
	Depth to bedrock	0.58	Low strength	0.00	Depth to bedrock	0.58
	Too acid	0.84	Shrink-swell	0.99		
	Droughty	0.98				
	Too clayey	0.98				
	Water erosion	0.99				
509D:						
Whalan--------------	Fair		Poor		Fair	
	Low content of organic matter	0.24	Depth to bedrock	0.00	Slope	0.04
	Droughty	0.38			Depth to bedrock	0.58
	Depth to bedrock	0.58				
	Water erosion	0.99				
509F:						
Whalan--------------	Fair		Poor		Poor	
	Low content of organic matter	0.24	Depth to bedrock	0.00	Slope	0.00
	Depth to bedrock	0.58	Slope	0.00	Depth to bedrock	0.58
	Droughty	0.95	Low strength	0.22		
	Water erosion	0.99	Shrink-swell	0.96		

Table 16a.--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
512B:						
Danabrook-----------	Fair		Poor		Fair	
	Carbonate content	0.46	Low strength	0.00	Depth to saturated zone	0.98
	Too acid	0.97	Shrink-swell	0.97		
	Water erosion	0.99	Depth to saturated zone	0.98		
512C2:						
Danabrook-----------	Fair		Fair		Fair	
	Low content of organic matter	0.24	Depth to saturated zone	0.98	Depth to saturated zone	0.98
	Carbonate content	0.54	Shrink-swell	0.99		
	Too acid	0.97				
	Water erosion	0.99				
523A:						
Dunham--------------	Fair		Poor		Poor	
	Carbonate content	0.46	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.99	Low strength	0.00	Hard to reclaim (rock fragments)	0.08
	Water erosion	0.99	Shrink-swell	0.98		
526A:						
Grundelein----------	Fair		Poor		Fair	
	Carbonate content	0.46	Low strength	0.00	Hard to reclaim (rock fragments)	0.08
	Water erosion	0.99	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.99	Shrink-swell	0.99		
527B:						
Kidami--------------	Fair		Poor		Fair	
	Carbonate content	0.16	Low strength	0.00	Depth to saturated zone	0.98
	Low content of organic matter	0.68	Depth to saturated zone	0.98		
	Too acid	0.97	Shrink-swell	0.99		
	Water erosion	0.99				
527C2:						
Kidami--------------	Fair		Poor		Fair	
	Carbonate content	0.16	Low strength	0.00	Depth to saturated zone	0.98
	Low content of organic matter	0.68	Depth to saturated zone	0.98		
	Too acid	0.97				
564C2:						
Waukegan------------	Fair		Good		Good	
	Low content of organic matter	0.02				
	Water erosion	0.90				
	Too acid	0.97				
570A:						
Martinsville--------	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.68				
	Too acid	0.97				

Table 16a.--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
570B:						
Martinsville--------	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.68				
	Too acid	0.97				
570C2:						
Martinsville--------	Fair		Fair		Good	
	Low content of organic matter	0.12	Shrink-swell	0.98		
	Carbonate content	0.68				
	Too acid	0.97				
570D:						
Martinsville--------	Fair		Fair		Fair	
	Low content of organic matter	0.12	Shrink-swell	0.99	Slope	0.04
	Carbonate content	0.68				
	Too acid	0.97				
610A:						
Tallmadge-----------	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Depth to bedrock	0.58		
618B:						
Senachwine----------	Fair		Poor		Fair	
	Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.57
	Carbonate content	0.16				
	Water erosion	0.90				
	Too acid	0.97				
	Too clayey	0.98				
618C2:						
Senachwine----------	Fair		Good		Fair	
	Low content of organic matter	0.12			Too clayey	0.57
					Hard to reclaim (dense layer)	0.71
	Carbonate content	0.16				
	Water erosion	0.90				
	Droughty	0.94				
	Too acid	0.97				
	Too clayey	0.98				
618D3:						
Senachwine----------	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.04
					Hard to reclaim (dense layer)	0.10
	Carbonate content	0.16				
	Droughty	0.26				
	Water erosion	0.99				

Table 16a.--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
618F:						
Senachwine	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Carbonate content	0.16	Low strength	0.00	Too clayey	0.57
	Water erosion	0.90				
	Too acid	0.97				
	Too clayey	0.98				
622B:						
Wyanet	Fair		Fair		Fair	
	Low content of organic matter	0.12	Shrink-swell	0.99	Too clayey	0.67
	Carbonate content	0.92				
	Too clayey	0.92				
	Too acid	0.95				
	Water erosion	0.99				
622B2:						
Wyanet	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.92				
622C2:						
Wyanet	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	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 (rock fragments)	0.82
					Rock fragments	0.97
648A:						
Clyde	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	Shrink-swell	0.91	Too clayey	0.98
	Water erosion	0.99				
649A:						
Nachusa	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Depth to saturated zone	0.12
	Too acid	0.88	Depth to saturated zone	0.12	Too clayey	0.60
	Too clayey	0.98	Shrink-swell	0.89		
	Water erosion	0.99				
650B:						
Prairieville	Fair		Poor		Fair	
	Low content of organic matter	0.24	Low strength	0.00	Depth to saturated zone	0.96
	Too acid	0.68	Shrink-swell	0.89		
	Water erosion	0.90	Depth to saturated zone	0.96		

Table 16a.--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
675B:						
Greenbush-----------	Fair		Poor		Fair	
	Low content of organic matter	0.88	Low strength	0.00	Too clayey	0.70
			Shrink-swell	0.91		
	Too acid	0.97				
	Too clayey	0.98				
	Water erosion	0.99				
679A:						
Blackberry----------	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Depth to saturated zone	0.98
			Shrink-swell	0.89		
	Too acid	0.97	Depth to saturated zone	0.98		
	Water erosion	0.99				
679B:						
Blackberry----------	Fair		Poor		Fair	
	Low content of organic matter	0.68	Low strength	0.00	Depth to saturated zone	0.98
			Shrink-swell	0.93		
	Too acid	0.97	Depth to saturated zone	0.98		
	Water erosion	0.99				
686B:						
Parkway-------------	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
			Shrink-swell	0.99		
	Water erosion	0.90				
	Too acid	0.97				
	Too clayey	0.98				
686C2:						
Parkway-------------	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Too clayey	0.64
			Shrink-swell	0.99		
	Water erosion	0.90				
	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 16a.--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
689F:						
Coloma--------------	Poor		Poor		Poor	
	Too sandy	0.00	Slope	0.00	Slope	0.00
	Wind erosion	0.00			Too sandy	0.00
	Low content of organic matter	0.12				
	Too acid	0.68				
	Droughty	0.72				
705A:						
Buckhart------------	Fair		Poor		Fair	
	Low content of organic matter	0.92	Low strength	0.00	Depth to saturated zone	0.98
			Shrink-swell	0.87		
	Water erosion	0.99	Depth to saturated zone	0.98		
715A:						
Arrowsmith----------	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Water erosion	0.37	Low strength	0.22	Too clayey	0.72
	Carbonate content	0.68				
	Too clayey	0.92				
727A:						
Waukee--------------	Fair		Good		Fair	
	Low content of organic matter	0.50			Rock fragments	0.97
					Hard to reclaim (rock fragments)	0.98
	Too acid	0.74				
741D3:						
Oakville------------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.63
	Low content of organic matter	0.12				
	Droughty	0.36				
	Too acid	0.88				
742B2:						
Dickinson-----------	Fair		Good		Good	
	Too acid	0.84				
	Low content of organic matter	0.88				
742C2:						
Dickinson-----------	Fair		Good		Good	
	Too acid	0.84				
	Low content of organic matter	0.88				
756B:						
Wyanet--------------	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.92				

Table 16a.--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
756C2:						
Wyanet---------------	Fair		Good		Good	
	Low content of organic matter	0.12				
	Carbonate content	0.92				
757B2:						
Senachwine----------	Fair		Good		Fair	
	Low content of organic matter	0.12			Hard to reclaim (dense layer)	0.35
	Carbonate content	0.16			Too clayey	0.57
	Droughty	0.54				
	Too acid	0.97				
	Too clayey	0.98				
	Water erosion	0.99				
757C2:						
Senachwine----------	Fair		Good		Fair	
	Low content of organic matter	0.12			Hard to reclaim (dense layer)	0.90
	Carbonate content	0.16				
	Droughty	0.85				
	Too acid	0.97				
	Water erosion	0.99				
761D:						
Eleva---------------	Fair		Poor		Fair	
	Droughty	0.38	Depth to bedrock	0.00	Rock fragments	0.50
	Too acid	0.50			Depth to bedrock	0.58
	Depth to bedrock	0.58			Slope	0.63
	Low content of organic matter	0.60			Too acid	0.92
761F:						
Eleva---------------	Fair		Poor		Poor	
	Droughty	0.38	Depth to bedrock	0.00	Slope	0.00
	Too acid	0.50	Slope	0.00	Rock fragments	0.50
	Depth to bedrock	0.58			Depth to bedrock	0.58
	Low content of organic matter	0.60			Too acid	0.92
777A:						
Adrian--------------	Poor		Poor		Poor	
	Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low content of organic matter	0.50			Content of organic matter	0.00
	Too acid	0.54			Too acid	0.98
	Carbonate content	0.92				
781B:						
Friesland-----------	Poor		Good		Fair	
	Low content of organic matter	0.00			Hard to reclaim (dense layer)	0.84
	Water erosion	0.90				
	Too acid	0.95				

Table 16a.--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
802A:						
Orthents------------	Fair		Poor		Good	
	Low content of organic matter	0.68	Low strength	0.00		
			Shrink-swell	0.87		
	Water erosion	0.90				
864, 865:						
Pits----------------	Not rated		Not rated		Not rated	
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		
1200A:						
Orio----------------	Poor		Poor		Poor	
	Low content of organic matter	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.97				
1776A:						
Comfrey-------------	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.89		
3076A:						
Otter---------------	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
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		
3451A:						
Lawson--------------	Fair		Poor		Fair	
	Low content of organic matter	0.50	Low strength	0.00	Depth to saturated zone	0.14
			Depth to saturated zone	0.14		
	Water erosion	0.68				
7073A:						
Ross----------------	Good		Good		Good	
7682A:						
Medway--------------	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.32	Depth to saturated zone	0.32

Table 16a.--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
8067A:						
Harpster	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	Low strength	0.00	Too clayey	0.70
	Too clayey	0.98	Shrink-swell	0.87		
	Carbonate content	0.99				
8076A:						
Otter	Fair		Poor		Poor	
	Water erosion	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.78		
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				
8404A:						
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	Low strength	0.00	Too clayey	0.01
			Shrink-swell	0.12		
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		
8492A:						
Normandy	Fair		Poor		Poor	
	Water erosion	0.68	Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
			Shrink-swell	0.92		
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 16a.--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
8776A:						
Comfrey-------------	Good		Poor		Poor	
			Depth to saturated zone	0.00	Depth to saturated zone	0.00
			Low strength	0.00		
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water---------------	Not rated		Not rated		Not rated	

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

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
45A:		
Denny	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
51A:		
Muscatune	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
60B2:		
La Rose	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
60C2:		
La Rose	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
67A:		
Harpster	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
68A:		
Sable	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
86B:		
Osco	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
86C2:		
Osco	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
87A:		
Dickinson	Fair	
	Thickest layer	0.01
	Bottom layer	0.67

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
87B:		
Dickinson	Fair	
	Thickest layer	0.04
	Bottom layer	0.67
87B2:		
Dickinson	Fair	
	Thickest layer	0.04
	Bottom layer	0.67
88B2:		
Sparta	Fair	
	Thickest layer	0.36
	Bottom layer	0.76
88D2:		
Sparta	Fair	
	Thickest layer	0.36
	Bottom layer	0.76
88E:		
Sparta	Fair	
	Bottom layer	0.31
	Thickest layer	0.36
93E:		
Rodman	Fair	
	Thickest layer	0.01
	Bottom layer	0.22
102A:		
La Hogue	Fair	
	Bottom layer	0.00
	Thickest layer	0.05
103A:		
Houghton	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
106B:		
Hitt	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
125A:		
Selma	Fair	
	Thickest layer	0.00
	Bottom layer	0.06
145B2:		
Saybrook	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
145C2:		
Saybrook	Poor	
	Bottom layer	0.00
	Thickest layer	0.00

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
152A:		
Drummer	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
152A+:		
Drummer	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
154A:		
Flanagan	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
171B:		
Catlin	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
171C2:		
Catlin	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
172A:		
Hoopeston	Fair	
	Thickest layer	0.04
	Bottom layer	0.22
198A:		
Elburn	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
199C2:		
Plano	Fair	
	Thickest layer	0.00
	Bottom layer	0.06
200A:		
Orio	Fair	
	Thickest layer	0.00
	Bottom layer	0.50
201A:		
Gilford	Fair	
	Thickest layer	0.08
	Bottom layer	0.22
204B2:		
Ayr	Fair	
	Bottom layer	0.00
	Thickest layer	0.09
221B2:		
Parr	Poor	
	Bottom layer	0.00
	Thickest layer	0.00

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
221C2:		
Parr	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
233B:		
Birkbeck	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
233C2:		
Birkbeck	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
243A:		
St. Charles	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
243B:		
St. Charles	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
244A:		
Hartsburg	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
259C2:		
Assumption	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
280B:		
Fayette	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
280C2:		
Fayette	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
280D:		
Fayette	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
290A:		
Warsaw	Fair	
	Thickest layer	0.00
	Bottom layer	0.91
290B2:		
Warsaw	Fair	
	Thickest layer	0.00
	Bottom layer	0.91

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
290C2:		
Warsaw	Fair	
	Thickest layer	0.00
	Bottom layer	0.91
329A:		
Will	Fair	
	Thickest layer	0.00
	Bottom layer	0.67
330A:		
Peotone	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
332A:		
Billett	Fair	
	Thickest layer	0.07
	Bottom layer	0.84
332B:		
Billett	Fair	
	Thickest layer	0.07
	Bottom layer	0.84
332C2:		
Billett	Fair	
	Thickest layer	0.07
	Bottom layer	0.84
355A:		
Binghampton	Fair	
	Bottom layer	0.00
	Thickest layer	0.44
356A:		
Elpaso	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
357B:		
Vanpetten	Fair	
	Bottom layer	0.00
	Thickest layer	0.16
361D2:		
Kidder	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
363D2:		
Griswold	Fair	
	Thickest layer	0.00
	Bottom layer	0.03
369A:		
Waupecan	Fair	
	Thickest layer	0.00
	Bottom layer	0.19

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
369B2:		
Waupecan	Fair	
	Thickest layer	0.00
	Bottom layer	0.19
379B2:		
Dakota	Fair	
	Thickest layer	0.09
	Bottom layer	0.99
397D:		
Boone	Fair	
	Thickest layer	0.00
	Bottom layer	0.17
397F:		
Boone	Fair	
	Thickest layer	0.00
	Bottom layer	0.17
403D:		
Elizabeth	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
403F:		
Elizabeth	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
411B:		
Ashdale	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
411C2:		
Ashdale	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
429C:		
Palsgrove	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
440A:		
Jasper	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
440B:		
Jasper	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
440C2:		
Jasper	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
488A:		
Hooppole	Fair	
	Thickest layer	0.00
	Bottom layer	0.31

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
490A:		
Odell	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
501A:		
Morocco	Fair	
	Thickest layer	0.12
	Bottom layer	0.26
503B:		
Rockton	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
503C2:		
Rockton	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
509B:		
Whalan	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
509D:		
Whalan	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
509F:		
Whalan	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
512B:		
Danabrook	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
512C2:		
Danabrook	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
523A:		
Dunham	Fair	
	Thickest layer	0.00
	Bottom layer	0.15
526A:		
Grundelein	Fair	
	Thickest layer	0.00
	Bottom layer	0.17
527B:		
Kidami	Poor	
	Bottom layer	0.00
	Thickest layer	0.00

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value
527C2:		
Kidami	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
564C2:		
Waukegan	Fair	
	Thickest layer	0.00
	Bottom layer	0.91
570A:		
Martinsville	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
570B:		
Martinsville	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
570C2:		
Martinsville	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
570D:		
Martinsville	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
610A:		
Tallmadge	Poor	
	Thickest layer	0.00
	Bottom layer	0.00
618B:		
Senachwine	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
618C2:		
Senachwine	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
618D3:		
Senachwine	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
618F:		
Senachwine	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
622B:		
Wyanet	Poor	
	Bottom layer	0.00
	Thickest layer	0.00

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value
622B2:		
Wyanet	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
622C2:		
Wyanet	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
647A:		
Lawler	Fair	
	Thickest layer	0.00
	Bottom layer	0.43
648A:		
Clyde	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
649A:		
Nachusa	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
650B:		
Prairieville	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
675B:		
Greenbush	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
679A:		
Blackberry	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
679B:		
Blackberry	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
686B:		
Parkway	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
686C2:		
Parkway	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
689B:		
Coloma	Fair	
	Bottom layer	0.58
	Thickest layer	0.76

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
689D:		
Coloma	Fair	
	Bottom layer	0.58
	Thickest layer	0.83
689F:		
Coloma	Fair	
	Bottom layer	0.58
	Thickest layer	0.94
705A:		
Buckhart	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
715A:		
Arrowsmith	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
727A:		
Waukee	Fair	
	Thickest layer	0.00
	Bottom layer	0.52
741D3:		
Oakville	Fair	
	Thickest layer	0.61
	Bottom layer	0.99
742B2:		
Dickinson	Fair	
	Bottom layer	0.00
	Thickest layer	0.04
742C2:		
Dickinson	Fair	
	Bottom layer	0.00
	Thickest layer	0.04
756B:		
Wyanet	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
756C2:		
Wyanet	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
757B2:		
Senachwine	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
757C2:		
Senachwine	Poor	
	Bottom layer	0.00
	Thickest layer	0.00

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand	
	Rating class	Value
761D:		
Eleva	Fair	
	Bottom layer	0.06
	Thickest layer	0.06
761F:		
Eleva	Fair	
	Thickest layer	0.05
	Bottom layer	0.06
777A:		
Adrian	Poor	
	Thickest layer	0.00
	Bottom layer	0.19
781B:		
Friesland	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
802A:		
Orthents	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
864, 865:		
Pits	Not rated	
1082A:		
Millington	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
1200A:		
Orio	Fair	
	Thickest layer	0.02
	Bottom layer	0.80
1776A:		
Comfrey	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
3076A:		
Otter	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
3302A:		
Ambraw	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
3451A:		
Lawson	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
7073A:		
Ross	Fair	
	Thickest layer	0.00
	Bottom layer	0.06

Table 16b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of sand: Rating class	Value
7682A:		
Medway	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8067A:		
Harpster	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8076A:		
Otter	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8166A:		
Cohoctah	Fair	
	Thickest layer	0.00
	Bottom layer	0.31
8302A:		
Ambraw	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8321A:		
Du Page	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8404A:		
Titus	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8451A:		
Lawson	Poor	
	Bottom layer	0.00
	Thickest layer	0.00
8492A:		
Normandy	Fair	
	Thickest layer	0.00
	Bottom layer	0.90
8499A:		
Fella	Fair	
	Thickest layer	0.00
	Bottom layer	0.06
8776A:		
Comfrey	Fair	
	Thickest layer	0.00
	Bottom layer	0.18
M-W:		
Miscellaneous water	Not rated	
W:		
Water	Not rated	

Table 17a.--Water Management

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

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45A:						
Denny	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.14		
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		
60B2:						
La Rose	Somewhat limited		Very limited		Very limited	
	Seepage	0.04	Piping	1.00	No ground water	1.00
60C2:						
La Rose	Somewhat limited		Very limited		Very limited	
	Seepage	0.04	Piping	1.00	No ground water	1.00
67A:						
Harpster	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
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		
86B:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	No ground water	1.00
86C2:						
Osco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	No ground water	1.00
87A:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	No ground water	1.00
87B:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	No ground water	1.00
87B2:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.67	No ground 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
88B2:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.76	No ground water	1.00
88D2:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.76	No ground water	1.00
	Slope	0.01				
88E:						
Sparta	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.36	No ground water	1.00
	Slope	0.04				
93E:						
Rodman	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	No ground water	1.00
	Slope	0.04				
102A:						
La Hogue	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.92		
			Seepage	0.05		
103A:						
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		
106B:						
Hitt	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.03	No ground water	1.00
	Depth to bedrock	0.03				
125A:						
Selma	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Piping	0.94		
			Seepage	0.06		
145B2:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.93	No ground water	1.00
			Piping	0.65		
145C2:						
Saybrook	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.93	No ground water	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
152A:						
Drummer	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		
152A+:						
Drummer	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	0.15		
154A:						
Flanagan	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	No ground water	1.00
			Piping	0.42		
171B:						
Catlin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	No ground water	1.00
			Piping	0.15		
171C2:						
Catlin	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.75	No ground water	1.00
			Piping	0.11		
172A:						
Hoopeston	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.22		
198A:						
Elburn	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
199C2:						
Plano	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.58	No ground water	1.00
			Seepage	0.06		
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	0.50		
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	0.22		

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
204B2:						
Ayr-----------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.09	No ground water	1.00
221B2:						
Parr----------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.91	No ground water	1.00
			Depth to saturated zone	0.68		
221C2:						
Parr----------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.91	No ground water	1.00
			Depth to saturated zone	0.68		
233B:						
Birkbeck------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.99	No ground water	1.00
			Piping	0.02		
233C2:						
Birkbeck------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.99	No ground water	1.00
			Piping	0.12		
243A:						
St. Charles---------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.64	No ground water	1.00
243B:						
St. Charles---------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.63	No ground water	1.00
244A:						
Hartsburg-----------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.39		
259C2:						
Assumption----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	No ground water	1.00
			Piping	0.01		
280B:						
Fayette-------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.21	No ground water	1.00
280C2:						
Fayette-------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	No ground 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
280D:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.32	No ground water	1.00
	Slope	0.02				
290A:						
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	No ground water	1.00
290B2:						
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	No ground water	1.00
290C2:						
Warsaw	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.95	No ground water	1.00
329A:						
Will	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Seepage	0.67		
330A:						
Peotone	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		
			Hard to pack	0.19		
332A:						
Billett	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.84	No ground water	1.00
332B:						
Billett	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.84	No ground water	1.00
332C2:						
Billett	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.84	No ground water	1.00
355A:						
Binghampton	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	No ground water	1.00
			Seepage	0.95		
356A:						
Elpaso	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.01		
357B:						
Vanpetten	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.95	Cutbanks cave	1.00
			Seepage	0.50	Depth to water	0.81

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
361D2:						
Kidder	Very limited		Not limited		Very limited	
	Seepage	1.00			No ground water	1.00
363D2:						
Griswold	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.03	No ground water	1.00
369A:						
Waupecan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.98	No ground water	1.00
			Seepage	0.19		
369B2:						
Waupecan	Very limited		Very limited		Very limited	
	Seepage	1.00	Piping	0.99	No ground water	1.00
			Seepage	0.19		
379B2:						
Dakota	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	No ground water	1.00
397D:						
Boone	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	No ground water	1.00
	Depth to bedrock	0.05	Thin layer	0.74		
	Slope	0.01				
397F:						
Boone	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	No ground water	1.00
	Depth to bedrock	0.34	Thin layer	0.99		
	Slope	0.28				
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	No ground water	1.00
	Seepage	0.02				
	Slope	0.02				
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	No ground water	1.00
	Slope	0.34				
	Seepage	0.02				
411B:						
Ashdale	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	No ground water	1.00
	Depth to bedrock	0.10				
411C2:						
Ashdale	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.11	No ground water	1.00
	Depth to bedrock	0.10				
429C:						
Palsgrove	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Thin layer	0.37	No ground water	1.00
	Depth to bedrock	0.37				

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
440A:						
Jasper	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.97	No ground water	1.00
440B:						
Jasper	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.84	No ground water	1.00
440C2:						
Jasper	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.19	No ground water	1.00
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	0.31		
490A:						
Odell	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.79		
501A:						
Morocco	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.26		
503B:						
Rockton	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.88	No ground water	1.00
	Depth to bedrock	0.88				
503C2:						
Rockton	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.98	No ground water	1.00
	Depth to bedrock	0.98				
509B:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.81	No ground water	1.00
	Depth to bedrock	0.81	Piping	0.09		
509D:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.99	No ground water	1.00
	Depth to bedrock	0.99				
	Slope	0.02				
509F:						
Whalan	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.88	No ground water	1.00
	Depth to bedrock	0.88				
	Slope	0.34				

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
512B:						
Danabrook-----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	No ground water	1.00
			Piping	0.60		
512C2:						
Danabrook-----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.75	No ground water	1.00
			Depth to saturated zone	0.68		
523A:						
Dunham--------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Piping	0.63		
			Seepage	0.15		
526A:						
Grundelein----------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00		
			Seepage	0.17		
527B:						
Kidami--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.78	No ground water	1.00
			Depth to saturated zone	0.68		
527C2:						
Kidami--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.87	No ground water	1.00
			Depth to saturated zone	0.68		
564C2:						
Waukegan------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	No ground water	1.00
570A:						
Martinsville--------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.89	No ground water	1.00
570B:						
Martinsville--------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.92	No ground water	1.00
570C2:						
Martinsville--------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.70	No ground water	1.00
570D:						
Martinsville--------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	No ground water	1.00
	Slope	0.02				

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
610A:						
Tallmadge-----------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
	Depth to bedrock	0.10	Ponding	1.00	Depth to hard bedrock	0.42
			Thin layer	0.11		
			Seepage	0.01		
618B:						
Senachwine----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.82	No ground water	1.00
618C2:						
Senachwine----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.84	No ground water	1.00
618D3:						
Senachwine----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.97	No ground water	1.00
	Slope	0.02				
618F:						
Senachwine----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.82	No ground water	1.00
	Slope	0.34				
622B:						
Wyanet--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.44	No ground water	1.00
622B2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.43	No ground water	1.00
622C2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.38	No ground water	1.00
647A:						
Lawler--------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.43		
648A:						
Clyde---------------	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	0.10
			Depth to saturated zone	1.00		
			Piping	0.14		
649A:						
Nachusa-------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	No ground water	1.00
			Piping	0.09		

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
650B:						
Prairieville--------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.73	Slow refill	0.46
					Depth to water	0.12
			Piping	0.04	Cutbanks cave	0.10
675B:						
Greenbush-----------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.17	No ground water	1.00
					Slow refill	0.28
679A:						
Blackberry----------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.68	Cutbanks cave	1.00
			Depth to saturated zone	0.68	Depth to water	0.14
679B:						
Blackberry----------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Piping	0.75	Cutbanks cave	1.00
			Depth to saturated zone	0.68	Depth to water	0.14
686B:						
Parkway-------------	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			No ground water	1.00
686C2:						
Parkway-------------	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			No ground water	1.00
689B:						
Coloma--------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	No ground water	1.00
689D:						
Coloma--------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	No ground water	1.00
	Slope	0.01				
689F:						
Coloma--------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.97	No ground water	1.00
	Slope	0.28				
705A:						
Buckhart------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	0.68	Slow refill	0.28
					Depth to water	0.14
			Piping	0.07	Cutbanks cave	0.10
715A:						
Arrowsmith----------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	0.50
					Slow refill	0.28
			Piping	0.81		
727A:						
Waukee--------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.52	No ground 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
741D3:						
Oakville	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	0.99	No ground water	1.00
	Slope	0.02				
742B2:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	No ground water	1.00
742C2:						
Dickinson	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	No ground water	1.00
756B:						
Wyanet	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.76	No ground water	1.00
756C2:						
Wyanet	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.54	No ground water	1.00
757B2:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.94	No ground water	1.00
757C2:						
Senachwine	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.94	No ground water	1.00
761D:						
Eleva	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.81	No ground water	1.00
	Depth to bedrock	0.81	Seepage	0.06		
	Slope	0.01				
761F:						
Eleva	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.81	No ground water	1.00
	Depth to bedrock	0.81	Seepage	0.05		
	Slope	0.28				
777A:						
Adrian	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
781B:						
Friesland	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	No ground water	1.00
802A:						
Orthents	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Piping	0.50	No ground water	1.00
864, 865:						
Pits	Not rated		Not rated		Not rated	

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
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		
1200A:						
Orio----------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Seepage	0.80		
1776A:						
Comfrey-------------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.61		
3076A:						
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	0.75		
3302A:						
Ambraw--------------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Ponding	1.00		
			Piping	0.06		
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		
7073A:						
Ross----------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Piping	1.00	No ground water	1.00
			Seepage	0.06		
7682A:						
Medway--------------	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.35		
8067A:						
Harpster------------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10

Table 17a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
8076A:						
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	0.79		
8166A:						
Cohoctah	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Ponding	1.00		
			Seepage	0.31		
8302A:						
Ambraw	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.28
					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	No ground water	1.00
8404A:						
Titus	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Ponding	1.00	Slow refill	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
8451A:						
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	0.64		
8492A:						
Normandy	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.90		
			Piping	0.84		
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	0.06		
8776A:						
Comfrey	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	0.95		
			Seepage	0.18		

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
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water---------------	Not rated		Not rated		Not rated	

Table 17b.--Water Management

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

Map symbol and soil name	Constructing grassed waterways and surface drains		Constructing terraces and diversions		Tile drains and underground outlets	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45A:						
Denny	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
51A:						
Muscatune	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
60B2:						
La Rose	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
60C2:						
La Rose	Somewhat limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Cutbanks cave	0.10
			Slope	1.00		
67A:						
Harpster	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
68A:						
Sable	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
86B:						
Osco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25	Cutbanks cave	0.10
86C2:						
Osco	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.99	Cutbanks cave	0.10
87A:						
Dickinson	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.17		

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
87B:						
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		
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		
88B2:						
Sparta--------------	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.36		
88D2:						
Sparta--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.84
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
93E:						
Rodman--------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	1.00
			Water erosion	0.56		
102A:						
La Hogue------------	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	0.10
103A:						
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
					Ponding	1.00
					Cutbanks cave	0.10
106B:						
Hitt----------------	Somewhat limited		Somewhat limited		Very limited	
	Depth to bedrock	0.42	Water erosion	0.89	Too clayey	1.00
	Slope	0.25	Depth to bedrock	0.42	Depth to bedrock	0.42
			Slope	0.25	Cutbanks cave	0.10
125A:						
Selma---------------	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	1.00

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
145B2:						
Saybrook	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.36		
145C2:						
Saybrook	Somewhat limited		Very limited		Very limited	
	Slope	0.95	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.95		
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
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
154A:						
Flanagan	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
171B:						
Catlin	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.25		
171C2:						
Catlin	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.95	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Slope	0.95	Cutbanks cave	0.10
			Water erosion	0.89		
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
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

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
199C2:						
Plano	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.99		
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	0.89		
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	0.17		
204B2:						
Ayr	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.36	Slope	0.36	Cutbanks cave	0.10
			Water erosion	0.17		
221B2:						
Parr	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Water erosion	0.89	Dense layer	0.50
			Slope	0.25	Cutbanks cave	0.10
221C2:						
Parr	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Slope	0.99	Dense layer	0.50
			Water erosion	0.89	Cutbanks cave	0.10
233B:						
Birkbeck	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.25		
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		
243A:						
St. Charles	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
243B:						
St. Charles	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
244A:						
Hartsburg	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
259C2:						
Assumption	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.99		
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		
280D:						
Fayette	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.10
290A:						
Warsaw	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.56		
290B2:						
Warsaw	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.56		
			Slope	0.25		
290C2:						
Warsaw	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.99		
			Water erosion	0.56		
329A:						
Will	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Cutbanks cave	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
330A:						
Peotone	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	0.02
332A:						
Billett	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.17		
332B:						
Billett	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.25		
			Water erosion	0.17		
332C2:						
Billett	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.99		
			Water erosion	0.17		
355A:						
Binghampton	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	Dense layer	0.50
356A:						
Elpaso	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
357B:						
Vanpetten	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	1.00
			Slope	0.25	Depth to saturated zone	0.61
					Dense layer	0.50
361D2:						
Kidder	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	0.10
			Water erosion	0.89	Slope	0.04
363D2:						
Griswold	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	0.10
			Water erosion	0.89	Slope	0.04
369A:						
Waupecan	Not limited		Very limited		Very limited	
			Water erosion	1.00	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
369B2:						
Waupecan------------	Somewhat limited		Very limited		Very limited	
	Slope	0.36	Water erosion	1.00	Cutbanks cave	1.00
			Slope	0.36		
379B2:						
Dakota--------------	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		
			Slope	0.25		
397D:						
Boone---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Cutbanks cave	1.00
			Too sandy	1.00	Slope	0.96
397F:						
Boone---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
					Cutbanks cave	1.00
403D:						
Elizabeth-----------	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.01		
403F:						
Elizabeth-----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
			Water erosion	0.01	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
411C2:						
Ashdale-------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Too clayey	0.50
	Depth to bedrock	0.42	Slope	0.99	Depth to bedrock	0.42
			Depth to bedrock	0.42	Cutbanks cave	0.10
429C:						
Palsgrove-----------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Too clayey	0.88
	Depth to bedrock	0.42	Slope	0.99	Depth to bedrock	0.42
			Depth to bedrock	0.42	Cutbanks cave	0.10
440A:						
Jasper--------------	Not limited		Somewhat limited		Somewhat limited	
			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
440B:						
Jasper	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25		
440C2:						
Jasper	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.89		
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
490A:						
Odell	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Dense layer	0.50
					Cutbanks cave	0.10
501A:						
Morocco	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
503B:						
Rockton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	0.25	Water erosion	0.89	Too clayey	0.32
			Slope	0.25	Cutbanks cave	0.10
503C2:						
Rockton	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	0.99	Slope	0.99	Too clayey	0.32
			Water erosion	0.89	Cutbanks cave	0.10
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
509D:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Slope	1.00	Slope	0.96
			Depth to bedrock	1.00	Too clayey	0.32
					Cutbanks cave	0.10
509F:						
Whalan	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Slope	1.00	Slope	1.00
			Depth to bedrock	1.00	Too clayey	0.32
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
512B:						
Danabrook-----------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	0.25	Cutbanks cave	0.10
512C2:						
Danabrook-----------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	0.99	Cutbanks cave	0.10
523A:						
Dunham--------------	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
526A:						
Grundelein----------	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
527B:						
Kidami--------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.16	Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Dense layer	0.50
			Slope	0.16	Cutbanks cave	0.10
527C2:						
Kidami--------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.62	Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Water erosion	0.89	Dense layer	0.50
			Slope	0.62	Cutbanks cave	0.10
564C2:						
Waukegan------------	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	1.00
			Too sandy	1.00		
			Slope	0.99		
570A:						
Martinsville--------	Not limited		Somewhat limited		Somewhat limited	
			Water erosion	0.89	Cutbanks cave	0.10
570B:						
Martinsville--------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25		
570C2:						
Martinsville--------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.89		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
570D:						
Martinsville	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
610A:						
Tallmadge	Somewhat limited		Very limited		Very limited	
	Depth to bedrock	0.42	Ponding	1.00	Depth to saturated zone	1.00
	Rock fragments	0.01	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Water erosion	0.89	Ponding	1.00
			Depth to bedrock	0.42	Depth to bedrock	0.42
			Rock fragments	0.01		
618B:						
Senachwine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Dense layer	0.50
			Slope	0.25	Cutbanks cave	0.10
618C2:						
Senachwine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Dense layer	0.50
			Slope	0.99	Cutbanks cave	0.10
618D3:						
Senachwine	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Dense layer	0.50
					Cutbanks cave	0.10
618F:						
Senachwine	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Dense layer	0.50
					Cutbanks cave	0.10
622B:						
Wyanet	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
622B2:						
Wyanet	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
622C2:						
Wyanet	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.89		
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		

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
648A: Clyde	Not limited		Very limited Water erosion Ponding Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10
649A: Nachusa	Not limited		Very limited Water erosion Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10
650B: Prairieville	Somewhat limited Slope	 0.25	Very limited Depth to saturated zone Water erosion Slope	 1.00 0.89 0.25	Somewhat limited Depth to saturated zone Cutbanks cave	 0.99 0.10
675B: Greenbush	Somewhat limited Slope	 0.25	Very limited Water erosion Slope	 1.00 0.25	Somewhat limited Depth to saturated zone Cutbanks cave	 0.15 0.10
679A: Blackberry	Not limited		Very limited Water erosion Depth to saturated zone	 1.00 1.00	Very limited Cutbanks cave Depth to saturated zone	 1.00 0.99
679B: Blackberry	Somewhat limited Slope	 0.25	Very limited Water erosion Depth to saturated zone Slope	 1.00 1.00 0.25	Very limited Cutbanks cave Depth to saturated zone	 1.00 0.99
686B: Parkway	Somewhat limited Slope	 0.25	Very limited Water erosion Slope	 1.00 0.25	Somewhat limited Depth to saturated zone Cutbanks cave	 0.15 0.10
686C2: Parkway	Somewhat limited Slope	 0.99	Very limited Water erosion Slope	 1.00 0.99	Somewhat limited Depth to saturated zone Cutbanks cave	 0.15 0.10
689B: Coloma	Somewhat limited Slope	 0.36	Very limited Too sandy Slope	 1.00 0.36	Very limited Cutbanks cave	 1.00
689D: Coloma	Very limited Slope	 1.00	Very limited Too sandy Slope	 1.00 1.00	Very limited Cutbanks cave Slope	 1.00 0.37

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
689F:						
Coloma	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Too sandy	1.00	Cutbanks cave	1.00
705A:						
Buckhart	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Cutbanks cave	0.10
715A:						
Arrowsmith	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.50
727A:						
Waukee	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89		
741D3:						
Oakville	Very limited		Very limited		Very limited	
	Slope	1.00	Too sandy	1.00	Cutbanks cave	1.00
			Slope	1.00	Slope	0.37
742B2:						
Dickinson	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Slope	0.25	Cutbanks cave	0.10
			Water erosion	0.17		
742C2:						
Dickinson	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.17		
756B:						
Wyanet	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25		
756C2:						
Wyanet	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.99	Slope	0.99	Cutbanks cave	0.10
			Water erosion	0.89		
757B2:						
Senachwine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Dense layer	0.50
			Slope	0.25	Cutbanks cave	0.10
757C2:						
Senachwine	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Dense layer	0.50
			Slope	0.99	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
761D:						
Eleva---------------	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
	Slope	1.00	Slope	1.00	Slope	0.37
			Water erosion	0.17	Cutbanks cave	0.10
761F:						
Eleva---------------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
			Water erosion	0.17	Cutbanks cave	0.10
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
781B:						
Friesland-----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25		
802A:						
Orthents------------	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Cutbanks cave	0.10
864, 865:						
Pits----------------	Not rated		Not rated		Not rated	
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
1200A:						
Orio----------------	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.56		
1776A:						
Comfrey-------------	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Water erosion	0.89	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10

Table 17b.--Water Management--Continued

Map symbol and soil name	Constructing grassed waterways and surface drains: Rating class and limiting features	Value	Constructing terraces and diversions: Rating class and limiting features	Value	Tile drains and underground outlets: Rating class and limiting features	Value
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
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
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
7073A:						
Ross	Not limited		Somewhat limited		Very limited	
			Water erosion	0.89	Cutbanks cave	1.00
					Depth to saturated zone	0.15
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
8067A:						
Harpster	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
8076A:						
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	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

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
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
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
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
8492A:						
Normandy	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
					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
8776A:						
Comfrey	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
					Flooding	0.60
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 17c.--Water Management

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

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45A:						
Denny	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	1.00				
51A:						
Muscatune	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.04				
60B2:						
La Rose	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.31	Water erosion	1.00		
	Slope	0.02	Droughty	0.75		
60C2:						
La Rose	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Percs slowly	0.31	Droughty	0.75		
			Slope	0.06		
67A:						
Harpster	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	Wetness	1.00
68A:						
Sable	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
86B:						
Osco	Somewhat limited		Not limited		Not limited	
	Slope	0.02				
86C2:						
Osco	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
			Slope	0.06		
87A:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Droughty	0.04	Droughty	0.54		
87B:						
Dickinson	Somewhat limited		Somewhat limited		Not limited	
	Droughty	0.34	Droughty	0.98		
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87B2:						
Dickinson-----------	Somewhat limited		Somewhat limited		Not limited	
	Droughty	0.34	Droughty	0.98		
	Slope	0.02				
88B2:						
Sparta--------------	Somewhat limited		Very limited		Not limited	
	Slope	0.18	Too sandy	1.00		
	Too acid	0.08	Wind erosion	1.00		
	Droughty	0.03	Droughty	1.00		
88D2:						
Sparta--------------	Very limited		Very limited		Not limited	
	Slope	1.00	Too sandy	1.00		
	Droughty	0.53	Wind erosion	1.00		
	Too acid	0.08	Droughty	1.00		
			Slope	0.78		
88E:						
Sparta--------------	Very limited		Very limited		Not limited	
	Slope	1.00	Too sandy	1.00		
	Droughty	0.36	Wind erosion	1.00		
	Too acid	0.08	Droughty	1.00		
			Slope	1.00		
93E:						
Rodman--------------	Very limited		Very limited		Not limited	
	Slope	1.00	Droughty	1.00		
	Droughty	1.00	Slope	1.00		
102A:						
La Hogue------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
103A:						
Houghton------------	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	Wetness	1.00
106B:						
Hitt----------------	Very limited		Not limited		Not limited	
	Percs slowly	1.00				
	Slope	0.02				
125A:						
Selma---------------	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	Wetness	1.00
145B2:						
Saybrook------------	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.93				
	Too acid	0.44				
	Percs slowly	0.31				
	Slope	0.08				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
145C2:						
Saybrook-----------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.93				
	Percs slowly	0.31				
152A:						
Drummer------------	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	Wetness	1.00
152A+:						
Drummer------------	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	Wetness	1.00
154A:						
Flanagan-----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	0.31				
	Too acid	0.08				
171B:						
Catlin-------------	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
	Too acid	0.08				
	Slope	0.02				
171C2:						
Catlin-------------	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Depth to saturated zone	0.76	Slope	0.06		
	Percs slowly	0.31				
172A:						
Hoopeston----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.08	Droughty	0.03		
198A:						
Elburn-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
199C2:						
Plano--------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods) Rating class and limiting features	Value	Sprinkler irrigation Rating class and limiting features	Value	Drip or trickle irrigation Rating class and limiting features	Value
200A:						
Orio	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	Wetness	1.00
	Percs slowly	0.31				
	Too acid	0.08				
201A:						
Gilford	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	Wetness	1.00
			Droughty	0.02		
204B2:						
Ayr	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.65		
221B2:						
Parr	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
	Slope	0.02				
221C2:						
Parr	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
233B:						
Birkbeck	Somewhat limited		Very limited		Not limited	
	Depth to saturated zone	0.99	Water erosion	1.00		
	Too acid	0.44				
	Slope	0.02				
233C2:						
Birkbeck	Somewhat limited		Very limited		Not limited	
	Depth to saturated zone	0.99	Water erosion	1.00		
			Slope	0.06		
	Slope	0.98				
	Too acid	0.44				
	Percs slowly	0.31				
243A:						
St. Charles	Not limited		Not limited		Not limited	
243B:						
St. Charles	Somewhat limited		Very limited		Not limited	
	Slope	0.02	Water erosion	1.00		
244A:						
Hartsburg	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	Wetness	1.00

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
259C2:						
Assumption----------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.68				
	Percs slowly	0.61				
280B:						
Fayette-------------	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				
280C2:						
Fayette-------------	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
			Slope	0.06		
280D:						
Fayette-------------	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	0.98		
290A:						
Warsaw--------------	Not limited		Somewhat limited		Not limited	
			Droughty	0.04		
290B2:						
Warsaw--------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.08		
290C2:						
Warsaw--------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.91		
	Droughty	0.14	Slope	0.06		
329A:						
Will----------------	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	Wetness	1.00
			Droughty	0.06		
330A:						
Peotone-------------	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	Wetness	1.00
	Percs slowly	0.31				
332A:						
Billett-------------	Somewhat limited		Somewhat limited		Not limited	
	Droughty	0.06	Droughty	0.97		
332B:						
Billett-------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.02	Droughty	0.63		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332C2:						
Billett	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.99		
	Droughty	0.09	Slope	0.06		
355A:						
Binghampton	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	0.31	Droughty	0.23		
356A:						
Elpaso	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	Wetness	1.00
	Too acid	0.22				
357B:						
Vanpetten	Somewhat limited		Somewhat limited		Not limited	
	Percs slowly	0.31	Droughty	0.01		
	Slope	0.02				
361D2:						
Kidder	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
			Slope	0.22		
			Droughty	0.12		
363D2:						
Griswold	Very limited		Somewhat limited		Not limited	
	Slope	1.00	Slope	0.22		
369A:						
Waupecan	Not limited		Not limited		Not limited	
369B2:						
Waupecan	Somewhat limited		Not limited		Not limited	
	Slope	0.08				
379B2:						
Dakota	Somewhat limited		Somewhat limited		Not limited	
	Too acid	0.08	Droughty	0.69		
	Slope	0.02				
397D:						
Boone	Very limited		Very limited		Not limited	
	Droughty	1.00	Wind erosion	1.00		
	Slope	1.00	Droughty	1.00		
	Too acid	0.44	Depth to soft bedrock	0.90		
	Depth to bedrock	0.16	Slope	0.60		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods): Rating class and limiting features	Value	Sprinkler irrigation: Rating class and limiting features	Value	Drip or trickle irrigation: Rating class and limiting features	Value
397F:						
Boone	Very limited		Very limited		Not limited	
	Droughty	1.00	Depth to soft bedrock	1.00		
	Slope	1.00	Wind erosion	1.00		
	Depth to bedrock	0.95	Droughty	1.00		
	Too acid	0.44	Slope	1.00		
403D:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	1.00	Droughty	1.00		
	Droughty	1.00	Slope	0.98		
	Percs slowly	0.61				
403F:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
	Slope	1.00	Droughty	1.00		
	Droughty	1.00	Slope	1.00		
	Percs slowly	0.61				
411B:						
Ashdale	Very limited		Not limited		Not limited	
	Percs slowly	1.00				
	Slope	0.02				
411C2:						
Ashdale	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.98	Slope	0.06		
429C:						
Palsgrove	Very limited		Very limited		Not limited	
	Percs slowly	1.00	Water erosion	1.00		
	Slope	0.98	Depth to hard bedrock	0.26		
			Slope	0.06		
440A:						
Jasper	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
440B:						
Jasper	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
	Slope	0.02				
440C2:						
Jasper	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Too acid	0.08				
488A:						
Hooppole	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	Wetness	1.00

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
490A:						
Odell	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	1.00				
501A:						
Morocco	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Wind erosion	1.00	Wetness	1.00
			Droughty	1.00		
	Droughty	0.59	Depth to saturated zone	1.00		
	Too acid	0.44				
503B:						
Rockton	Somewhat limited		Very limited		Not limited	
	Depth to bedrock	0.54	Depth to hard bedrock	1.00		
	Too acid	0.44				
	Droughty	0.08	Droughty	0.16		
	Slope	0.02				
503C2:						
Rockton	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Depth to hard bedrock	1.00		
	Depth to bedrock	0.90				
	Droughty	0.54	Droughty	0.85		
	Too acid	0.44	Slope	0.06		
509B:						
Whalan	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.61	Water erosion	1.00		
	Depth to bedrock	0.29	Depth to hard bedrock	0.97		
	Slope	0.02				
	Droughty	0.01	Droughty	0.01		
509D:						
Whalan	Very limited		Very limited		Not limited	
	Slope	1.00	Depth to hard bedrock	1.00		
	Depth to bedrock	0.95				
	Droughty	0.68	Water erosion	1.00		
	Percs slowly	0.61	Slope	0.98		
			Droughty	0.95		
509F:						
Whalan	Very limited		Very limited		Not limited	
	Slope	1.00	Depth to hard bedrock	1.00		
	Percs slowly	0.61				
	Depth to bedrock	0.54	Slope	1.00		
	Droughty	0.06	Water erosion	1.00		
			Droughty	0.12		
512B:						
Danabrook	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
	Slope	0.02				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods) Rating class and limiting features	Value	Sprinkler irrigation Rating class and limiting features	Value	Drip or trickle irrigation Rating class and limiting features	Value
512C2:						
Danabrook-----------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Depth to saturated zone	0.68				
	Percs slowly	0.31				
523A:						
Dunham-------------	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	Wetness	1.00
526A:						
Grundelein----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Too acid	0.01				
527B:						
Kidami--------------	Somewhat limited		Very limited		Not limited	
	Depth to saturated zone	0.68	Water erosion	1.00		
	Percs slowly	0.31				
	Too acid	0.08				
527C2:						
Kidami--------------	Somewhat limited		Very limited		Not limited	
	Depth to saturated zone	0.68	Water erosion	1.00		
	Slope	0.32				
	Percs slowly	0.31				
	Too acid	0.08				
564C2:						
Waukegan------------	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
			Slope	0.06		
570A:						
Martinsville--------	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
570B:						
Martinsville--------	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				
570C2:						
Martinsville--------	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Too acid	0.08	Slope	0.06		
570D:						
Martinsville--------	Very limited		Very limited		Not limited	
	Slope	1.00	Water erosion	1.00		
	Too acid	0.08	Slope	0.98		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
610A:						
Tallmadge-----------	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	Wetness	1.00
618B:						
Senachwine----------	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.31	Water erosion	1.00		
	Slope	0.02				
618C2:						
Senachwine----------	Somewhat limited		Very limited		Not limited	
	Slope	0.98	Water erosion	1.00		
	Percs slowly	0.31	Droughty	0.43		
	Droughty	0.07	Slope	0.06		
618D3:						
Senachwine----------	Very limited		Very limited		Not limited	
	Slope	1.00	Droughty	1.00		
	Droughty	0.88	Slope	0.98		
	Percs slowly	0.31				
618F:						
Senachwine----------	Very limited		Very limited		Not limited	
	Slope	1.00	Slope	1.00		
	Percs slowly	0.31	Water erosion	1.00		
622B:						
Wyanet--------------	Somewhat limited		Not limited		Not limited	
	Percs slowly	0.31				
	Slope	0.02				
622B2:						
Wyanet--------------	Somewhat limited		Very limited		Not limited	
	Percs slowly	0.31	Water erosion	1.00		
	Slope	0.02				
622C2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Percs slowly	0.31				
647A:						
Lawler--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
648A:						
Clyde---------------	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	Wetness	1.00
649A:						
Nachusa-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	0.31				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
650B:						
Prairieville--------	Somewhat limited		Somewhat limited		Not limited	
	Depth to saturated zone	0.73	Depth to saturated zone	0.27		
	Percs slowly	0.31				
	Slope	0.02				
675B:						
Greenbush-----------	Somewhat limited		Very limited		Not limited	
	Too acid	0.08	Water erosion	1.00		
	Slope	0.02				
679A:						
Blackberry----------	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
679B:						
Blackberry----------	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				
	Slope	0.02				
686B:						
Parkway-------------	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
	Slope	0.02				
686C2:						
Parkway-------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Too acid	0.08				
689B:						
Coloma--------------	Somewhat limited		Very limited		Not limited	
	Droughty	0.70	Too sandy	1.00		
	Too acid	0.32	Wind erosion	1.00		
	Slope	0.08	Droughty	1.00		
689D:						
Coloma--------------	Very limited		Very limited		Not limited	
	Slope	1.00	Too sandy	1.00		
	Droughty	0.76	Wind erosion	1.00		
	Too acid	0.32	Droughty	1.00		
			Slope	0.60		
689F:						
Coloma--------------	Very limited		Very limited		Not limited	
	Slope	1.00	Too sandy	1.00		
	Droughty	0.76	Wind erosion	1.00		
	Too acid	0.32	Droughty	1.00		
			Slope	1.00		
705A:						
Buckhart------------	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.68				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
715A:						
Arrowsmith----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
727A:						
Waukee--------------	Somewhat limited		Not limited		Not limited	
	Too acid	0.08				
741D3:						
Oakville------------	Very limited		Very limited		Not limited	
	Slope	1.00	Too sandy	1.00		
	Too acid	0.08	Wind erosion	1.00		
	Droughty	0.03	Droughty	1.00		
			Slope	0.60		
742B2:						
Dickinson-----------	Not limited		Somewhat limited		Not limited	
			Droughty	0.08		
742C2:						
Dickinson-----------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.08		
			Slope	0.06		
756B:						
Wyanet--------------	Somewhat limited		Not limited		Not limited	
	Percs slowly	0.31				
	Slope	0.02				
756C2:						
Wyanet--------------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Slope	0.06		
	Percs slowly	0.31				
757B2:						
Senachwine----------	Somewhat limited		Somewhat limited		Not limited	
	Droughty	0.52	Droughty	0.99		
	Percs slowly	0.31				
	Slope	0.02				
757C2:						
Senachwine----------	Somewhat limited		Somewhat limited		Not limited	
	Slope	0.98	Droughty	0.71		
	Percs slowly	0.31	Slope	0.06		
	Droughty	0.17				
761D:						
Eleva---------------	Very limited		Somewhat limited		Not limited	
	Slope	1.00	Depth to hard bedrock	0.97		
	Too acid	0.78				
	Droughty	0.54	Droughty	0.86		
	Depth to bedrock	0.29	Slope	0.60		
761F:						
Eleva---------------	Very limited		Very limited		Not limited	
	Slope	1.00	Slope	1.00		
	Too acid	0.78	Depth to hard bedrock	0.97		
	Droughty	0.54				
	Depth to bedrock	0.29	Droughty	0.86		

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods) Rating class and limiting features	Value	Sprinkler irrigation Rating class and limiting features	Value	Drip or trickle irrigation Rating class and limiting features	Value
777A:						
Adrian	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	Wetness	1.00
781B:						
Friesland	Somewhat limited		Not limited		Not limited	
	Too acid	0.14				
	Slope	0.02				
802A:						
Orthents	Somewhat limited		Not limited		Not limited	
	Percs slowly	0.31				
864, 865:						
Pits	Not rated		Not rated		Not rated	
1082A:						
Millington	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
1200A:						
Orio	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	Wetness	1.00
	Percs slowly	0.31	Droughty	0.02		
	Too acid	0.08				
1776A:						
Comfrey	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3076A:						
Otter	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
3302A:						
Ambraw	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00
	Percs slowly	0.31	Droughty	0.01		
3451A:						
Lawson	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00	Flooding	1.00
	Flooding	0.80	Depth to saturated zone	1.00	Wetness	1.00

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods)		Sprinkler irrigation		Drip or trickle irrigation	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7073A:						
Ross----------------	Not limited		Not limited		Not limited	
7682A:						
Medway--------------	Very limited		Not limited		Very limited	
	Depth to saturated zone	1.00			Wetness	1.00
8067A:						
Harpster------------	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	Wetness	1.00
	Flooding	0.60				
8076A:						
Otter---------------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Flooding	0.60				
8166A:						
Cohoctah------------	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	Wetness	1.00
	Flooding	0.60				
8302A:						
Ambraw--------------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Flooding	0.60				
	Percs slowly	0.31				
8321A:						
Du Page-------------	Somewhat limited		Not limited		Not limited	
	Flooding	0.60				
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	Wetness	1.00
	Percs slowly	1.00				
	Flooding	0.60				
8451A:						
Lawson--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Flooding	0.60				
8492A:						
Normandy------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Flooding	0.60				

Table 17c.--Water Management--Continued

Map symbol and soil name	Irrigation (all application methods): Rating class and limiting features	Value	Sprinkler irrigation: Rating class and limiting features	Value	Drip or trickle irrigation: Rating class and limiting features	Value
8499A:						
Fella----------------	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	Wetness	1.00
	Flooding	0.60				
8776A:						
Comfrey-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	1.00
	Flooding	0.60				
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water----------------	Not rated		Not rated		Not rated	

Table 18.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

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	
45A:												
Denny-----------	0-9	Silt loam	CL	A-6, A-4	0	0	100	100	95-100	95-100	30-40	8-15
	9-22	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	95-100	25-40	5-15
	22-45	Silty clay loam, silty clay	CL, CH	A-7-6, A-6	0	0	100	100	95-100	95-100	35-60	15-35
	45-60	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	95-100	25-40	11-20
51A:												
Muscatune-------	0-16	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	97-100	95-100	24-37	4-14
	16-22	Silty clay loam, silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	35-40	14-20
	22-46	Silty clay loam	CL, ML	A-6, A-7-6	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
60B2:												
La Rose---------	0-7	Silt loam	CL, ML	A-4, A-6	0	0	90-100	80-100	80-90	65-85	29-33	8-11
	7-19	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	19-60	Loam	CL-ML, ML, CL, SC-SM, SC	A-4	0-1	0-3	90-100	85-100	70-95	45-75	22-28	4-10
60C2:												
La Rose---------	0-7	Silt loam	CL, ML	A-4, A-6	0	0	90-100	80-100	80-90	65-85	29-33	8-11
	7-19	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	19-60	Loam	CL-ML, ML, CL, SC-SM, SC	A-4	0-1	0-3	90-100	85-100	70-95	45-75	22-28	4-10
67A:												
Harpster--------	0-18	Silty clay loam	CL, CH	A-7-6	0	0	100	95-100	90-100	75-100	37-49	17-25
	18-32	Silty clay loam	CH, CL	A-7-6	0	0	100	95-100	90-100	78-100	37-49	18-28
	32-60	Silt loam, silty clay loam, loam	CH, CL	A-6, A-7	0	0	100	95-100	90-100	73-100	35-47	17-27

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
68A:												
Sable-----------	0-17	Silty clay loam	CH, CL, MH, ML	A-7-6	0	0	100	100	95-100	95-100	41-65	15-35
	17-23	Silty clay loam	CH, CL, MH, ML	A-7-6	0	0	100	100	95-100	95-100	41-65	15-35
	23-60	Silty clay loam, silt loam	CL, CH	A-7-6	0	0	100	100	95-100	95-100	40-55	20-35
86B:												
Osco------------	0-14	Silt loam	CL, ML	A-6, A-4	0	0	100	100	100	95-100	35-45	7-20
	14-55	Silty clay loam, silt loam	CL	A-6, A-7-6	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	7-25
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	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4, A-2-4	0	0	100	100	63-87	24-50	17-26	4-11
	20-31	Fine sandy loam, 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-3, A-2-4	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		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
87B:												
Dickinson-------	0-9	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	63-76	24-50	19-25	2-8
	9-17	Sandy loam, fine sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	63-87	24-50	19-25	3-9
	17-33	Sandy loam, fine sandy loam	SC, SC-SM	A-4	0	0	100	100	65-87	25-50	17-22	4-9
	33-41	Loamy sand, loamy fine sand, fine sand	SC-SM, SM	A-2-4, A-3	0	0	100	100	58-80	7-25	10-20	NP-5
	41-60	Sand, loamy fine sand, loamy sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	50-80	7-25	6-16	NP-5
87B2:												
Dickinson-------	0-8	Sandy loam	SC, SC-SM, SM	A-2, A-4	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	SC-SM, SM, SP-SM	A-3, A-2-4	0	0	100	100	55-80	7-25	9-15	NP-5
	31-60	Sand, loamy fine sand, loamy sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	50-80	7-25	9-14	NP-5
88B2:												
Sparta----------	0-8	Loamy sand	SM	A-4, A-2-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	8-30	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
	30-72	Stratified sand to loamy sand	SM, SP, SP-SM	A-2-4, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
88D2:												
Sparta----------	0-9	Loamy sand	SM	A-2-4, A-4	0	0	85-100	85-100	50-95	10-50	0-14	NP
	9-31	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
	31-60	Sand, fine sand	SP, SM, SP-SM	A-2-4, A-3	0	0	85-100	85-100	50-95	4-50	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	
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	SP-SM, 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, SP, SM	A-2-4, A-3	0	0	85-100	85-100	50-95	4-50	0-14	NP-4
93E:												
Rodman----------	0-7	Gravelly sandy loam	SC-SM, SC, SP-SM	A-1-b, A-2	0	0-2	75-85	55-85	40-70	10-40	15-25	NP-10
	7-11	Gravelly loam, sandy loam, loam	SM, CL, SC, SC-SM	A-1-b, A-2, A-4	0	0-2	70-85	50-85	40-75	20-65	10-30	NP-15
	11-60	Stratified very gravelly coarse sand to sand	SW-SM, SC-SM, SP	A-1-a, A-1-b	0-2	2-5	60-75	22-75	10-40	2-15	6-16	NP-5
102A:												
La Hogue--------	0-16	Loam	CL, CL-ML, ML	A-6	0	0	100	100	80-100	50-80	20-35	3-15
	16-26	Clay loam, sandy clay loam, loam	CL, SC	A-4, A-6, A-7-6	0	0	100	100	80-100	40-85	25-45	8-22
	26-36	Sandy clay loam, clay loam, sandy loam	SC	A-6	0	0	100	100	85-95	35-65	23-47	8-27
	36-61	Sandy loam, sandy clay loam, loamy sand	SC	A-2-4, A-2	0	0	95-100	80-100	65-90	18-50	12-35	NP-18
	61-65	Stratified silt loam	CL, ML	A-2, A-4	0	0	100	100	96-100	66-100	17-29	4-14
103A:												
Houghton--------	0-11	Muck	PT	A-8	0	0	---	---	---	---	0-0	NP
	11-60	Muck	PT	A-8	0	0	---	---	---	---	0-0	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	
106B:												
Hitt------------	0-8	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	63-76	24-50	17-26	3-11
	8-32	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0	0-5	95-100	95-100	75-95	40-80	37-48	19-26
	32-46	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0	0-5	94-100	84-100	73-92	40-67	37-48	19-26
	46-54	Clay, silty clay	CH	A-7-6	0-2	0-10	88-100	85-100	80-100	68-99	60-75	40-51
	54-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
125A:												
Selma-----------	0-23	Loam	CL	A-4, A-6	0	0	100	95-100	80-100	55-85	25-35	7-17
	23-53	Clay loam, sandy loam, loam, silty clay loam	CL, ML, SC	A-6	0	0	100	95-100	80-95	38-85	24-36	11-19
	53-60	Stratified sand to silt loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-2	0	0	90-100	85-100	60-90	30-70	15-35	1-20
145B2:												
Saybrook--------	0-8	Silt loam	CL, ML	A-6	0	0	100	97-100	95-100	85-100	29-37	10-16
	8-28	Silt loam, silty clay loam	CL, ML	A-7-6, A-6, A-7-5	0	0	100	97-100	95-100	85-100	35-46	14-24
	28-31	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	31-60	Loam	CL, ML, SC	A-6, A-4	0-1	0-3	85-100	80-95	70-90	45-70	27-33	8-14
145C2:												
Saybrook--------	0-9	Silt loam	CL, ML	A-6	0	0	100	97-100	95-100	85-100	29-37	10-16
	9-30	Silt loam, silty clay loam	CL, ML	A-7-6, A-6, A-7-5	0	0	100	97-100	95-100	85-100	35-46	14-24
	30-36	Clay loam	CL, ML	A-6	0	0	90-100	85-100	75-95	55-85	33-39	12-18
	36-60	Loam	CL, ML, SC	A-6, A-4	0-1	0-3	85-100	80-95	70-90	45-70	27-33	8-14

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	
152A:												
Drummer---------	0-14	Silty clay loam	CL	A-7, A-6	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	SC, CL	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	CL, SC	A-4, A-6, A-2-4	0	0-5	95-100	75-95	75-95	15-80	20-35	7-20
152A+:												
Drummer---------	0-16	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-45	10-20
	16-23	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	95-100	85-95	30-50	15-30
	23-38	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
	38-60	Stratified loamy sand to silty clay loam	SC, CL	A-2-4, A-4, A-6	0	0-5	95-100	75-95	75-95	15-80	20-35	7-20
154A:												
Flanagan--------	0-18	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	90-100	24-37	4-14
	18-38	Silty clay loam, silty clay	CL, CH	A-7-6	0	0	100	100	95-100	95-100	45-52	22-28
	38-45	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	95-100	35-40	14-20
	45-49	Silt loam, loam	CL	A-6, A-4	0	0-3	85-100	80-100	75-90	60-90	25-33	9-13
	49-60	Loam	CL, CL-ML, SC-SM, SC	A-4, A-6	0-1	0-5	85-100	80-100	70-90	45-70	22-33	4-14

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	
171B:												
Catlin----------	0-11	Silt loam	CL-ML, CL	A-4, A-6, A-7	0	0	100	100	95-100	90-100	25-45	5-20
	11-45	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	95-100	90-100	90-100	30-50	15-30
	45-57	Clay loam, silty clay loam, loam	CL	A-6	0	0-3	90-100	85-100	70-95	50-80	25-40	10-20
	57-70	Loam, clay loam, silty clay loam	CL-ML, CL	A-4, A-6	0	0-3	90-100	85-100	70-90	45-70	20-35	5-15
171C2:												
Catlin----------	0-9	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	10-16
	9-40	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	40-50	Silt loam, silty clay loam	CL, ML	A-6	0	0	100	97-100	95-100	85-100	35-40	14-20
	50-55	Clay loam	CL, ML	A-6	0	0	90-98	85-98	76-95	55-85	33-39	12-18
	55-60	Clay loam	CL, ML	A-6	0-1	0-2	90-98	80-95	70-90	50-80	33-39	13-18
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	SM, SC-SM, SC	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
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-6, A-7-6	0	0	100	100	95-100	90-100	30-50	15-35
	52-60	Sandy loam, loam, clay loam	SC-SM, CL-ML, SM, CL	A-2, A-4, A-6	0	0	90-100	85-100	60-90	30-85	20-40	1-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
199C2:												
Plano-----------	0-8	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	8-41	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-25
	41-53	Clay loam, loam, sandy loam	SC-SM, SC, CL-ML, CL	A-6, A-7, A-4	0	0-1	90-100	85-95	60-90	35-75	20-45	5-25
	53-60	Stratified loamy sand to silt loam	SM, CL, SC, ML	A-4, A-2-4	0	0-5	90-100	70-95	60-90	15-70	0-25	NP-10
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	SC-SM, SM	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	SC, CL	A-7-6, A-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	SM, SC-SM, SC, SP-SM	A-2-4, A-3	0	0	100	100	60-90	5-35	20-30	NP-10
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	Sandy loam, fine sandy loam	SC, SC-SM, SM	A-4, A-2-4	0	0	95-100	85-100	55-85	25-40	10-25	3-10
	32-60	Sand, loamy sand, coarse sand	SP-SM, SP, SM	A-1-b, A-2-4, A-3	0	0	95-100	85-100	5-75	0-20	0-15	NP-2
204B2:												
Ayr-------------	0-8	Sandy loam	SM	A-2	0	0	100	95-100	50-85	15-40	0-26	NP-6
	8-27	Sandy loam, loamy sand, fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	50-85	5-35	0-24	NP-6
	27-39	Loam	CL-ML, CL	A-6	0	0-3	95-100	90-100	70-95	50-90	26-38	11-19
	39-60	Loam	CL-ML, CL	A-4	0	0-3	95-100	90-100	70-90	50-85	20-29	6-12

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
221B2:												
Parr------------	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	98-100	95-100	80-100	65-95	20-30	4-15
	9-28	Clay loam, loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-100	50-90	25-45	10-25
	28-36	Loam	CL	A-4, A-6	0	0	95-100	85-100	75-85	50-70	25-35	8-15
	36-60	Loam	CL, CL-ML, ML	A-4	0	0-3	85-100	80-98	70-85	50-65	10-25	3-15
221C2:												
Parr------------	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	98-100	95-100	80-100	65-95	20-30	4-15
	9-29	Clay loam, loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-100	50-90	25-45	10-25
	29-33	Loam	CL	A-4, A-6	0	0	95-100	85-100	75-85	50-70	25-35	8-15
	33-60	Loam	CL, CL-ML, ML	A-4	0	0-3	85-100	80-98	70-85	50-65	10-25	3-15
233B:												
Birkbeck--------	0-10	Silt loam	CL, ML	A-6	0	0	100	100	97-100	95-100	29-37	11-18
	10-57	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-25
	57-60	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	85-100	70-90	45-70	25-33	8-14
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
243A:												
St. Charles-----	0-9	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	22-35	7-15
	9-51	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	10-20
	51-60	Clay loam, silt loam, sandy loam, loam	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20
243B:												
St. Charles-----	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	22-35	7-15
	8-50	Silty clay loam, silt loam	CL	A-6	0	0	100	100	95-100	90-100	30-40	10-20
	50-60	Clay loam, silt loam, sandy loam, loam	CL, SC	A-4, A-6	0	0	90-100	75-100	75-95	40-80	20-35	8-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
244A:												
Hartsburg-------	0-17	Silty clay loam	CL, ML	A-7-6, A-7-5	0	0	100	100	97-100	95-100	40-46	15-19
	17-34	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	97-100	95-100	37-46	16-24
	34-60	Silt loam	CL	A-6, A-4	0	0	95-100	90-100	90-100	85-100	24-37	7-18
259C2:												
Assumption------	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	25-40	8-20
	8-24	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-50	10-30
	24-60	Clay loam, silty clay loam	CL	A-6, A-7	0	0-5	100	95-100	90-100	70-90	35-50	10-30
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-6, A-7	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
280D:												
Fayette---------	0-13	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	13-38	Silty clay loam, silt loam	CL	A-7, A-6	0	0	100	100	95-100	95-100	35-45	15-25
	38-60	Silt loam	CL	A-6	0	0	100	100	95-100	95-100	30-40	10-20
290A:												
Warsaw----------	0-14	Loam	CL, ML	A-6, A-4	0	0	97-100	95-100	70-95	50-75	23-37	8-18
	14-26	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	26-35	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	35-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2

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	
290B2:												
Warsaw----------	0-8	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	92-100	72-97	23-36	5-15
	8-29	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	29-34	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	34-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2
290C2:												
Warsaw----------	0-9	Loam	CL, ML	A-6, A-4	0	0	97-100	95-100	70-95	50-75	23-37	8-18
	9-22	Loam	CL, ML, SC	A-6, A-4	0	0	90-100	80-100	70-90	45-70	25-33	8-14
	22-25	Gravelly clay loam	SC, SM, CL	A-6, A-7-6	0	0-5	70-85	50-75	40-75	35-65	33-42	12-20
	25-60	Very gravelly sand	SW, GW, SP	A-1-a	0-2	0-5	50-60	30-50	15-30	1-5	17-19	NP-2
329A:												
Will------------	0-11	Loam	ML, CL	A-7-6, A-6, A-7-5	0	0	95-100	90-100	85-98	55-90	39-49	13-18
	11-29	Loam, clay loam, silty clay loam	CL	A-6, A-7-6	0-1	0-5	90-100	80-100	60-98	55-90	34-48	16-23
	29-60	Gravelly loamy sand	SP-SC, GP, GP-GM, SC-SM	A-1-b, A-1	0-2	1-10	40-85	15-70	10-50	1-15	0-23	NP-6
330A:												
Peotone---------	0-13	Silty clay loam	CL, CH, MH	A-7-6, A-7-5	0	0	100	95-100	95-100	90-100	40-65	15-35
	13-50	Silty clay loam, silty clay	CL, CH, MH	A-7-6, A-7-5	0	0-3	98-100	95-100	90-100	85-100	40-70	15-40
	50-60	Silty clay loam, silt loam, silty clay	CL, CH, MH	A-6, A-7-6, A-7-5	0	0-5	95-100	95-100	90-100	75-100	30-60	15-30

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
332A:												
Billett---------	0-7	Fine sandy loam	SC-SM, SC, SM	A-4, A-2-4	0	0	100	100	84-88	27-47	14-22	1-8
	7-23	Sandy loam, fine sandy loam	SC-SM, SC	A-4, A-2-4, A-6	0	0-10	90-100	80-100	60-90	18-50	17-26	4-12
	23-26	Loamy sand, sandy loam, fine sandy loam	SC-SM, SC, SM, SW-SM	A-2-4, A-1-b, A-4	0	0-10	80-100	57-100	43-85	8-40	12-26	NP-12
	26-60	Fine sand, loamy sand	SC-SM, SM, SP-SM, SP	A-1-b, A-2-4	0	0-10	80-100	63-100	50-85	3-20	8-13	NP-2
332B:												
Billett---------	0-8	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	100	100	84-88	27-47	14-22	1-8
	8-27	Sandy loam, fine sandy loam	SC-SM, SC	A-4, A-2-4, A-6	0	0-10	90-100	80-100	60-90	18-50	17-26	4-12
	27-40	Loamy sand, sandy loam, fine sandy loam	SM, SC-SM, SC, SW-SM	A-2-4, A-1-b, A-4	0	0-10	80-100	57-100	43-85	8-40	12-26	NP-12
	40-60	Fine sand, loamy sand	SC-SM, SM, SP, SP-SM	A-1-b, A-2-4	0	0-10	80-100	63-100	50-85	3-20	8-13	NP-2
332C2:												
Billett---------	0-6	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	100	100	84-88	27-47	14-22	1-8
	6-22	Sandy loam, fine sandy loam	SC-SM, SC	A-4, A-2-4, A-6	0	0-10	90-100	80-100	60-90	18-50	17-26	4-12
	22-25	Loamy sand, sandy loam, fine sandy loam	SM, SC-SM, SC, SW-SM	A-2-4, A-1-b, A-4	0	0-10	80-100	57-100	43-85	8-40	12-26	NP-12
	25-60	Fine sand, loamy sand	SP, SC-SM, SM, SP-SM	A-2-4, A-1-b	0	0-10	80-100	63-100	50-85	3-20	8-13	NP-2

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	
355A:												
Binghampton-----	0-8	Sandy loam	SC-SM, SM, ML, CL	A-2-4, A-4	0	0	100	100	60-90	30-55	21-37	4-13
	8-27	Loam, sandy loam, clay loam	SC, CL	A-2-4, A-4, A-6, A-7-6	0	0	100	100	65-95	30-75	26-43	10-21
	27-51	Sand, coarse sand, loamy sand	SP-SM, SM, SC-SM	A-2-4, A-3	0	0	100	100	50-85	5-30	0-25	NP-7
	51-66	Clay loam, loam, silty clay loam	CL	A-6	0	0	94-100	88-100	70-95	50-90	31-46	13-25
356A:												
Elpaso----------	0-21	Silty clay loam	CL, ML	A-7-6, A-6	0	0	100	100	95-100	90-100	35-50	15-30
	21-44	Silty clay loam, silt loam	ML, CL	A-6, A-7-6	0	0	100	100	95-100	90-100	30-50	15-30
	44-69	Clay loam, silt loam, silty clay loam	CL, ML	A-6, A-7-6	0	0	100	85-100	80-100	70-100	25-45	10-25
	69-80	Clay loam, silt loam, silty clay loam	CL	A-6	0	0-5	95-100	85-100	75-100	70-98	20-35	10-20
357B:												
Vanpetten-------	0-12	Loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	80-100	50-90	20-40	5-20
	12-24	Silt loam, sandy loam, loam	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	100	100	60-100	30-90	29-40	12-19
	24-31	Fine sandy loam, sandy loam	SC-SM, SC, SM	A-4	0	0	100	100	63-87	24-50	17-26	4-12
	37-50	Loamy coarse sand, coarse sand, loamy sand	SM, SP-SM, SC	A-2-4, A-3	0	0	100	100	35-85	5-30	0-25	NP-7
	50-66	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0	100	95-100	75-95	50-95	35-50	17-29

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	
361D2:												
Kidder----------	0-7	Loam	CL, CL-ML, ML	A-4	0	0	90-100	85-100	70-100	50-90	20-30	6-15
	7-23	Clay loam, sandy clay loam, loam	SC, CL	A-2, A-4, A-6	0	0-3	90-100	80-100	55-95	25-80	20-40	8-25
	23-60	Sandy loam, gravelly sandy loam, fine sandy loam	SM, GM	A-1, A-2-4, A-4	0	3-10	55-95	50-90	30-80	20-50	0-14	NP
363D2:												
Griswold--------	0-7	Loam	CL-ML, CL	A-6, A-4	0	0	94-100	88-100	75-95	50-80	29-43	9-17
	7-22	Clay loam, sandy clay loam, loam	SC, SC-SM, CL-ML, CL	A-6, A-4	0	0-6	94-100	82-100	70-95	40-80	29-43	13-22
	22-34	Sandy loam, loam, sandy clay loam	SC-SM, CL, CL-ML, SC	A-6, A-2-4, A-4	0-2	0-10	85-95	80-95	60-85	30-55	24-35	9-17
	34-60	Sandy loam, gravelly sandy loam	SM, SC, SC-SM	A-2-4, A-1-b, A-4	0-2	0-10	85-95	60-90	45-75	20-45	16-26	2-10
369A:												
Waupecan--------	0-12	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	92-100	72-97	23-36	5-15
	12-32	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	93-100	77-96	35-47	16-27
	32-45	Stratified loam to sandy loam to loamy sand	SC, SM, SC-SM, ML, CL	A-2, A-1-b, A-4	0	0	93-100	64-100	48-90	16-65	23-32	3-11
	45-60	Sand and gravel, very gravelly sandy loam, sand	SW-SM, SP-SM, SP, GP-GM, GP	A-1-b, A-1-a, A-2-4	0-5	10-35	50-97	10-95	7-73	1-17	0-20	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	
369B2:												
Waupecan--------	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	92-100	72-97	23-36	5-15
	8-29	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	93-100	77-96	35-47	16-27
	29-40	Stratified loam to sandy loam to loamy sand	CL, ML, SC-SM, SM, SC	A-1-b, A-4, A-2	0	0	93-100	64-100	48-90	16-65	23-32	3-11
	40-60	Sand and gravel, very gravelly sandy loam, sand	GP, GP-GM, SP, SP-SM, SW-SM	A-1-a, A-2-4, A-1-b	0-5	10-35	50-97	10-95	7-73	1-17	0-20	NP
379B2:												
Dakota----------	0-8	Sandy loam	SM, CL-ML, SC, SC-SM	A-4, A-2-4	0	0	95-100	80-100	63-88	24-51	19-28	NP-7
	8-20	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0	95-100	80-100	68-95	40-70	29-43	12-23
	20-35	Loamy sand, sandy loam, gravelly loamy coarse sand	SM, SC-SM, SP-SM	A-2-4, A-1-b, A-3, A-4	0-2	0-5	75-100	60-100	35-88	11-38	20-23	NP-4
	35-60	Sand, gravelly coarse sand, loamy sand	SP, SM	A-2-4, A-1-b	0-2	0-5	70-100	60-100	32-78	4-28	15-17	NP
397D:												
Boone-----------	0-2	Loamy fine sand	SM, SP-SM	A-2-4, A-3	0	0	95-100	90-100	65-90	5-30	0-14	NP
	2-9	Loamy fine sand, fine sand	SM, SC-SM, SW-SM	A-3, A-2-4	0	0	95-100	90-100	65-85	5-30	4-14	NP-5
	9-34	Fine sand	SP-SM, SW-SM, SM, SP	A-3, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
	34-60	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	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
397F:												
Boone-----------	0-6	Loamy fine sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	90-100	65-90	5-30	0-14	NP
	6-15	Loamy fine sand, fine sand	SC-SM, SM, SW-SM	A-3, A-2-4	0	0	95-100	90-100	65-85	5-30	4-14	NP-5
	15-23	Fine sand, sand	SP-SM, SW-SM, SM, SP	A-3, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
	23-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
403D:												
Elizabeth-------	0-12	Loam	SC, CL	A-6, A-2-4, A-7-5	0	0-12	80-100	55-100	47-95	30-72	27-45	9-15
	12-60	Unweathered bedrock	---	---	---	---	---	---	---	---	0-14	---
403F:												
Elizabeth-------	0-10	Loam	SC, CL	A-6, A-2-4, A-7-5	0	0-12	80-100	55-100	47-95	30-72	27-45	9-15
	10-60	Unweathered bedrock	---	---	---	---	---	---	---	---	0-14	---
411B:												
Ashdale---------	0-15	Silt loam	CL, CL-ML	A-4, A-6	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	---	---	---	---	---	---	---	---	---	---
411C2:												
Ashdale---------	0-9	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	100	95-100	30-40	8-18
	9-48	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	100	95-100	35-47	17-25
	48-56	Silty clay, clay	CH	A-7-6	0-1	0-5	90-100	80-100	80-100	75-99	35-50	15-30
	56-60	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	Plasticity index
	In				Pct	Pct					Pct	
429C:												
Palsgrove-------	0-8	Silt loam	CL	A-6	0	0	100	100	97-100	93-100	30-37	13-17
	8-11	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	99-100	83-100	27-31	7-11
	11-37	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	98-100	85-100	35-47	17-27
	37-42	Clay, silty clay loam, silty clay	CH, CL	A-7-6, A-7-5	0-2	0-6	93-100	82-94	77-93	67-90	45-95	25-63
	42-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
440A:												
Jasper----------	0-15	Loam, silt loam	CL-ML, ML, CL	A-6, A-7-6, A-4	0	0	100	100	80-100	60-90	27-43	6-15
	15-22	Loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	75-100	55-90	21-39	6-19
	22-31	Clay loam, sandy clay loam, silty clay loam	SC, CL	A-6, A-7-6	0	0	100	95-100	70-95	40-85	29-44	13-25
	31-37	Sandy loam, loamy sand, sandy clay loam	SC-SM, SC	A-4, A-2-4, A-6	0	0	100	85-100	55-75	20-50	22-31	7-13
	37-60	Stratified silt loam to sandy loam	SC, SC-SM, CL-ML, CL	A-2-4, A-4	0	0	100	85-100	75-90	35-85	0-30	5-10
440B:												
Jasper----------	0-13	Loam, silt loam	ML, CL-ML, CL	A-4, A-2-4, A-6	0	0	100	100	80-100	60-90	27-43	6-15
	13-22	Loam, silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	75-100	55-90	21-39	6-19
	22-37	Clay loam, sandy clay loam, silty clay loam	SC, CL	A-7-6, A-6	0	0	100	95-100	70-95	40-85	29-44	13-25
	37-47	Sandy loam, loamy sand, sandy clay loam	SC, SC-SM	A-2-4, A-4, A-6	0	0	100	85-100	55-75	20-50	22-31	7-13
	47-60	Stratified silt loam to sandy loam	SC, CL-ML, SC-SM, CL	A-4, A-2-4	0	0	100	85-100	75-90	35-85	0-30	5-10

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	Plasticity index
	In				Pct	Pct					Pct	
440C2:												
Jasper----------	0-8	Loam, silt loam	ML, CL-ML, CL	A-6, A-7-6, A-4	0	0	100	100	80-100	60-90	27-43	6-15
	8-48	Clay loam, sandy clay loam, silty clay loam	SC, CL	A-7-6, A-6	0	0	100	95-100	70-95	40-85	29-44	13-25
	48-60	Stratified silt loam to sandy loam	CL-ML, SC, SC-SM, CL	A-4, A-2-4	0	0	100	85-100	75-90	35-85	0-30	5-10
488A:												
Hooppole--------	0-17	Loam	CL	A-4, A-6	0	0	100	95-100	80-100	55-85	25-35	7-17
	17-44	Clay loam, loam, silt loam	CL	A-7-6, A-6	0	0	95-100	90-100	80-95	55-85	30-45	10-20
	44-60	Sand, loamy sand	SP-SM, SM	A-3, A-2-4	0	0	95-100	90-100	50-75	5-25	0-25	NP-7
490A:												
Odell-----------	0-15	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	80-100	50-90	20-35	5-15
	15-20	Silty clay loam	CL	A-6, A-7-6	0	0	100	95-100	80-100	95-100	37-46	16-24
	20-29	Clay loam, loam, silty clay loam	SC, CL	A-6, A-7-6	0	0	95-100	90-100	75-100	45-95	35-47	17-25
	29-40	Loam	CL-ML, CL	A-4, A-6	0	0-3	95-100	85-100	70-95	50-75	22-37	7-17
	40-60	Loam	CL, CL-ML, ML	A-4, A-6	0	0-3	95-100	85-100	70-95	50-75	20-31	6-13
501A:												
Morocco---------	0-7	Loamy fine sand	SM	A-2-4	0	0	100	100	50-95	15-35	0-23	NP-3
	7-16	Loamy fine sand	SM	A-2-4	0	0	100	100	50-95	15-35	0-19	NP-3
	16-60	Fine sand, sand	SM, SP-SM	A-2-4, A-3	0	0	100	80-100	50-95	5-25	0-19	NP-3
503B:												
Rockton---------	0-10	Silt loam	ML, CL-ML, CL	A-7-6, A-6, A-7-5	0	0	90-100	80-100	75-100	55-90	31-43	13-18
	10-26	Clay loam, loam, sandy clay loam	CL, SC	A-6, A-7-6	0	0	90-100	80-100	70-100	40-75	35-47	17-25
	26-29	Clay, clay loam, silty clay	CL, CH	A-7-6	0	0-2	90-100	80-100	70-100	60-98	45-69	25-44
	29-60	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	Plasticity index
	In				Pct	Pct					Pct	
503C2:												
Rockton---------	0-9	Silt loam	ML, CL-ML, CL	A-6, A-7-5, A-7-6	0	0	90-100	80-100	75-100	55-90	33-49	13-18
	9-22	Clay loam, loam, sandy clay loam	SC, CL	A-6, A-7-6	0	0	90-100	80-100	70-100	40-75	35-47	17-25
	22-24	Clay, clay loam, silty clay	CH, CL	A-7-6	0	0-2	90-100	80-100	70-100	60-98	45-69	25-44
	24-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509B:												
Whalan----------	0-5	Loam	ML, CL	A-6, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	5-11	Loam	CL, ML	A-4, A-6	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, A-7-6	0	0	95-100	90-100	75-97	55-85	37-46	19-25
	31-32	Clay, clay loam, silty clay	CL, CH	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	32-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509D:												
Whalan----------	0-4	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	29-39	12-17
	4-7	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	7-16	Loam	CL, ML	A-6, A-4	0	0	100	95-100	85-95	60-90	27-36	12-17
	16-23	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
	23-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
509F:												
Whalan----------	0-5	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-95	60-90	29-39	12-17
	5-8	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-95	60-90	27-36	12-17
	8-21	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-95	60-90	27-36	12-17
	21-29	Clay, clay loam, silty clay	CL, CH	A-7-6	0	0-6	80-100	70-95	65-90	55-85	49-69	29-44
	29-60	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	Plasticity index
	In				Pct	Pct					Pct	
512B:												
Danabrook-------	0-13	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	13-33	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	98-100	90-100	85-100	30-45	10-25
	33-50	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
	50-60	Loam, sandy loam	CL, SC	A-4, A-6	0	0-3	90-100	80-98	65-90	40-70	20-40	5-15
512C2:												
Danabrook-------	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	8-27	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	98-100	90-100	85-100	30-45	10-25
	27-40	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-2	95-100	80-98	75-95	50-80	25-45	10-20
	40-65	Loam, sandy loam	CL, SC	A-4, A-6	0	0-3	90-100	80-98	65-90	40-70	20-40	5-15
523A:												
Dunham----------	0-12	Silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	85-95	30-50	15-30
	12-35	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	98-100	90-100	85-95	35-45	15-25
	35-44	Clay loam, silt loam, sandy loam, gravelly loam	CL, SC, ML	A-2-6, A-4, A-6	0	0-5	90-100	70-100	55-90	30-80	25-40	8-20
	44-60	Stratified gravelly sandy loam to extremely gravelly coarse sand	GP-GM, GM, SW-SM, SP-SM	A-1-b, A-1-a	0-3	0-10	35-90	15-80	10-40	2-25	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	Plasticity index
	In				Pct	Pct					Pct	
526A:												
Grundelein------	0-11	Silt loam	ML, CL	A-4, A-6	0	0	100	100	90-100	85-100	30-40	8-15
	11-33	Silty clay loam, silt loam	CL, ML	A-6, A-7-6	0	0	100	98-100	90-100	80-100	35-50	10-25
	33-39	Clay loam, sandy loam, silt loam, gravelly loam	ML, CL, SC	A-2-4, A-4, A-6, A-2-6	0	0-5	90-100	70-100	55-90	30-80	25-40	8-20
	39-60	Stratified gravelly sandy loam to extremely gravelly coarse sand	GM, SM, SP-SM, GP-GM	A-1-a, A-1-b	0-3	0-10	40-90	15-80	10-50	2-25	0-14	NP
527B:												
Kidami----------	0-3	Silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	80-95	70-90	20-35	5-15
	3-10	Silt loam, loam	CL, CL-ML	A-4, A-6	0	0-1	95-100	90-100	80-95	55-90	20-35	5-15
	10-37	Loam, clay loam, silty clay loam	CL	A-6, A-7-6	0	0-2	95-100	85-98	75-95	55-85	25-45	10-25
	37-45	Loam	CL	A-4, A-6	0	0-2	90-100	80-98	70-90	55-70	25-35	8-15
	45-60	Loam, sandy loam	CL, CL-ML, ML, SC	A-4, A-6	0	0-3	90-100	80-95	65-90	40-65	15-30	3-15
527C2:												
Kidami----------	0-9	Loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	80-95	60-85	20-35	5-15
	9-30	Loam, clay loam	CL	A-6, A-7-6	0	0-2	95-100	85-98	75-95	55-75	25-45	10-25
	30-40	Loam	CL	A-4, A-6	0	0-2	90-100	80-98	70-90	55-70	25-35	8-15
	40-60	Loam, sandy loam	CL, CL-ML, ML, SC	A-4, A-6	0	0-3	90-100	80-95	65-90	40-65	15-30	3-15
564C2:												
Waukegan--------	0-8	Silt loam	CL	A-6, A-4	0	0	95-100	95-100	92-100	85-95	25-40	3-10
	8-25	Silt loam, loam	CL, CL-ML	A-4, A-6	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-2-4, A-3	0	0-5	85-100	85-100	50-75	2-30	0-9	NP

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
570A:												
Martinsville----	0-16	Silt loam, loam	ML, CL-ML, CL	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	16-36	Clay loam, loam, sandy clay loam	CL, SC, SC-SM, CL-ML	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	36-54	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	54-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10
570B:												
Martinsville----	0-9	Silt loam, loam	ML, CL, CL-ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	9-18	Silty clay loam, clay loam, sandy clay loam	SC-SM, CL, CL-ML, SC	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-90	20-50	5-35
	18-33	Clay loam, loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	33-42	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	42-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10
570C2:												
Martinsville----	0-10	Silt loam, loam	CL, CL-ML, ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	10-44	Clay loam, loam, sandy clay loam	CL-ML, SC, SC-SM, CL	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	44-52	Sandy loam, loam, sandy clay loam	SC, CL-ML, SC-SM, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	85-100	50-95	25-70	10-40	NP-20
	52-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10

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	
570D:												
Martinsville----	0-7	Silt loam, loam	CL-ML, CL, ML	A-6, A-4	0	0	100	85-100	70-100	50-90	23-40	3-20
	7-39	Clay loam, loam, sandy clay loam	SC-SM, CL-ML, CL, SC	A-6, A-4, A-7, A-2	0	0	95-100	85-100	70-100	30-75	20-50	5-30
	39-60	Stratified sandy loam to loam to silt loam	SC-SM, SC, CL, ML	A-4, A-2-4, A-1-b	0	0	95-100	85-100	40-95	20-75	0-30	NP-10
610A:												
Tallmadge-------	0-8	Sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	95-100	95-100	65-85	30-50	15-25	2-10
	8-17	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-2-6, A-7-6	0	0	95-100	90-100	75-97	35-85	35-42	17-22
	17-33	Clay loam, loam, sandy clay loam	SC, CL	A-2-6, A-7-6	0	0-1	90-100	85-100	75-97	30-85	37-46	19-25
	33-43	Stratified channery clay loam to very channery loamy sand	SC, GC, CL	A-2-6, A-6, A-2-4	0-5	0-50	60-95	40-80	30-75	20-70	10-35	2-20
	43-60	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
618B:												
Senachwine------	0-11	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	95-100	90-100	80-95	60-85	20-30	5-15
	11-32	Clay loam, silty clay loam	CL	A-6, A-7-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	32-40	Loam, fine sandy loam	CL, CL-ML	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	40-60	Loam, fine sandy loam	CL, CL-ML	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
618C2:												
Senachwine------	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	95-100	90-100	80-95	60-85	20-30	5-15
	6-27	Clay loam, silty clay loam	CL	A-6, A-7-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	27-32	Loam, fine sandy loam	CL-ML, CL	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	32-60	Loam, fine sandy loam	CL-ML, CL	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	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	Plasticity index
	In				Pct	Pct					Pct	
618D3:												
Senachwine------	0-7	Clay loam	CL	A-6, A-4	0	0-2	95-100	90-100	80-100	60-80	30-40	10-20
	7-24	Loam, fine sandy loam	CL-ML, CL	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	24-60	Loam, fine sandy loam	CL, CL-ML	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
618F:												
Senachwine------	0-11	Silt loam	ML, CL-ML, CL	A-6, A-4	0	0	95-100	90-100	80-95	60-85	20-30	5-15
	11-32	Clay loam, silty clay loam	CL	A-6, A-7-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	32-40	Loam, fine sandy loam	CL-ML, CL	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	40-60	Loam, fine sandy loam	CL-ML, CL	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
622B:												
Wyanet----------	0-12	Silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	95-100	80-100	50-90	20-30	5-15
	12-26	Silty clay loam	ML, CL	A-6, A-7-6	0	0	95-100	95-100	80-100	50-95	37-46	16-24
	26-38	Clay loam, loam	CL	A-6, A-7-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	38-60	Loam, sandy loam	SC, CL, CL-ML	A-6, A-4	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13
622B2:												
Wyanet----------	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	95-100	80-100	50-90	20-30	5-15
	8-32	Clay loam, loam	CL	A-6, A-7-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	32-60	Loam, sandy loam	CL-ML, SC, CL	A-6, A-4	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13
622C2:												
Wyanet----------	0-8	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	80-100	50-90	20-30	5-15
	8-34	Clay loam, loam	CL	A-7-6, A-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	34-60	Loam, sandy loam	CL-ML, CL, SC	A-4, A-6	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13

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	
647A:												
Lawler----------	0-10	Loam, silt loam	ML, CL	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	GP, SP, SP-SM	A-1-b	0	0-10	50-90	50-85	20-40	3-10	0-14	NP
648A:												
Clyde-----------	0-17	Clay loam	MH, ML	A-7-5	0	0-6	94-100	88-100	77-94	55-80	50-64	19-24
	17-32	Clay loam, loam, silty clay loam	CL, SC	A-7-6, A-6	0	0-6	94-100	83-100	70-97	47-85	37-49	15-23
	32-36	Sandy loam, loam, sandy clay loam	CL, SC-SM, SC	A-6, A-2-4	0	2-6	80-95	70-95	55-80	20-55	20-34	6-15
	36-60	Loam, sandy clay loam	CL, SC	A-6	0-6	2-6	88-95	77-95	66-88	42-70	31-37	13-17
649A:												
Nachusa---------	0-11	Silt loam	ML, CL, CL-ML	A-7-6, A-4, A-6, A-7-5	0	0	100	100	90-100	67-92	33-49	9-18
	11-23	Silt loam, silty clay loam, loam	CL-ML, CL	A-6, A-4, A-7-6	0	0	100	95-100	85-100	60-98	27-45	10-23
	23-46	Clay loam, loam, clay	CL, SC	A-7-6, A-6	0	0	95-100	90-100	75-95	50-82	35-46	17-25
	46-60	Loam, clay loam	SC-SM, CL-ML, CL, SC	A-6, A-4, A-7-6	0-2	0-5	95-100	80-100	70-95	42-80	24-44	7-23
650B:												
Prairieville----	0-12	Silt loam	CL-ML, CL	A-6, A-4	0	0	100	100	85-100	60-90	31-43	9-17
	12-26	Loam, silt loam, silty clay loam	CL	A-7-6, A-4, A-6	0	0	100	95-100	80-100	55-95	27-45	10-23
	26-41	Clay loam	CL	A-7-6, A-6	0	0	95-100	90-100	80-100	55-75	39-47	21-25
	41-60	Clay loam, loam	CL, CL-ML	A-7-6, A-4, A-6	0-2	0-5	95-100	80-100	70-95	50-75	24-44	7-23

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	
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
679A:												
Blackberry------	0-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	11-52	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	25-45	10-25
	52-68	Silt loam, gravelly clay loam, sandy loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0	0-5	90-100	70-100	60-90	30-85	20-40	5-20
	68-80	Stratified loamy sand to gravelly clay loam	SC-SM, SC, CL-ML, CL	A-2, A-4	0	0-5	90-100	65-100	60-90	15-85	15-25	5-10
679B:												
Blackberry------	0-16	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	20-30	5-15
	16-47	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	25-45	10-25
	47-62	Silt loam, gravelly clay loam, sandy loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0	0-5	90-100	70-100	60-90	30-85	20-40	5-20
	62-70	Stratified loamy sand to gravelly clay loam	SC-SM, SC, CL-ML, CL	A-2, A-4	0	0-5	90-100	65-100	60-90	15-85	15-25	5-10
686B:												
Parkway---------	0-16	Silt loam	CL, ML	A-7-6, A-6	0	0	100	100	95-100	85-100	30-50	11-20
	16-49	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	95-100	85-100	30-50	15-30
	49-60	Loam, clay loam, silty clay loam	CL	A-6, A-7-6	0	0-3	90-100	85-100	85-100	60-100	25-45	10-25

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
686C2:												
Parkway---------	0-9	Silt loam	ML, CL	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-6, A-7-6	0	0	100	100	90-100	80-100	35-50	20-30
	40-60	Loam, clay loam, silty 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, SP-SM	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-3, A-4	0	0	85-100	85-100	50-100	2-40	0-14	NP
689F:												
Coloma----------	0-12	Sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-15	0-14	NP
	12-25	Sand, loamy sand	SP-SM, SP, SM	A-3, A-2	0	0	85-100	85-100	50-75	2-30	0-14	NP
	25-60	Stratified sand to loamy sand to sandy loam	SP, SP-SM, SM	A-2-4, A-3, A-4	0	0	85-100	85-100	50-100	2-40	0-14	NP
705A:												
Buckhart--------	0-20	Silt loam, silty clay loam	ML, CL	A-6, A-7	0	0	100	100	100	95-100	35-45	10-20
	20-58	Silty clay loam, silt loam	CL	A-7, A-7-6	0	0	100	100	100	95-100	40-50	15-25
	58-60	Silty clay loam, 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	Plasticity index
	In				Pct	Pct					Pct	
715A:												
Arrowsmith------	0-12	Silt loam	CL, ML, CL-ML	A-4, A-6	0	0	100	100	97-100	95-100	24-37	5-15
	12-30	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	97-100	95-100	37-46	16-24
	30-39	Silt loam	CL, ML	A-6, A-4	0	0	100	100	96-100	94-100	22-37	7-18
	39-60	Silt loam, silt	ML, CL, CL-ML	A-4, A-6	0	0	100	100	96-100	95-100	20-35	3-15
727A:												
Waukee----------	0-14	Silt loam, 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-6, A-4	0	0-5	85-95	80-95	65-85	40-60	20-35	5-15
	34-60	Gravelly coarse sand, loamy coarse sand, coarse sand, loamy sand	SP-SM, SP, SM	A-1-b	0	0-10	60-90	60-85	20-40	3-25	0-14	NP
741D3:												
Oakville--------	0-3	Fine sand	SP-SM, SP	A-2-4, A-3	0	0	100	95-100	70-80	2-12	8-15	NP-1
	3-31	Fine sand, loamy fine sand	SP-SM, SM, SP	A-2-4, A-3	0	0	100	95-100	74-85	2-15	8-15	NP
	31-60	Fine sand, sand	SP-SM, SM, SP	A-3, A-2-4	0	0	100	95-100	73-83	0-13	8-15	NP-2
742B2:												
Dickinson-------	0-9	Sandy loam	SM, SC-SM, SC	A-4, A-2-4, A-6	0	0	100	100	63-76	24-50	17-26	3-11
	9-54	Sandy loam, fine sandy loam	SC, SC-SM, SM	A-4, A-2-4, A-6	0	0	100	100	63-87	24-50	17-26	4-12
	54-60	Loam	SC, CL	A-6	0	2-5	90-95	80-95	70-90	42-67	29-35	13-16
742C2:												
Dickinson-------	0-8	Sandy loam	SC, SM, SC-SM	A-4, A-2-4, A-6	0	0	100	100	63-76	24-50	17-26	3-11
	8-48	Fine sandy loam, sandy loam	SC, SM, SC-SM	A-4, A-2-4, A-6	0	0	100	100	63-87	24-50	17-26	4-12
	48-60	Loam	CL, SC	A-6	0	2-5	90-95	80-95	70-90	42-67	29-35	13-16
756B:												
Wyanet----------	0-11	Fine sandy loam	SC-SM, CL-ML	A-4	0	0	95-100	95-100	85-95	40-65	20-25	4-12
	11-29	Clay loam, loam	CL	A-6, A-7-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	29-60	Loam, sandy loam	CL, CL-ML, SC	A-6, A-4	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13

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	
756C2:												
Wyanet----------	0-6	Fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	95-100	85-95	40-65	20-25	4-12
	6-29	Clay loam, loam	CL	A-7-6, A-6	0	0	90-100	80-100	70-95	50-80	32-44	15-23
	29-60	Loam, sandy loam	SC, CL-ML, CL	A-6, A-4	0	0-3	85-100	80-95	65-88	38-68	20-32	6-13
757B2:												
Senachwine------	0-8	Fine sandy loam	SC-SM, SC, SM	A-4, A-2-4	0	0	100	95-100	60-85	40-50	18-33	2-10
	8-25	Clay loam, silty clay loam	CL	A-6, A-7-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	25-28	Loam, fine sandy loam	CL, CL-ML	A-6, A-4	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	28-60	Loam, fine sandy loam	CL, CL-ML	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
757C2:												
Senachwine------	0-7	Fine sandy loam	SC-SM, SC, SM	A-4, A-2-4	0	0	100	95-100	60-85	40-50	18-33	2-10
	7-20	Clay loam, silty clay loam	CL	A-7-6, A-6	0	0	90-98	85-98	85-95	55-85	35-45	15-20
	20-35	Loam, fine sandy loam	CL-ML, CL	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	30-35	10-15
	35-60	Loam, fine sandy loam	CL, CL-ML	A-4, A-6	0-1	0-3	90-98	85-98	75-95	50-75	25-35	5-15
761D:												
Eleva-----------	0-8	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	90-100	78-100	65-90	20-50	18-33	2-10
	8-32	Fine sandy loam, sandy loam, loam	ML, SC-SM, SC, CL	A-2-4, A-4, A-6	0	0-2	80-100	70-100	58-95	20-60	20-31	6-12
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
761F:												
Eleva-----------	0-8	Fine sandy loam	SC-SM, SC, SM	A-2-4, A-4	0	0	90-100	78-100	65-90	20-50	18-33	2-10
	8-32	Fine sandy loam, sandy loam, loam	CL, SC-SM, SC, ML	A-2-4, A-4, A-6	0	0-2	80-100	70-100	58-95	20-60	20-31	6-12
	32-60	Bedrock	---	---	---	---	---	---	---	---	---	---
777A:												
Adrian----------	0-22	Muck	PT	A-8	---	---	---	---	---	---	---	---
	22-60	Gravelly sand, loamy sand, fine sand, sand	SP, SM	A-1, A-2-4, 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	
781B:												
Friesland-------	0-14	Fine sandy loam	SM, CL-ML, ML, SC-SM	A-2-4, A-4	0	0	100	100	85-95	30-55	23-37	2-10
	14-34	Loam, fine sandy loam, sandy clay loam	SC, CL	A-4, A-6	0	0	100	100	85-98	40-75	27-39	12-21
	34-60	Silt loam, loam, sandy loam	SM, CL-ML, CL, SC	A-4, A-6, A-2-4, A-1	0	0-10	80-100	65-100	55-98	30-80	16-30	2-13
802A:												
Orthents--------	0-6	Loam	CL	A-6	0-1	0-5	95-100	90-100	85-95	60-90	20-40	10-20
	6-60	Loam, silt loam, clay loam	CL	A-6	0-1	0-5	95-100	90-100	85-95	60-90	20-40	10-20
864, 865. Pits												
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	Stratified sandy loam to loam to silt loam to silty clay loam, loam	CL-ML, CL	A-6, A-4, A-7	0	0	80-100	80-100	80-100	60-95	20-45	5-20
1200A:												
Orio------------	0-9	Sandy loam	SM, SC, SC-SM	A-4, A-2-4	0	0	100	100	70-85	25-50	15-30	2-10
	9-21	Sandy loam, loam, loamy sand	SM, ML, SC-SM	A-4, A-2-4	0	0	100	100	75-90	15-60	15-35	2-10
	21-37	Sandy clay loam, sandy loam, clay loam	SC, CL	A-7-6, A-6, A-2-4	0	0	100	100	80-95	35-75	30-45	10-20
	37-60	Sand, loamy sand, loamy fine sand	SP-SM, SM, SC-SM, SC	A-3, A-2-4	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	Plasticity index
	In				Pct	Pct					Pct	
1776A:												
Comfrey---------	0-11	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	90-100	90-100	80-100	65-95	20-35	NP-12
	11-41	Loam, clay loam	CL, MH, ML, SC	A-6, A-4, A-7-6	0	0	100	100	85-100	50-80	27-47	10-25
	41-60	Loam, clay loam	CL, ML, SC	A-6, A-4, A-7-6	0	0	100	100	85-100	50-80	27-47	10-25
3076A:												
Otter-----------	0-43	Silt loam	CL	A-4, A-6, A-7	0	0	100	95-100	90-100	80-100	25-45	7-20
	43-50	Silt loam, silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	80-100	30-45	10-20
	50-60	Silt loam, sandy loam, silty clay loam	CL-ML, CL, SC, SC-SM	A-4, A-6, A-7	0	0	90-100	80-100	55-95	45-85	25-45	5-20
3302A:												
Ambraw----------	0-8	Silty clay loam	CL	A-7-6, A-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	SC, CL	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	SM, ML, SC, CL	A-4, A-6	0	0	100	90-100	80-90	40-80	20-40	NP-17
3451A:												
Lawson----------	0-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	20-35	5-15
	14-33	Silt loam, silty clay loam	CL-ML, CL	A-4	0	0	100	100	90-100	85-100	20-40	5-20
	33-80	Silty clay loam, silt loam	CL	A-6, A-4	0	0	100	100	90-100	60-100	30-40	10-20

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
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	ML, CL-ML, CL	A-4, A-7, A-6	0	0	90-100	85-100	70-100	55-95	22-45	3-20
	36-60	Stratified gravelly sandy loam to silt loam, stratified loamy sand to sandy loam	CL, GM, ML, SM	A-4, A-6, A-2-4	0	0-5	65-100	45-100	30-100	20-80	0-30	NP-12
7682A:												
Medway----------	0-19	Loam	SC, CL	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	CL, ML, SC	A-2-6, A-7-6, A-6	0	0	82-100	50-100	44-94	22-86	29-41	13-23
8067A:												
Harpster--------	0-13	Silty clay loam	CH, CL	A-7-6	0	0	100	95-100	95-100	90-100	45-60	20-35
	13-35	Silty clay loam	CH, CL	A-7-6, A-6	0	0	100	95-100	95-100	85-100	40-60	20-35
	35-56	Silt loam, silty clay loam	CL, MH, ML	A-7-6, A-4, A-6, A-7-5	0	0	100	95-100	95-100	70-100	35-55	10-25
	56-70	Silt loam, silty clay loam, loam	CL, ML, MH	A-7-6, A-4, A-6, A-7-5	0	0	100	95-100	95-100	70-100	35-55	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	
8076A:												
Otter-----------	0-30	Silt loam	CL	A-6, A-4, A-7-6	0	0	100	95-100	90-100	80-100	25-45	7-20
	30-35	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
	35-60	Silt loam, sandy loam, silty clay loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-7-6	0	0	90-100	80-100	55-95	45-85	25-45	5-20
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	ML, CL, SC-SM, SC	A-4, A-2-4	0	0	95-100	85-100	55-90	20-70	0-30	NP-10
	28-60	Sandy loam, loamy fine sand, sand	SC, ML, SP-SM, SM, CL	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-7-6, A-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
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	Sandy loam, loam, gravelly sandy clay loam	CL	A-7-6, A-4, A-6	0	0	85-100	65-100	50-95	35-85	27-39	12-19
	34-60	Stratified loam to sandy loam	SC, CL-ML, CL, SC-SM	A-6, A-4	0	0	85-100	65-100	50-95	35-85	17-35	3-16

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	
8404A:												
Titus-----------	0-13	Silty clay loam	CL, MH, CH	A-7, A-7-5, A-7-6	0	0	100	100	95-100	90-100	49-60	20-30
	13-68	Silty clay loam, silty clay	MH, CL, CH	A-7-6, A-7	0	0	100	100	95-100	90-100	46-57	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
8451A:												
Lawson----------	0-14	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	90-100	85-100	20-40	5-20
	14-33	Silt loam, silty clay loam	CL-ML, CL	A-4	0	0	100	100	90-100	85-100	20-30	5-10
	33-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	60-100	20-45	10-25
8492A:												
Normandy--------	0-13	Loam	CL	A-4, A-6	0	0	100	95-100	80-100	55-85	25-35	7-17
	13-54	Silt loam, loam, clay loam	CL	A-6, A-7-6	0	0	95-100	90-100	85-95	65-85	30-45	10-20
	54-60	Sand, loamy sand	SP-SM, SP	A-7-6, A-3, A-2-4	0	0	94-100	85-100	48-65	2-21	6-19	NP-7
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	SC, CL	A-6, A-7-6, A-4	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-2-4, A-4, A-6	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	SC-SM, SM, SC	A-6, A-2-4, A-4	0	0	93-100	78-100	76-99	16-39	8-26	NP-12

Table 18.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
8776A:												
Comfrey---------	0-24	Loam	ML, SM, CL	A-6, A-4	0	0	100	100	85-100	50-80	27-36	5-15
	24-34	Loam, clay loam	SC, CL, ML	A-6, A-4, A-7-6	0	0	100	100	85-100	50-80	27-47	10-25
	34-50	Loam, clay loam	ML, CL, SC	A-6, A-4, A-7-6	0	0	100	100	85-100	50-80	27-47	10-25
	50-60	Loamy sand, sandy loam, loam, clay loam	SM, CL	A-6, A-4, A-2-4, A-7-6	0	0	100	100	70-90	15-70	0-41	NP-21
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					
45A:														
Denny----------------	0-9	0-7	66-80	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.37	.37	5	6	48
	9-22	0-7	71-85	15-22	1.25-1.45	0.2-0.6	0.18-0.20	0.0-2.9	0.0-0.5	.43	.43			
	22-45	0-7	48-65	35-45	1.20-1.40	0.06-0.2	0.11-0.22	6.0-8.9	0.0-1.0	.37	.37			
	45-60	0-7	58-75	25-35	1.40-1.60	0.2-0.6	0.20-0.22	3.0-5.9	0.0-0.2	.43	.43			
51A:														
Muscatune-----------	0-16	2-7	66-74	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			
60B2:														
La Rose-------------	0-7	15-30	50-65	20-27	1.40-1.60	0.6-2	0.14-0.17	0.0-2.9	1.5-3.5	.32	.37	4	6	48
	7-19	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.28			
	19-60	30-50	28-50	15-20	1.65-1.85	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.43			
60C2:														
La Rose-------------	0-7	15-30	50-65	20-27	1.40-1.60	0.6-2	0.14-0.17	0.0-2.9	1.5-3.5	.32	.37	5	6	48
	7-19	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.28			
	19-60	30-50	28-50	15-20	1.65-1.85	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.43			
67A:														
Harpster------------	0-18	0-15	50-73	27-37	1.05-1.25	0.6-2	0.21-0.24	3.0-5.9	2.0-5.5	.24	.24	5	4L	86
	18-32	0-15	50-73	27-37	1.20-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	32-60	0-30	35-83	10-35	1.25-1.55	0.6-2	0.17-0.22	3.0-5.9	0.0-0.5	.43	.43			
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	48
	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			
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			

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					
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			
87B:														
Dickinson-----------	0-9	52-75	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
	9-17	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			
	33-41	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			
	41-60	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	.05	.05			
88B2:														
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	1	220
	8-30	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			
	30-72	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			
88D2:														
Sparta--------------	0-9	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	1	220
	9-31	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			
	31-60	52-100	0-29	3-16	1.50-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.17	.17			
88E:														
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
	17-32	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			
	32-60	52-100	0-29	3-16	1.50-1.70	6-20	0.04-0.07	0.0-2.9	0.0-0.5	.17	.17			
93E:														
Rodman--------------	0-7	50-75	10-25	5-20	1.10-1.40	2-6	0.09-0.12	0.0-2.9	2.0-4.0	.05	.15	3	4	86
	7-11	25-60	30-50	5-25	1.10-1.50	2-6	0.09-0.12	0.0-2.9	0.0-2.0	.28	.32			
	11-60	85-100	0-15	0-10	1.60-1.70	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
102A:														
La Hogue------------	0-16	25-45	28-65	10-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.24	.24	5	5	56
	16-26	20-60	20-50	18-35	1.50-1.70	0.6-2	0.12-0.20	3.0-5.9	0.5-2.0	.32	.32			
	26-36	40-70	15-30	15-35	1.50-1.70	0.6-2	0.11-0.19	3.0-5.9	0.5-1.0	.32	.32			
	36-61	50-90	10-30	5-25	1.50-1.70	0.6-6	0.09-0.15	0.0-2.9	0.2-0.8	.24	.24			
	61-65	5-40	50-80	5-20	1.35-1.55	0.2-2	0.20-0.24	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					
103A:														
Houghton------------	0-11	---	---	---	0.20-0.35	0.2-6	0.35-0.45	---	70-99	---	---	3	2	134
	11-60	---	---	---	0.15-0.25	0.2-6	0.35-0.45	---	70-99	---	---			
106B:														
Hitt----------------	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
	8-32	20-53	20-43	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	32-46	35-55	18-28	27-37	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.4	.32	.32			
	46-54	2-25	20-43	55-70	1.30-1.55	0.06-0.2	0.08-0.12	3.0-5.9	0.0-0.2	.28	.28			
	54-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
125A:														
Selma---------------	0-23	30-50	35-49	17-27	1.40-1.60	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.24	.24	5	6	48
	23-53	15-50	27-49	18-30	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-2.0	.32	.32			
	53-60	60-90	5-25	1-18	1.60-1.90	2-6	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
145B2:														
Saybrook------------	0-8	2-15	58-79	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.28	.28	5	6	48
	8-28	2-15	55-74	25-30	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	28-31	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.32			
	31-60	30-50	28-50	20-27	1.65-1.85	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.37			
145C2:														
Saybrook------------	0-9	2-15	58-79	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.28	.28	5	6	48
	9-30	2-15	55-74	25-30	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	30-36	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.24	.32			
	36-60	30-50	28-50	20-27	1.65-1.85	0.2-0.6	0.06-0.12	0.0-2.9	0.0-0.5	.37	.37			
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	.24	.24	5	6	48
	14-41	0-15	50-80	20-42	1.20-1.45	0.6-2	0.21-0.24	3.0-5.9	0.0-1.0	.37	.37			
	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	.32	.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	.32	.32			
152A+:														
Drummer-------------	0-16	0-7	66-80	20-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	16-23	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			
	23-38	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			
	38-60	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			
154A:														
Flanagan------------	0-18	2-7	66-78	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
	18-38	2-7	53-63	35-40	1.30-1.50	0.2-0.6	0.17-0.21	6.0-8.9	0.5-1.8	.37	.37			
	38-45	3-15	50-72	25-35	1.30-1.50	0.6-2	0.17-0.21	3.0-5.9	0.1-0.5	.43	.43			
	45-49	15-30	45-65	20-27	1.40-1.60	0.6-2	0.10-0.17	0.0-2.9	0.1-0.5	.37	.37			
	49-60	30-50	28-50	10-27	1.65-1.85	0.2-0.6	0.08-0.12	0.0-2.9	0.1-0.5	.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					
171B:														
Catlin--------------	0-11	0-8	65-82	18-27	1.25-1.45	0.6-2	0.23-0.26	0.0-2.9	2.5-4.0	.28	.28	5	6	48
	11-45	0-8	57-76	24-35	1.25-1.55	0.6-2	0.18-0.20	3.0-5.9	0.0-1.5	.37	.37			
	45-57	20-45	20-53	20-35	1.40-1.70	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	57-70	20-50	28-50	10-27	1.60-1.85	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
171C2:														
Catlin--------------	0-9	2-7	66-78	20-27	1.40-1.60	0.6-2	0.18-0.22	0.0-2.9	1.5-3.5	.32	.32	5	6	48
	9-40	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.28	.28			
	40-50	3-15	58-72	25-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.1-0.5	.37	.37			
	50-55	20-40	25-53	27-35	1.50-1.70	0.6-2	0.12-0.16	3.0-5.9	0.1-0.5	.28	.32			
	55-60	20-40	30-53	27-30	1.65-1.85	0.2-0.6	0.06-0.12	3.0-5.9	0.0-0.5	.37	.43			
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	70-95	1-10	2-12	1.50-1.70	6-20	0.05-0.10	0.0-2.9	0.1-0.5	.05	.05			
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			
199C2:														
Plano---------------	0-8	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	8-41	0-10	55-80	20-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	41-53	15-70	5-70	15-30	1.30-1.55	0.6-6	0.09-0.16	0.0-2.9	0.1-0.5	.32	.32			
	53-60	65-80	5-50	5-15	1.50-1.70	2-6	0.11-0.22	0.0-2.9	0.1-0.5	.28	.28			
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	.24	.24			
	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	.32	.32			
	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	.24	.24			
	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	.05	.05			
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	.15	.15	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			
204B2:														
Ayr-----------------	0-8	55-75	5-40	3-10	1.20-1.40	6-20	0.10-0.12	0.0-2.9	1.0-2.0	.17	.17	5	3	86
	8-27	55-90	5-35	2-10	1.20-1.45	6-20	0.06-0.11	0.0-2.9	0.5-1.0	.24	.24			
	27-39	30-50	28-50	17-27	1.50-1.70	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32			
	39-60	30-50	28-50	10-18	1.50-1.70	0.6-2	0.05-0.13	0.0-2.9	0.0-0.3	.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			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
221B2:														
Parr	0-9	5-35	50-80	12-25	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-3.0	.24	.24	5	5	56
	9-28	10-50	20-65	22-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	28-36	30-50	25-50	20-25	1.55-1.65	0.6-2	0.15-0.19	0.0-2.9	0.0-0.5	.32	.32			
	36-60	35-50	30-50	10-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.2	.37	.37			
221C2:														
Parr	0-9	5-35	50-80	12-25	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-3.0	.24	.24	5	5	56
	9-29	10-50	20-65	22-35	1.40-1.55	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	29-33	30-50	25-50	20-25	1.55-1.65	0.6-2	0.15-0.19	0.0-2.9	0.0-0.5	.32	.32			
	33-60	35-50	30-50	10-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.2	.37	.37			
233B:														
Birkbeck	0-10	2-7	66-78	20-27	1.40-1.60	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.49	.49	5	6	48
	10-57	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			
	57-60	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			
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			
243A:														
St. Charles	0-9	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-51	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	51-60	30-50	33-50	15-30	1.30-1.50	0.6-2	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32			
243B:														
St. Charles	0-8	0-10	63-80	20-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-50	0-10	55-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	50-60	30-50	33-50	15-30	1.30-1.50	0.6-2	0.11-0.16	0.0-2.9	0.0-0.5	.32	.32			
244A:														
Hartsburg	0-17	2-7	58-71	27-35	1.20-1.40	0.6-2	0.19-0.22	3.0-5.9	4.5-6.0	.24	.24	5	6	48
	17-34	2-7	58-71	25-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-2.0	.37	.37			
	34-60	3-15	66-82	15-27	1.45-1.65	0.6-2	0.19-0.26	0.0-2.9	0.1-0.5	.49	.49			
259C2:														
Assumption	0-8	0-7	66-73	20-27	1.25-1.45	0.6-2	0.23-0.25	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	8-24	0-7	58-66	25-35	1.20-1.40	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.37	.37			
	24-60	20-30	25-50	25-45	1.40-1.60	0.06-0.6	0.16-0.20	6.0-8.9	0.0-0.5	.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					
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	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
280D:														
Fayette-------------	0-13	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
	13-38	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			
	38-60	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			
290A:														
Warsaw--------------	0-14	30-45	35-50	15-27	1.30-1.50	0.6-2	0.15-0.21	0.0-2.9	2.5-4.0	.24	.24	4	6	48
	14-26	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	26-35	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	35-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
290B2:														
Warsaw--------------	0-8	3-30	53-70	15-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.28	.28	4	6	48
	8-29	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	29-34	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	34-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
290C2:														
Warsaw--------------	0-9	30-45	35-50	15-27	1.30-1.50	0.6-2	0.15-0.21	0.0-2.9	2.5-4.0	.28	.28	4	6	48
	9-22	30-50	28-50	20-27	1.45-1.65	0.6-2	0.11-0.14	0.0-2.9	0.5-1.5	.28	.32			
	22-25	20-35	30-53	27-35	1.55-1.75	0.6-2	0.13-0.17	3.0-5.9	0.0-0.5	.28	.32			
	25-60	90-97	3-5	0-5	1.35-1.55	20-60	0.03-0.05	0.0-2.9	0.0-0.5	.02	.05			
329A:														
Will----------------	0-11	15-50	25-60	20-27	1.25-1.40	0.6-2	0.15-0.20	0.0-2.9	5.0-6.0	.24	.24	4	6	48
	11-29	15-50	27-62	23-33	1.35-1.55	0.6-2	0.15-0.20	3.0-5.9	0.5-2.0	.32	.32			
	29-60	85-99	0-15	0-10	1.65-1.85	20-99	0.02-0.04	0.0-2.9	0.2-0.5	.02	.05			
330A:														
Peotone-------------	0-13	0-10	50-67	33-40	1.20-1.40	0.2-0.6	0.21-0.23	6.0-8.9	5.0-7.0	.24	.24	5	4	86
	13-50	0-10	45-65	35-45	1.30-1.60	0.2-0.6	0.11-0.20	6.0-8.9	0.5-3.0	.37	.37			
	50-60	0-20	38-75	25-42	1.40-1.65	0.2-0.6	0.10-0.20	6.0-8.9	0.2-0.5	.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					
332A:														
Billett-------------	0-7	55-86	15-30	7-15	1.45-1.65	2-6	0.14-0.16	0.0-2.9	1.0-2.0	.17	.17	5	3	86
	7-23	55-80	10-30	10-18	1.40-1.70	2-6	0.10-0.15	0.0-2.9	0.0-1.0	.24	.24			
	23-26	62-87	5-20	5-18	1.50-1.70	2-6	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
	26-60	83-96	2-10	2-7	1.60-1.70	6-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.05			
332B:														
Billett-------------	0-8	55-86	15-30	7-15	1.45-1.65	2-6	0.14-0.16	0.0-2.9	1.0-2.0	.17	.17	5	3	86
	8-27	55-80	10-30	10-18	1.40-1.70	2-6	0.10-0.15	0.0-2.9	0.0-1.0	.24	.24			
	27-40	62-87	5-20	5-18	1.50-1.70	2-6	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
	40-60	83-96	2-10	2-7	1.60-1.70	6-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.05			
332C2:														
Billett-------------	0-6	55-86	15-30	7-15	1.45-1.65	2-6	0.14-0.16	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	6-22	55-80	10-30	10-18	1.40-1.70	2-6	0.10-0.15	0.0-2.9	0.0-1.0	.24	.24			
	22-25	62-87	5-20	5-18	1.50-1.70	2-6	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
	25-60	83-96	2-10	2-7	1.60-1.70	6-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.05			
355A:														
Binghampton---------	0-8	50-70	15-40	8-20	1.45-1.60	0.6-2	0.13-0.15	0.0-2.9	1.0-3.0	.17	.17	4	3	86
	8-27	30-60	20-50	15-30	1.40-1.60	0.6-2	0.12-0.21	3.0-5.9	0.0-1.0	.32	.32			
	27-51	80-98	1-10	3-12	1.70-1.90	20-100	0.03-0.11	0.0-2.9	0.0-0.5	.10	.10			
	51-66	15-50	25-55	20-35	1.70-1.86	0.2-0.6	0.14-0.19	3.0-5.9	0.0-0.5	.32	.32			
356A:														
Elpaso--------------	0-21	1-10	55-72	27-35	1.15-1.35	0.6-2	0.21-0.23	3.0-5.9	4.0-7.0	.24	.24	5	6	48
	21-44	1-10	50-75	24-40	1.20-1.40	0.6-2	0.22-0.24	3.0-5.9	0.2-2.0	.37	.37			
	44-69	2-30	30-78	20-40	1.35-1.60	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	69-80	2-30	40-83	15-30	1.60-1.85	0.2-0.6	0.05-0.15	3.0-5.9	0.0-0.5	.43	.43			
357B:														
Vanpetten-----------	0-12	25-50	30-60	12-25	1.35-1.55	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.24	.24	4	5	56
	12-24	10-60	20-70	18-27	1.40-1.60	0.6-2	0.12-0.22	3.0-5.9	0.2-1.0	.32	.32			
	24-31	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			
	37-50	80-98	1-12	3-12	1.70-1.90	20-100	0.06-0.11	0.0-2.9	0.2-0.5	.10	.10			
	50-66	15-50	25-50	25-40	1.60-1.80	0.2-0.6	0.14-0.19	3.0-5.9	0.2-0.5	.37	.37			
361D2:														
Kidder--------------	0-7	15-50	28-55	10-25	1.35-1.55	0.6-2	0.16-0.24	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	7-23	20-75	5-55	20-30	1.50-1.65	0.6-2	0.11-0.19	3.0-5.9	0.2-1.0	.32	.32			
	23-60	50-80	0-44	6-15	1.40-1.60	2-6	0.06-0.13	0.0-2.9	0.0-0.5	.20	.24			

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			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
363D2:														
Griswold------------	0-7	25-50	35-50	15-25	1.10-1.30	0.6-2	0.16-0.22	0.0-2.9	2.0-4.0	.28	.28	5	5	56
	7-22	20-55	25-48	20-32	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	0.0-1.0	.32	.32			
	22-34	40-70	20-35	15-25	1.40-1.60	0.6-2	0.12-0.14	0.0-2.9	0.0-0.2	.24	.24			
	34-60	55-75	20-30	5-15	1.45-1.65	2-6	0.06-0.13	0.0-2.9	0.0-0.1	.24	.24			
369A:														
Waupecan------------	0-12	3-30	53-70	15-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.24	.24	4	6	48
	12-32	5-25	50-60	25-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	32-45	40-80	10-35	10-25	1.55-1.75	2-6	0.08-0.18	0.0-2.9	0.2-0.5	.17	.24			
	45-60	85-97	0-13	3-10	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.2-0.5	.02	.05			
369B2:														
Waupecan------------	0-8	3-30	53-70	15-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.24	.24	5	6	48
	8-29	5-25	50-60	25-35	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	29-40	40-80	10-35	10-25	1.55-1.75	2-6	0.08-0.18	0.0-2.9	0.2-0.5	.17	.24			
	40-60	85-97	0-13	3-10	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.2-0.5	.02	.05			
379B2:														
Dakota--------------	0-8	52-75	20-28	5-20	1.45-1.55	0.6-2	0.12-0.18	0.0-2.9	2.0-4.0	.17	.17	4	3	86
	8-20	30-55	25-38	18-32	1.30-1.55	0.6-2	0.15-0.19	0.0-2.9	0.5-2.0	.32	.32			
	20-35	69-86	6-20	4-11	1.55-1.65	2-6	0.02-0.14	0.0-2.9	0.0-0.5	.17	.17			
	35-60	80-98	1-16	1-4	1.55-1.65	6-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.05			
397D:														
Boone---------------	0-2	70-90	0-27	2-6	1.45-1.65	6-20	0.11-0.12	0.0-2.9	0.0-1.0	.02	.02	2	2	134
	2-9	75-100	0-27	0-6	1.55-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	9-34	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			
	34-60	---	---	---	---	0.2-2	---	---	---	---	---			
397F:														
Boone---------------	0-6	70-90	0-27	2-6	1.45-1.65	6-20	0.11-0.12	0.0-2.9	0.0-1.0	.02	.02	2	2	134
	6-15	75-100	0-27	0-6	1.55-1.70	6-20	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	15-23	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			
	23-60	---	---	---	---	0.2-2	---	---	---	---	---			
403D:														
Elizabeth-----------	0-12	30-50	32-45	18-25	1.15-1.20	0.6-2	0.17-0.22	3.0-5.9	2.0-4.0	.20	.24	1	4L	86
	12-60	---	---	---	---	0.06-0.6	0.00-0.00	---	---	---	---			
403F:														
Elizabeth-----------	0-10	30-50	32-45	18-25	1.15-1.20	0.6-2	0.17-0.22	3.0-5.9	2.0-4.0	.20	.24	1	4L	86
	10-60	---	---	---	---	0.06-0.6	0.00-0.00	---	---	---	---			

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			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	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	---	---	---	---	---			
411C2:														
Ashdale-------------	0-9	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	.32	.32	3	6	48
	9-48	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			
	48-56	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			
	56-60	---	---	---	---	0.01-0.2	---	---	---	---	---			
429C:														
Palsgrove-----------	0-8	1-19	60-72	21-27	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	4	6	48
	8-11	1-22	60-75	18-24	1.15-1.35	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49			
	11-37	1-20	55-70	25-35	1.40-1.60	0.6-2	0.18-0.20	3.0-5.9	0.3-1.0	.37	.37			
	37-42	10-20	20-65	35-75	1.20-1.40	0.06-0.2	0.08-0.10	6.0-8.9	0.0-0.3	.32	.32			
	42-60	---	---	---	---	0.06-0.6	---	---	---	---	---			
440A:														
Jasper--------------	0-15	25-45	33-65	10-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.24	.24	5	5	56
	15-22	25-50	30-65	10-27	1.35-1.60	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.32	.32			
	22-31	15-60	20-50	20-35	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.0-0.5	.32	.32			
	31-37	55-80	8-25	12-20	1.40-1.60	0.6-2	0.14-0.16	0.0-2.9	0.0-0.2	.24	.24			
	37-60	10-75	20-70	5-20	1.50-1.70	0.6-2	0.19-0.21	0.0-2.9	0.0-0.2	.24	.24			
440B:														
Jasper--------------	0-13	25-45	33-65	10-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.24	.24	5	5	56
	13-22	25-50	30-65	10-27	1.35-1.60	0.6-2	0.20-0.24	0.0-2.9	0.5-1.0	.32	.32			
	22-37	15-60	20-50	20-35	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.0-0.5	.32	.32			
	37-47	55-80	8-25	12-20	1.40-1.60	0.6-2	0.14-0.16	0.0-2.9	0.0-0.2	.24	.24			
	47-60	10-75	20-70	5-20	1.50-1.70	0.6-2	0.19-0.21	0.0-2.9	0.0-0.2	.24	.24			
440C2:														
Jasper--------------	0-8	25-45	33-65	10-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	3.0-5.0	.28	.28	5	5	56
	8-48	15-60	20-50	20-35	1.40-1.60	0.6-2	0.16-0.18	0.0-2.9	0.0-0.5	.32	.32			
	48-60	10-75	20-70	5-20	1.50-1.70	0.6-2	0.19-0.21	0.0-2.9	0.0-0.2	.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			

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					
490A:														
Odell---------------	0-15	2-7	66-74	18-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.24	.24	4	6	48
	15-20	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	.32	.32			
	20-29	15-40	25-50	25-35	1.50-1.70	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
	29-40	30-50	30-50	12-25	1.55-1.70	0.2-0.6	0.08-0.15	0.0-2.9	0.0-1.0	.28	.32			
	40-60	30-50	30-50	10-20	1.70-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.2	.32	.37			
501A:														
Morocco-------------	0-7	70-90	5-20	1-6	1.40-1.60	6-20	0.10-0.12	0.0-2.9	0.5-2.0	.02	.02	5	2	134
	7-16	70-90	5-20	1-6	1.40-1.60	6-20	0.10-0.12	0.0-2.9	0.0-0.2	.10	.10			
	16-60	85-99	0-15	1-6	1.50-1.70	6-20	0.05-0.07	0.0-2.9	0.0-0.2	.02	.05			
503B:														
Rockton-------------	0-10	17-30	50-60	20-27	1.30-1.40	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.24	.24	4	6	48
	10-26	25-50	25-40	25-35	1.40-1.55	0.6-2	0.17-0.19	3.0-5.9	0.2-0.8	.32	.32			
	26-29	15-25	25-40	35-60	1.35-1.45	0.6-2	0.10-0.14	6.0-8.9	0.0-0.3	.32	.32			
	29-60	---	---	---	---	2-20	---	---	---	---	---			
503C2:														
Rockton-------------	0-9	17-30	50-60	20-27	1.30-1.40	0.6-2	0.20-0.22	0.0-2.9	0.5-2.5	.28	.28	4	6	48
	9-22	25-50	25-40	25-35	1.40-1.55	0.6-2	0.17-0.19	3.0-5.9	0.2-0.8	.32	.32			
	22-24	15-25	25-40	35-60	1.35-1.45	0.6-2	0.10-0.14	6.0-8.9	0.0-0.3	.32	.32			
	24-60	---	---	---	---	2-20	---	---	---	---	---			
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	25-35	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	38-60	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	---	---	---	---	---			
509D:														
Whalan--------------	0-4	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
	4-7	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			
	7-16	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			
	16-23	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	23-60	---	---	---	---	2-20	---	---	---	---	---			
509F:														
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
	5-8	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			
	8-21	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			
	21-29	5-25	30-55	38-60	1.35-1.45	0.06-0.6	0.09-0.19	6.0-8.9	0.0-0.2	.17	.20			
	29-60	---	---	---	---	2-20	---	---	---	---	---			

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			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
512B:														
Danabrook-----------	0-13	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	5	6	48
	13-33	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	33-50	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	50-60	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37			
512C2:														
Danabrook-----------	0-8	0-15	58-82	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	8-27	0-15	50-76	24-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	27-40	25-50	10-50	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-0.5	.32	.32			
	40-65	35-60	20-45	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.2-0.5	.37	.37			
523A:														
Dunham--------------	0-12	5-15	50-68	27-35	1.10-1.30	0.6-2	0.21-0.23	3.0-5.9	4.0-6.0	.24	.24	4	6	48
	12-35	5-20	45-72	23-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.5-2.0	.37	.37			
	35-44	20-70	5-70	10-30	1.35-1.60	0.6-6	0.15-0.20	3.0-5.9	0.1-0.5	.32	.32			
	44-60	75-98	0-20	1-10	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
526A:														
Grundelein----------	0-11	0-15	58-80	18-27	1.15-1.30	0.6-2	0.22-0.24	0.0-2.9	4.0-5.0	.28	.28	4	6	48
	11-33	0-20	45-78	22-35	1.25-1.45	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	33-39	20-70	5-70	10-30	1.35-1.60	0.6-6	0.15-0.20	3.0-5.9	0.1-0.5	.32	.32			
	39-60	75-98	0-20	1-10	1.60-1.80	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
527B:														
Kidami--------------	0-3	10-30	50-80	10-24	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	3-10	10-45	31-80	10-24	1.35-1.50	0.6-2	0.20-0.23	0.0-2.9	0.5-1.0	.37	.37			
	10-37	15-45	21-65	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32			
	37-45	30-45	28-53	17-27	1.45-1.65	0.6-2	0.15-0.19	0.0-2.9	0.0-0.5	.32	.32			
	45-60	35-60	20-50	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
527C2:														
Kidami--------------	0-9	20-45	31-55	10-24	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	9-30	25-45	21-55	20-34	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.2-1.0	.32	.32			
	30-40	30-45	28-53	17-27	1.45-1.65	0.6-2	0.15-0.19	0.0-2.9	0.0-0.5	.32	.32			
	40-60	35-60	20-50	15-20	1.70-1.90	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.5	.37	.37			
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	.37	.37	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	.37	.37			
	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	.10	.10			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
570A:														
Martinsville--------	0-16	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	16-36	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	36-54	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	54-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
570B:														
Martinsville--------	0-9	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	9-18	10-60	15-65	25-39	1.40-1.60	0.6-2	0.15-0.21	3.0-5.9	0.0-1.0	.32	.32			
	18-33	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	33-42	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	42-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
570C2:														
Martinsville--------	0-10	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	10-44	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	44-52	35-75	10-45	10-30	1.40-1.65	0.6-2	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	52-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
570D:														
Martinsville--------	0-7	10-45	35-70	8-20	1.30-1.60	0.6-2	0.18-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	7-39	25-60	15-45	20-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	39-60	15-90	10-70	5-20	1.50-1.70	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.24	.24			
610A:														
Tallmadge-----------	0-8	50-75	7-40	10-20	1.45-1.70	2-6	0.16-0.18	0.0-2.9	3.0-5.0	.17	.17	4	3	86
	8-17	20-65	5-50	15-32	1.40-1.60	0.6-2	0.17-0.22	3.0-5.9	2.0-4.0	.24	.24			
	17-33	20-65	5-50	25-35	1.40-1.60	0.6-2	0.15-0.19	3.0-5.9	0.5-1.5	.32	.32			
	33-43	20-75	1-50	3-30	1.45-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.5	.20	.24			
	43-60	---	---	---	---	2-20	---	---	---	---	---			
618B:														
Senachwine----------	0-11	15-40	30-66	19-25	1.20-1.65	0.6-2	0.17-0.26	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	11-32	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	32-40	20-45	18-65	20-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	40-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.37			
618C2:														
Senachwine----------	0-6	15-40	30-66	19-25	1.20-1.65	0.6-2	0.17-0.26	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	6-27	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	27-32	20-45	18-65	20-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	32-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.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	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
618D3:														
Senachwine----------	0-7	---	---	27-35	1.35-1.50	0.6-2	0.17-0.19	3.0-5.9	0.5-2.0	.24	.24	4	6	48
	7-24	20-45	18-65	20-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	24-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.37			
618F:														
Senachwine----------	0-11	15-40	30-66	19-25	1.20-1.65	0.6-2	0.17-0.26	0.0-2.9	1.0-3.0	.43	.43	4	6	48
	11-32	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	32-40	20-45	18-65	20-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.37	.43			
	40-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.37	.43			
622B:														
Wyanet--------------	0-12	13-38	50-65	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	5	5	56
	12-26	0-15	58-71	27-35	1.35-1.55	0.2-0.6	0.18-0.20	3.0-5.9	0.5-1.5	.37	.37			
	26-38	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	38-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.28	.32			
622B2:														
Wyanet--------------	0-8	13-38	50-65	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	4	5	56
	8-32	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	32-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.32	.37			
622C2:														
Wyanet--------------	0-8	13-38	50-65	12-22	1.30-1.45	0.6-2	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	4	5	56
	8-34	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	34-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.28	.32			
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	20-100	0.02-0.04	0.0-2.9	0.0-0.5	.02	.05			
648A:														
Clyde---------------	0-17	20-45	30-50	28-35	1.35-1.40	0.6-2	0.21-0.23	3.0-5.9	6.0-9.0	.17	.17	5	6	48
	17-32	16-48	30-52	22-32	1.45-1.65	0.6-2	0.18-0.20	3.0-5.9	2.0-3.0	.37	.37			
	32-36	43-75	15-35	10-22	1.60-1.70	2-6	0.11-0.13	0.0-2.9	0.0-1.0	.24	.24			
	36-60	31-52	28-45	20-24	1.65-1.75	0.6-2	0.17-0.19	3.0-5.9	0.0-0.5	.32	.32			
649A:														
Nachusa-------------	0-11	8-35	50-65	15-27	1.15-1.35	0.6-2	0.20-0.24	0.0-2.9	4.0-6.0	.28	.28	5	6	48
	11-23	2-40	45-65	15-33	1.20-1.40	0.6-2	0.17-0.22	3.0-5.9	0.5-1.0	.28	.28			
	23-46	20-45	30-45	25-35	1.35-1.55	0.2-0.6	0.09-0.20	3.0-5.9	0.2-0.5	.37	.37			
	46-60	20-50	30-50	12-32	1.35-1.60	0.2-2	0.14-0.19	3.0-5.9	0.2-0.5	.32	.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					
650B:														
Prairieville--------	0-12	10-30	50-75	15-25	1.15-1.35	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	12-26	15-35	40-55	15-33	1.20-1.40	0.6-2	0.17-0.22	3.0-5.9	0.5-1.0	.32	.32			
	26-41	25-40	30-45	30-35	1.35-1.55	0.2-0.6	0.09-0.20	3.0-5.9	0.2-1.0	.28	.28			
	41-60	25-45	30-43	12-32	1.35-1.60	0.2-2	0.14-0.19	3.0-5.9	0.2-0.5	.28	.28			
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			
679A:														
Blackberry----------	0-11	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	11-52	0-10	55-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	52-68	15-60	5-70	15-35	1.30-1.55	0.6-2	0.11-0.22	3.0-5.9	0.1-0.5	.32	.32			
	68-80	15-80	0-80	5-30	1.40-1.70	0.6-6	0.05-0.19	0.0-2.9	0.0-0.5	.24	.28			
679B:														
Blackberry----------	0-16	0-10	63-82	18-27	1.10-1.30	0.6-2	0.22-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
	16-47	0-10	55-75	25-35	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	47-62	15-60	5-70	15-35	1.30-1.55	0.6-2	0.11-0.22	3.0-5.9	0.1-0.5	.32	.32			
	62-70	15-80	0-80	5-30	1.40-1.70	0.6-6	0.05-0.19	0.0-2.9	0.0-0.5	.24	.28			
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	25-35	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			
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	25-35	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	220
	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	.02	.02			
	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	.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			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
689F:														
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	.02	.02			
	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	.02	.02			
705A:														
Buckhart------------	0-20	0-7	63-80	20-30	1.25-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	5	6	48
	20-58	0-7	58-75	25-35	1.30-1.35	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	58-60	0-7	66-82	18-27	1.35-1.45	0.6-2	0.20-0.22	3.0-5.9	0.0-0.5	.49	.49			
715A:														
Arrowsmith----------	0-12	1-7	66-84	15-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	3.5-5.0	.28	.28	5	6	48
	12-30	1-7	58-72	27-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.5-1.5	.37	.37			
	30-39	1-7	66-87	12-27	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.5	.43	.43			
	39-60	1-7	75-91	8-18	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.5	.55	.55			
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	6-20	0.02-0.06	0.0-2.9	0.0-1.0	.02	.05			
741D3:														
Oakville------------	0-3	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	1	220
	3-31	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			
	31-60	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			
742B2:														
Dickinson-----------	0-9	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
	9-54	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			
	54-60	30-50	30-46	20-24	1.55-1.75	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32			
742C2:														
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
	8-48	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			
	48-60	30-50	30-46	20-24	1.55-1.75	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.32	.32			
756B:														
Wyanet--------------	0-11	52-70	25-45	10-18	1.35-1.50	0.6-2	0.16-0.18	0.0-2.9	2.0-4.0	.15	.15	5	3	86
	11-29	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	29-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.28	.32			
756C2:														
Wyanet--------------	0-6	52-70	25-45	10-18	1.35-1.50	0.6-2	0.16-0.18	0.0-2.9	2.0-4.0	.15	.15	5	3	86
	6-29	28-50	28-45	22-32	1.40-1.55	0.2-0.6	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	29-60	30-60	30-50	10-20	1.50-1.70	0.2-0.6	0.08-0.13	0.0-2.9	0.0-0.5	.28	.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	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
757B2:														
Senachwine----------	0-8	55-75	20-30	5-15	1.35-1.50	2-6	0.10-0.18	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	8-25	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	25-28	20-45	18-65	20-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	28-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.37			
757C2:														
Senachwine----------	0-7	55-75	20-30	5-15	1.35-1.50	2-6	0.10-0.18	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	7-20	15-40	20-58	27-35	1.40-1.70	0.6-2	0.07-0.21	3.0-5.9	0.0-0.5	.37	.37			
	20-35	20-45	18-65	20-27	1.60-1.80	0.2-0.6	0.07-0.17	0.0-2.9	0.0-0.5	.32	.37			
	35-60	20-45	18-65	15-25	1.75-1.95	0.2-0.6	0.01-0.03	0.0-2.9	0.0-0.5	.32	.37			
761D:														
Eleva---------------	0-8	55-75	20-30	5-15	1.40-1.60	2-6	0.10-0.18	0.0-2.9	1.0-3.0	.20	.20	4	3	86
	8-32	45-75	20-37	10-18	1.50-1.60	0.6-6	0.09-0.19	0.0-2.9	0.1-1.0	.24	.24			
	32-60	---	---	---	---	0.2-2	---	---	---	---	---			
761F:														
Eleva---------------	0-8	55-75	20-30	5-15	1.40-1.60	2-6	0.10-0.18	0.0-2.9	1.0-3.0	.20	.20	4	3	86
	8-32	45-75	---	10-18	1.50-1.60	0.6-6	0.09-0.19	0.0-2.9	0.1-1.0	.24	.24			
	32-60	---	---	---	---	0.2-2	---	---	---	---	---			
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			
781B:														
Friesland-----------	0-14	53-75	15-35	5-15	1.40-1.70	0.6-2	0.13-0.18	0.0-2.9	3.0-5.0	.15	.15	5	3	86
	14-34	30-62	20-40	18-30	1.35-1.55	0.6-2	0.12-0.19	0.0-2.9	0.2-1.0	.32	.32			
	34-60	20-55	45-60	5-20	1.35-1.85	0.6-2	0.08-0.22	0.0-2.9	0.0-0.5	.43	.43			
802A:														
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	28-45	25-50	22-30	1.70-1.80	0.2-0.6	0.16-0.20	3.0-5.9	0.2-1.0	.43	.43			
864, 865.														
Pits														
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			

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					
1200A:														
Orio----------------	0-9	52-77	15-30	8-18	1.30-1.50	2-6	0.13-0.15	0.0-2.9	10-16	.20	.20	5	3	86
	9-21	40-80	14-40	6-20	1.30-1.50	2-6	0.09-0.18	0.0-2.9	0.2-0.5	.28	.28			
	21-37	40-72	10-30	18-30	1.40-1.60	0.2-2	0.12-0.19	3.0-5.9	0.0-0.2	.28	.28			
	37-60	85-95	2-10	3-10	1.55-1.75	6-20	0.05-0.13	0.0-2.9	0.0-0.2	.02	.02			
1776A:														
Comfrey-------------	0-11	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	6	48
	11-41	23-52	30-50	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	1.0-3.0	.32	.32			
	41-60	23-52	30-50	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	0.0-0.5	.32	.32			
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	58-82	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			
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	6	48
	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			
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			
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	6	48
	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			
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			
8067A:														
Harpster------------	0-13	0-15	58-65	27-35	1.05-1.25	0.6-2	0.21-0.24	3.0-5.9	5.0-6.0	.28	.28	5	4L	86
	13-35	0-15	58-65	27-35	1.20-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.32	.32			
	35-56	0-15	---	22-35	1.25-1.55	0.6-2	0.17-0.22	3.0-5.9	0.0-0.2	.49	.49			
	56-70	---	---	22-35	1.25-1.55	0.6-2	0.17-0.22	3.0-5.9	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					
8076A:														
Otter---------------	0-30	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
	30-35	0-30	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			
	35-60	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			
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			
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	40-63	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			
8451A:														
Lawson--------------	0-14	0-15	50-80	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	40-80	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	40-80	18-30	1.55-1.65	0.6-2	0.18-0.20	3.0-5.9	1.0-4.0	.49	.49			
8492A:														
Normandy------------	0-13	25-50	30-50	20-27	1.40-1.60	0.6-2	0.20-0.24	3.0-5.9	4.0-8.0	.32	.32	4	4L	86
	13-54	10-40	35-70	21-35	1.35-1.50	0.6-2	0.15-0.19	3.0-5.9	0.5-2.0	.49	.49			
	54-60	80-100	0-8	2-12	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-0.5	.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	6	48
	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	10-75	5-30	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			

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			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
8776A:														
Comfrey-------------	0-24	23-52	30-50	18-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	4.0-8.0	.32	.32	5	6	48
	24-34	23-52	30-50	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	1.0-3.0	.32	.32			
	34-50	23-52	30-50	18-35	1.20-1.40	0.6-2	0.16-0.20	3.0-5.9	0.0-0.5	.32	.32			
	50-60	35-87	10-35	2-30	1.55-1.65	0.6-20	0.07-0.19	0.0-5.9	0.0-0.3	.02	.02			
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	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
45A:				
Denny-----------	0-9	18-24	5.6-7.3	0
	9-22	9.0-15	5.6-6.5	0
	22-45	21-29	5.6-6.5	0
	45-60	15-21	5.6-7.8	0
51A:				
Muscatune-------	0-16	16-32	6.1-7.3	0
	16-22	16-27	5.6-7.3	0
	22-46	17-31	5.6-7.3	0
	46-60	9.0-22	6.6-7.8	0-15
60B2:				
La Rose---------	0-7	10-22	6.1-7.3	0
	7-19	11-22	6.6-7.8	0-5
	19-60	4.0-13	7.4-8.4	15-40
60C2:				
La Rose---------	0-7	10-22	6.1-7.3	0
	7-19	11-22	6.6-7.8	0-5
	19-60	4.0-13	7.4-8.4	15-40
67A:				
Harpster--------	0-18	26-33	7.4-8.4	10-40
	18-32	17-23	7.4-8.4	5-40
	32-60	13-22	7.4-8.4	5-40
68A:				
Sable-----------	0-17	26-33	5.6-7.3	0
	17-23	20-30	5.6-7.3	0
	23-60	15-23	5.6-7.8	0
86B:				
Osco------------	0-14	18-25	5.1-7.3	0
	14-55	15-23	5.1-6.5	0
	55-60	12-18	5.6-7.3	0-15
86C2:				
Osco------------	0-9	18-25	5.1-7.3	0
	9-34	15-23	5.1-6.5	0
	34-60	12-18	5.1-7.3	0-15
87A:				
Dickinson-------	0-8	15-20	5.6-7.3	0
	8-20	7.0-17	5.6-7.3	0
	20-31	9.0-17	5.1-6.5	0
	31-36	0.0-10	5.1-6.5	0
	36-60	0.0-10	5.6-6.5	0
87B:				
Dickinson-------	0-9	10-20	5.6-7.3	0
	9-17	7.0-17	5.6-7.3	0
	17-33	9.0-17	5.1-6.5	0
	33-41	0.0-10	5.1-6.5	0
	41-60	0.0-10	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
87B2:				
Dickinson-------	0-8	15-20	5.6-7.3	0
	8-22	7.0-17	5.1-6.5	0
	22-31	0.0-10	5.1-6.5	0
	31-60	0.0-10	5.6-6.5	0
88B2:				
Sparta----------	0-8	2.0-12	5.1-7.3	0
	8-30	1.0-6.0	5.1-7.3	0
	30-72	1.0-9.0	5.1-6.0	0
88D2:				
Sparta----------	0-9	2.0-12	5.1-7.3	0
	9-31	1.0-6.0	5.1-7.3	0
	31-60	1.0-4.0	5.1-7.8	0
88E:				
Sparta----------	0-17	2.0-12	5.1-7.3	0
	17-32	1.0-6.0	5.1-7.3	0
	32-60	1.0-4.0	5.1-7.8	0
93E:				
Rodman----------	0-7	5.0-16	6.6-7.8	0-15
	7-11	1.0-14	6.6-7.8	0-25
	11-60	1.0-6.0	7.4-8.4	10-45
102A:				
La Hogue--------	0-16	12-24	5.6-7.8	0
	16-26	12-25	5.1-7.3	0
	26-36	12-25	5.1-7.3	0
	36-61	4.0-27	6.1-7.8	0-10
	61-65	8.0-21	6.1-7.8	0-10
103A:				
Houghton--------	0-11	140-200	5.6-7.8	0
	11-60	100-200	5.6-7.8	0
106B:				
Hitt------------	0-8	15-20	5.6-7.3	0
	8-32	16-21	5.1-6.0	0
	32-46	16-21	5.1-6.0	0
	46-54	30-35	5.6-7.3	0
	54-60	---	---	---
125A:				
Selma-----------	0-23	20-28	6.1-7.8	0
	23-53	11-22	6.1-8.4	0-20
	53-60	7.0-20	6.6-8.4	0-20
145B2:				
Saybrook--------	0-8	14-28	5.6-7.3	0
	8-28	17-23	5.1-7.3	0
	28-31	11-22	6.6-7.8	0-5
	31-60	4.0-16	7.4-8.4	15-40
145C2:				
Saybrook--------	0-9	14-28	5.6-7.3	0
	9-30	17-23	5.1-7.3	0
	30-36	11-22	6.6-7.8	0-5
	36-60	4.0-16	7.4-8.4	15-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
152A:				
Drummer----------	0-14	26-53	5.6-7.3	0
	14-41	12-23	5.6-7.8	0
	41-47	13-21	6.1-8.4	0-20
	47-60	9.0-19	6.6-8.4	0-40
152A+:				
Drummer----------	0-16	16-24	5.6-7.3	0
	16-23	26-53	5.6-7.3	0
	23-38	13-21	6.1-8.4	0-20
	38-60	9.0-19	6.6-8.4	0-40
154A:				
Flanagan---------	0-18	16-32	5.6-7.3	0
	18-38	22-35	5.6-7.3	0
	38-45	16-27	5.6-7.3	0
	45-49	6.0-18	6.1-7.8	0-10
	49-60	4.0-16	7.4-8.4	10-40
171B:				
Catlin-----------	0-11	17-24	5.1-7.3	0
	11-45	14-23	5.1-7.3	0
	45-57	12-22	6.1-7.8	0-5
	57-70	4.0-16	7.4-8.4	5-25
171C2:				
Catlin-----------	0-9	14-28	6.1-7.3	0
	9-40	17-31	5.6-6.5	0
	40-50	16-27	6.1-7.3	0
	50-55	11-22	6.6-7.8	0-5
	55-60	10-22	7.4-8.4	15-40
172A:				
Hoopeston--------	0-14	9.0-17	5.1-7.3	0
	14-38	7.0-13	5.1-7.8	0-5
	38-60	1.0-7.0	4.5-8.4	0-20
198A:				
Elburn-----------	0-13	20-30	5.6-7.3	0
	13-52	15-25	5.6-7.3	0
	52-60	9.0-15	6.1-8.4	0-20
199C2:				
Plano------------	0-8	17-26	6.1-7.3	0
	8-41	15-23	5.1-7.3	0
	41-53	9.0-20	5.6-7.8	0
	53-60	6.0-13	5.6-8.4	0-20
200A:				
Orio-------------	0-9	8.0-15	4.5-7.8	0
	9-18	5.0-15	4.5-7.8	0
	18-35	10-20	4.5-7.8	0
	35-41	6.0-12	4.5-7.8	0
	41-60	1.0-5.0	4.5-7.8	0
201A:				
Gilford----------	0-18	6.0-20	5.6-7.3	0
	18-32	4.0-14	5.6-7.3	0
	32-60	1.0-6.0	6.6-8.4	0-30

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
204B2:				
Ayr-------------	0-8	2.0-10	6.6-7.3	0
	8-27	1.0-8.0	6.1-7.3	0
	27-39	6.0-17	6.1-7.8	0
	39-60	4.0-11	7.4-8.4	5-15
221B2:				
Parr------------	0-9	10-19	5.6-7.3	0
	9-28	11-19	5.6-7.3	0
	28-36	10-14	6.6-8.4	0-20
	36-60	5.0-11	7.4-8.4	5-35
221C2:				
Parr------------	0-9	10-19	5.6-7.3	0
	9-29	11-19	5.6-7.3	0
	29-33	10-14	6.6-8.4	0-20
	33-60	5.0-11	7.4-8.4	5-35
233B:				
Birkbeck--------	0-10	13-24	5.6-7.3	0
	10-57	16-29	5.6-7.3	0
	57-60	9.0-19	6.1-7.8	0-5
233C2:				
Birkbeck--------	0-7	13-24	5.6-7.3	0
	7-46	16-29	5.6-7.3	0
	46-57	9.0-19	6.1-7.8	0-5
	57-60	4.0-16	7.4-8.4	15-40
243A:				
St. Charles-----	0-9	14-22	5.1-7.8	0
	9-51	15-22	4.5-7.3	0
	51-60	9.0-19	5.1-7.3	0
243B:				
St. Charles-----	0-8	14-22	5.1-7.8	0
	8-50	15-22	4.5-7.3	0
	50-60	9.0-19	5.1-7.3	0
244A:				
Hartsburg-------	0-17	27-40	6.1-7.8	0-5
	17-34	17-31	6.6-8.4	0-25
	34-60	9.0-23	7.4-8.4	15-40
259C2:				
Assumption------	0-8	18-24	5.6-7.3	0
	8-24	15-23	5.1-7.3	0
	24-60	15-22	5.1-7.3	0
280B:				
Fayette---------	0-9	15-20	5.1-7.3	0
	9-39	15-23	4.5-6.0	0
	39-60	15-20	5.1-7.8	0-15
280C2:				
Fayette---------	0-8	18-25	5.1-7.3	0
	8-64	15-22	4.5-6.0	0
	64-80	15-20	5.1-7.8	0-15

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
280D:				
Fayette---------	0-13	15-20	5.1-7.3	0
	13-38	15-20	4.5-6.0	0
	38-60	15-20	5.1-7.8	0-15
290A:				
Warsaw----------	0-14	14-33	6.1-7.3	0
	14-26	9.0-19	5.6-6.5	0
	26-35	11-24	6.1-7.3	0-5
	35-60	0.0-2.0	7.4-8.4	15-25
290B2:				
Warsaw----------	0-8	17-26	6.1-7.8	0
	8-29	9.0-19	5.6-6.5	0
	29-34	11-24	6.1-7.3	0-5
	34-60	0.0-2.0	7.4-8.4	15-25
290C2:				
Warsaw----------	0-9	14-33	6.1-7.3	0
	9-22	9.0-19	5.6-6.5	0
	22-25	11-24	6.1-7.3	0-5
	25-60	0.0-2.0	7.4-8.4	15-25
329A:				
Will------------	0-11	22-28	5.6-7.3	0
	11-29	14-24	6.1-8.4	0-20
	29-60	0.0-8.0	7.4-8.4	15-35
330A:				
Peotone---------	0-13	30-38	5.6-7.8	0
	13-50	22-33	6.1-7.8	0
	50-60	15-26	6.6-8.4	0-15
332A:				
Billett---------	0-7	5.0-13	5.6-7.8	0
	7-23	6.0-12	5.1-7.3	0
	23-26	5.0-12	5.6-7.3	0
	26-60	1.0-5.0	5.1-7.8	0-20
332B:				
Billett---------	0-8	5.0-13	5.6-7.8	0
	8-27	6.0-12	5.1-7.3	0
	27-40	5.0-12	5.6-7.3	0
	40-60	1.0-5.0	5.1-7.8	0-20
332C2:				
Billett---------	0-6	5.0-13	5.6-7.8	0
	6-22	6.0-12	5.1-7.3	0
	22-25	5.0-12	5.6-7.3	0
	25-60	1.0-5.0	5.1-7.8	0-20
355A:				
Binghampton-----	0-8	7.0-17	5.6-7.3	0
	8-27	9.0-20	4.5-6.0	0
	27-51	2.0-8.0	4.5-6.5	0
	51-66	15-25	4.5-7.3	0
356A:				
Elpaso----------	0-21	26-35	5.6-7.3	0
	21-44	14-25	6.1-7.8	0-5
	44-69	12-25	6.6-7.8	0-15
	69-80	9.0-20	7.4-8.4	5-30

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
357B:				
Vanpetten-------	0-12	11-20	5.6-7.3	0
	12-24	11-18	4.5-6.0	0
	24-31	9.0-17	5.1-6.5	0
	37-50	2.0-8.0	3.6-6.5	0
	50-66	15-25	4.5-7.3	0
361D2:				
Kidder----------	0-7	7.0-17	6.1-7.8	0
	7-23	10-17	5.6-7.8	0-15
	23-60	3.0-9.0	7.4-8.4	10-30
363D2:				
Griswold--------	0-7	13-23	5.6-7.8	0
	7-22	12-20	5.6-7.8	0
	22-34	11-16	5.6-7.8	0-10
	34-60	9.0-12	7.4-8.4	10-40
369A:				
Waupecan--------	0-12	17-26	6.1-7.8	0
	12-32	16-23	5.6-7.3	0
	32-45	6.0-16	5.6-7.3	0
	45-60	2.0-8.0	6.6-8.4	0-20
369B2:				
Waupecan--------	0-8	17-26	6.1-7.8	0
	8-29	16-23	5.6-7.3	0
	29-40	6.0-16	5.6-7.3	0
	40-60	2.0-8.0	6.6-8.4	0-20
379B2:				
Dakota----------	0-8	6.0-25	5.1-7.3	0
	8-20	5.0-30	5.1-7.3	0
	20-35	1.0-10	5.1-7.3	0
	35-60	0.0-4.0	5.1-7.8	0-15
397D:				
Boone-----------	0-2	1.0-4.0	5.1-6.5	0
	2-9	1.0-3.0	4.5-5.5	0
	9-34	1.0-2.0	5.6-7.3	0
	34-60	---	---	---
397F:				
Boone-----------	0-6	1.0-4.0	5.1-6.5	0
	6-15	1.0-3.0	4.5-5.5	0
	15-23	1.0-2.0	5.6-7.3	0
	23-60	---	---	---
403D:				
Elizabeth-------	0-12	10-20	6.1-8.4	0
	12-60	---	---	0
403F:				
Elizabeth-------	0-10	10-20	6.1-8.4	0
	10-60	---	---	0
411B:				
Ashdale---------	0-15	18-26	6.1-7.3	0
	15-43	16-23	5.6-6.0	0
	43-51	16-23	5.6-7.3	0
	51-60	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
411C2:				
Ashdale---------	0-9	18-26	6.1-7.3	0
	9-48	16-23	5.6-6.0	0
	48-56	16-23	5.6-7.3	0
	56-60	---	---	---
429C:				
Palsgrove-------	0-8	15-20	5.6-7.3	0
	8-11	15-20	5.6-7.3	0
	11-37	16-23	5.1-7.3	0
	37-42	21-40	5.6-7.3	0
	42-60	---	---	---
440A:				
Jasper----------	0-15	10-24	5.1-7.3	0
	15-22	10-24	5.1-7.3	0
	22-31	8.0-21	5.1-7.3	0
	31-37	4.0-12	5.6-7.8	0-5
	37-60	2.0-12	6.1-8.4	0-25
440B:				
Jasper----------	0-13	10-24	5.1-7.3	0
	13-22	10-24	5.1-7.3	0
	22-37	8.0-21	5.1-7.3	0
	37-47	4.0-12	5.6-7.8	0-5
	47-60	2.0-12	6.1-8.4	0-25
440C2:				
Jasper----------	0-8	10-24	5.1-7.3	0
	8-48	8.0-21	5.1-7.3	0
	48-60	2.0-12	6.1-8.4	0-25
488A:				
Hooppole--------	0-17	15-32	7.4-8.4	5-15
	17-44	12-29	7.4-8.4	12-18
	44-60	1.0-8.0	7.4-8.4	10-15
490A:				
Odell-----------	0-15	11-25	5.6-7.3	0
	15-20	17-31	5.6-7.3	0
	20-29	10-23	5.6-7.3	0
	29-40	4.0-17	6.6-8.4	0-10
	40-60	4.0-13	7.4-8.4	5-35
501A:				
Morocco---------	0-7	1.0-7.0	5.1-6.5	0
	7-16	1.0-7.0	5.1-6.5	0
	16-60	0.0-3.0	4.5-6.0	0
503B:				
Rockton---------	0-10	17-23	5.1-6.5	0
	10-26	19-27	5.1-6.5	0
	26-29	23-43	5.6-7.3	0
	29-60	---	---	---
503C2:				
Rockton---------	0-9	16-23	5.1-6.5	0
	9-22	19-27	5.1-6.5	0
	22-24	23-43	5.6-7.3	0
	24-60	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
509B:				
Whalan----------	0-5	14-19	5.6-7.3	0
	5-11	13-18	5.6-7.3	0
	11-17	16-22	5.6-7.3	0
	17-31	16-22	5.1-6.5	0
	31-32	22-38	5.6-7.8	0
	32-60	---	---	---
509D:				
Whalan----------	0-4	14-19	5.6-7.3	0
	4-7	13-18	5.6-7.3	0
	7-16	16-22	5.6-7.3	0
	16-23	22-38	5.6-7.8	0
	23-60	---	---	---
509F:				
Whalan----------	0-5	14-19	5.6-7.3	0
	5-8	13-18	5.6-7.3	0
	8-21	16-22	5.6-7.3	0
	21-29	22-38	5.6-7.8	0
	29-60	---	---	---
512B:				
Danabrook-------	0-13	19-26	5.6-7.3	0
	13-33	15-25	5.1-7.3	0
	33-50	12-21	5.6-7.8	0-20
	50-60	9.0-13	7.4-8.4	15-40
512C2:				
Danabrook-------	0-8	17-24	5.6-7.3	0
	8-27	15-25	5.1-7.3	0
	27-40	12-21	5.6-7.8	0-20
	40-65	9.0-13	7.4-8.4	15-40
523A:				
Dunham----------	0-12	25-34	5.6-7.3	0
	12-35	16-26	5.6-7.3	0
	35-44	6.0-19	6.1-7.8	0-20
	44-60	1.0-7.0	7.4-8.4	15-40
526A:				
Grundelein------	0-11	19-30	5.6-7.3	0
	11-33	16-26	5.6-7.3	0
	33-39	6.0-19	6.1-7.8	0-20
	39-60	1.0-7.0	7.4-8.4	15-40
527B:				
Kidami----------	0-3	7.0-18	5.1-7.3	0
	3-10	6.0-14	5.1-7.3	0
	10-37	10-19	5.1-7.3	0
	37-45	8.0-15	6.1-8.4	0-30
	45-60	7.0-11	7.4-8.4	25-40
527C2:				
Kidami----------	0-9	7.0-16	5.1-7.3	0
	9-30	10-19	5.1-7.3	0
	30-40	8.0-15	6.1-8.4	0-30
	40-60	7.0-11	7.4-8.4	25-40

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
564C2:				
Waukegan--------	0-8	13-24	5.6-7.3	0
	8-25	11-18	5.1-7.3	0
	25-60	1.0-6.0	4.6-7.8	0-15
570A:				
Martinsville----	0-16	5.0-16	5.1-7.3	0
	16-36	8.0-17	5.1-7.3	0
	36-54	2.0-12	5.6-7.8	0-10
	54-60	1.0-10	7.4-8.4	10-40
570B:				
Martinsville----	0-9	5.0-16	5.1-7.3	0
	9-18	6.0-17	5.1-7.3	0
	18-33	8.0-17	5.1-7.3	0
	33-42	2.0-12	5.6-7.8	0-10
	42-72	1.0-10	7.4-8.4	10-40
570C2:				
Martinsville----	0-10	5.0-16	5.1-7.3	0
	10-44	8.0-17	5.1-7.3	0
	44-52	2.0-12	5.6-7.8	0-10
	52-60	1.0-10	7.4-8.4	10-40
570D:				
Martinsville----	0-7	5.0-16	5.1-7.3	0
	7-39	8.0-17	5.1-7.3	0
	39-60	1.0-10	7.4-8.4	10-40
610A:				
Tallmadge-------	0-8	12-23	6.1-7.3	0
	8-17	17-27	6.1-7.3	0
	17-33	13-20	6.6-7.8	0
	33-43	5.0-18	6.6-8.4	0-20
	43-60	---	---	---
618B:				
Senachwine------	0-11	7.0-17	5.6-7.3	0
	11-32	9.0-20	5.1-7.3	0
	32-40	4.0-9.0	6.6-7.8	0-20
	40-60	2.0-7.0	7.4-8.4	20-45
618C2:				
Senachwine------	0-6	7.0-17	5.6-7.3	0
	6-27	9.0-20	5.1-7.3	0
	27-32	4.0-9.0	6.6-7.8	0-20
	32-60	2.0-7.0	7.4-8.4	20-45
618D3:				
Senachwine------	0-7	11-25	5.6-7.3	0
	7-24	4.0-9.0	6.6-7.8	0-20
	24-60	2.0-7.0	7.4-8.4	20-45
618F:				
Senachwine------	0-11	7.0-17	5.6-7.3	0
	11-32	9.0-20	5.1-7.3	0
	32-40	4.0-9.0	6.6-7.8	0-20
	40-60	2.0-7.0	7.4-8.4	20-45

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
622B:				
Wyanet----------	0-12	8.0-22	5.6-7.3	0
	12-26	17-31	5.6-7.3	0
	26-38	8.0-21	5.6-7.3	0
	38-60	4.0-13	7.4-8.4	5-35
622B2:				
Wyanet----------	0-8	8.0-22	5.6-7.3	0
	8-32	8.0-21	5.6-7.3	0
	32-60	4.0-13	7.4-8.4	5-35
622C2:				
Wyanet----------	0-8	8.0-22	5.6-7.3	0
	8-34	8.0-21	5.6-7.3	0
	34-60	4.0-13	7.4-8.4	5-35
647A:				
Lawler----------	0-10	20-25	5.6-7.3	0
	10-31	15-20	5.1-6.5	0
	31-60	5.0-10	5.1-7.3	0
648A:				
Clyde-----------	0-17	36-41	6.1-7.3	0
	17-32	30-36	6.1-7.3	0
	32-36	15-20	6.1-7.3	0
	36-60	20-25	6.6-8.4	0-25
649A:				
Nachusa---------	0-11	17-28	5.6-7.3	0
	11-23	10-22	4.5-7.3	0
	23-46	15-22	5.1-7.3	0
	46-60	7.0-18	6.1-8.4	0-30
650B:				
Prairieville----	0-12	15-23	5.6-7.3	0
	12-26	10-22	4.5-6.5	0
	26-41	18-23	5.1-7.3	0
	41-60	7.0-20	6.1-7.3	0
675B:				
Greenbush-------	0-14	20-25	5.1-7.3	0
	14-60	25-30	4.5-7.3	0
	60-80	20-25	5.6-7.3	0
679A:				
Blackberry------	0-11	17-26	6.1-7.3	0
	11-52	15-23	5.1-7.3	0
	52-68	9.0-22	5.6-8.4	0-20
	68-80	3.0-19	5.6-8.4	0-20
679B:				
Blackberry------	0-16	17-26	6.1-7.3	0
	16-47	15-23	5.1-7.3	0
	47-62	9.0-22	5.6-8.4	0-20
	62-70	3.0-19	5.6-8.4	0-20
686B:				
Parkway---------	0-16	17-24	5.1-7.3	0
	16-49	16-23	5.1-7.3	0
	49-60	12-19	6.1-8.4	0-20

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
686C2:				
Parkway---------	0-9	17-24	5.1-7.3	0
	9-40	16-23	5.1-7.3	0
	40-60	12-19	6.1-8.4	0-20
689B:				
Coloma----------	0-10	1.0-12	4.5-7.3	0
	10-27	0.1-9.0	4.5-7.3	0
	27-60	0.4-11	4.5-7.3	0
689D:				
Coloma----------	0-12	1.0-12	4.5-7.3	0
	12-25	0.1-9.0	4.5-7.3	0
	25-60	0.4-11	4.5-7.3	0
689F:				
Coloma----------	0-7	1.0-12	4.5-7.3	0
	7-45	0.1-9.0	4.5-6.5	0
	45-60	0.4-11	4.5-7.3	0
705A:				
Buckhart--------	0-20	18-25	5.6-7.3	0
	20-58	15-23	5.1-7.8	0
	58-60	12-18	5.6-7.8	0-15
715A:				
Arrowsmith------	0-12	16-32	6.1-7.3	0
	12-30	17-31	6.1-7.8	0-10
	30-39	9.0-22	7.4-8.4	5-30
	39-60	5.0-20	7.9-8.4	15-35
727A:				
Waukee----------	0-14	20-25	5.1-7.3	0
	14-34	20-25	5.1-6.0	0
	34-60	5.0-10	5.6-6.5	0
741D3:				
Oakville--------	0-3	1.0-2.0	4.5-7.3	0
	3-31	1.0-2.0	4.5-7.3	0
	31-60	1.0-2.0	5.6-7.3	0
742B2:				
Dickinson-------	0-9	15-20	5.6-7.3	0
	9-54	7.0-17	5.1-6.5	0
	54-60	15-20	5.6-6.5	0
742C2:				
Dickinson-------	0-8	15-20	5.6-7.3	0
	8-48	7.0-17	5.1-6.5	0
	48-60	15-20	5.6-6.5	0
756B:				
Wyanet----------	0-11	8.0-19	5.6-7.3	0
	11-29	8.0-21	5.6-7.3	0
	29-60	4.0-13	7.4-8.4	5-35
756C2:				
Wyanet----------	0-6	8.0-19	5.6-7.3	0
	6-29	8.0-21	5.6-7.3	0
	29-60	4.0-13	7.4-8.4	5-35

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
757B2:				
Senachwine------	0-8	4.0-16	5.6-7.3	0
	8-25	9.0-20	5.1-7.3	0
	25-28	4.0-9.0	6.6-7.8	0-20
	28-60	2.0-7.0	7.4-8.4	20-45
757C2:				
Senachwine------	0-7	4.0-16	5.6-7.3	0
	7-20	9.0-20	5.1-7.3	0
	20-35	4.0-9.0	6.6-7.8	0-20
	35-60	2.0-7.0	7.4-8.4	20-45
761D:				
Eleva-----------	0-8	5.0-20	3.6-7.3	0
	8-32	1.0-7.0	3.6-6.5	0
	32-60	---	---	---
761F:				
Eleva-----------	0-8	5.0-20	3.6-7.3	0
	8-32	1.0-7.0	3.6-6.5	0
	32-60	---	---	---
777A:				
Adrian----------	0-22	125-200	5.1-7.8	0
	22-60	1.0-2.0	5.6-8.4	0-40
781B:				
Friesland-------	0-14	5.0-14	5.6-6.5	0
	14-34	14-24	5.6-6.5	0
	34-60	4.1-16	6.1-8.4	0
802A:				
Orthents--------	0-6	10-25	5.6-7.8	0-10
	6-60	10-20	5.6-7.8	0-20
864, 865.				
Pits				
1082A:				
Millington------	0-19	20-28	7.4-8.4	5-20
	19-35	12-27	7.4-8.4	5-30
	35-60	11-25	7.4-8.4	10-30
1200A:				
Orio------------	0-9	8.0-15	4.5-7.8	0
	9-21	5.0-15	4.5-7.8	0
	21-37	10-20	4.5-7.8	0
	37-60	1.0-5.0	4.5-7.8	0
1776A:				
Comfrey---------	0-11	12-26	6.1-7.8	0
	11-41	16-41	6.6-7.8	0
	41-60	14-36	6.6-7.8	0
3076A:				
Otter-----------	0-43	16-36	6.1-7.8	0
	43-50	12-22	6.1-7.8	0
	50-60	10-21	6.1-8.4	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
3302A:				
Ambraw----------	0-8	20-27	5.6-7.3	0
	8-39	19-29	5.1-7.3	0
	39-50	15-23	5.1-7.3	0
	50-60	11-19	5.6-8.4	0
3451A:				
Lawson----------	0-14	11-28	6.1-7.8	0
	14-33	11-29	6.1-7.8	0
	33-80	11-23	6.1-7.8	0
7073A:				
Ross------------	0-20	12-26	6.1-7.8	0
	20-36	8.0-20	6.1-8.4	0-20
	36-60	2.0-15	6.1-8.4	0-30
7682A:				
Medway----------	0-19	20-35	6.1-7.8	0
	19-27	13-28	6.1-7.8	0
	27-37	21-34	6.1-8.4	0-5
	37-60	2.0-18	6.1-8.4	0-20
8067A:				
Harpster--------	0-13	26-33	7.4-8.4	10-40
	13-35	17-23	7.4-8.4	2-40
	35-56	13-22	7.4-8.4	4-40
	56-70	13-22	7.4-8.4	4-40
8076A:				
Otter-----------	0-30	16-36	6.1-7.8	0
	30-35	12-22	6.1-7.8	0
	35-60	10-21	6.1-8.4	0
8166A:				
Cohoctah--------	0-19	10-20	6.1-7.8	0
	19-28	5.0-20	6.1-8.0	0
	28-60	1.0-10	6.1-8.0	0
8302A:				
Ambraw----------	0-9	15-27	5.6-7.3	0
	9-32	19-29	5.1-7.3	0
	32-38	15-23	5.1-7.3	0
	38-60	11-19	5.6-8.4	0
8321A:				
Du Page---------	0-17	17-26	6.6-8.4	0-15
	17-34	11-18	7.4-8.4	5-40
	34-60	4.0-15	7.9-8.4	5-40
8404A:				
Titus-----------	0-13	25-32	6.1-7.3	0
	13-68	21-29	6.1-7.8	0
	68-80	12-19	6.1-7.8	0-5
8451A:				
Lawson----------	0-14	11-28	6.1-7.8	0
	14-33	11-29	6.1-7.8	0
	33-80	11-23	6.1-7.8	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate equivalent
	In	meq/100 g	pH	Pct
8492A:				
Normandy--------	0-13	15-32	7.4-8.4	5-15
	13-54	12-29	7.4-8.4	12-18
	54-60	1.0-8.0	7.4-8.4	10-15
8499A:				
Fella-----------	0-20	26-33	6.1-7.8	0-10
	20-43	16-22	6.6-7.8	0-20
	43-54	9.0-19	7.4-8.4	10-35
	54-61	5.0-19	7.4-8.4	10-35
	61-80	5.0-19	7.4-8.4	10-35
8776A:				
Comfrey---------	0-24	22-42	6.6-7.8	0
	24-34	16-41	6.6-7.8	0
	34-50	14-36	6.6-7.8	0
	50-60	0.0-15	6.6-8.4	0-2
M-W. Miscellaneous water				
W. Water				

Table 21.--Water 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	Hydro-logic group	Annual ponding			Annual flooding		Water table		
		Surface water depth	Duration	Frequency	Duration	Frequency	Months	Upper limit	Lower limit
		Ft						Ft	Ft
45A:									
Denny	D	0.0-1.0	Brief	Frequent	---	None	Jan-May	0.0	>6.0
51A:									
Muscatune	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
60B2:									
La Rose	B	---	---	None	---	None	Jan-Dec	---	---
60C2:									
La Rose	B	---	---	None	---	None	Jan-Dec	---	---
67A:									
Harpster	B	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0
68A:									
Sable	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0
86B:									
Osco	B	---	---	None	---	None	Feb-Apr	4.0-6.0	>6.0
86C2:									
Osco	B	---	---	None	---	None	Feb-Apr	4.0-6.0	>6.0
87A:									
Dickinson	B	---	---	None	---	None	Jan-Dec	---	---
87B:									
Dickinson	B	---	---	None	---	None	Jan-Dec	---	---
87B2:									
Dickinson	B	---	---	None	---	None	Jan-Dec	---	---
88B2:									
Sparta	A	---	---	None	---	None	Jan-Dec	---	---
88D2:									
Sparta	A	---	---	None	---	None	Jan-Dec	---	---
88E:									
Sparta	A	---	---	None	---	None	Jan-Dec	---	---
93E:									
Rodman	A	---	---	None	---	None	Jan-Dec	---	---
102A:									
La Hogue	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
103A:									
Houghton	A	0.0-1.0	Long	Frequent	---	None	Nov-Jun	0.0-1.0	>6.0
106B:									
Hitt	B	---	---	None	---	None	Jan-Dec	---	---
125A:									
Selma	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
145B2:									
Saybrook	B	---	---	None	---	None	Feb-Apr	2.0-3.5	2.1-3.5
145C2:									
Saybrook	B	---	---	None	---	None	Feb-Apr	2.0-3.5	2.1-3.5
152A:									
Drummer	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0
152A+:									
Drummer	B	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0
154A:									
Flanagan	B	---	---	None	---	None	Jan-May	1.0-2.0	3.7-5.4
171B:									
Catlin	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-5.5
171C2:									
Catlin	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.7-5.4
172A:									
Hoopeston	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
198A:									
Elburn	B	---	---	None	---	None	Jan-May	1.5-3.0	>6.0
199C2:									
Plano	B	---	---	None	---	None	Jan-Dec	---	---
200A:									
Orio	B/D	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0
201A:									
Gilford	B/D	0.0-0.5	Brief	Occasional	---	None	Jan-May	0.0-1.0	>6.0
204B2:									
Ayr	B	---	---	None	---	None	Jan-Dec	---	---
221B2:									
Parr	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-4.0
221C2:									
Parr	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-4.0
233B:									
Birkbeck	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.3-5.8
233C2:									
Birkbeck	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.3-5.8
243A:									
St. Charles	B	---	---	None	---	None	Jan-Dec	---	---
243B:									
St. Charles	B	---	---	None	---	None	Jan-Dec	---	---
244A:									
Hartsburg	B/D	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
259C2:									
Assumption------------	B	---	---	None	---	None	Feb-Apr	2.0-3.5	2.8-4.5
280B:									
Fayette---------------	B	---	---	None	---	None	Jan-Dec	---	---
280C2:									
Fayette---------------	B	---	---	None	---	None	Jan-Dec	---	---
280D:									
Fayette---------------	B	---	---	None	---	None	Jan-Dec	---	---
290A:									
Warsaw----------------	B	---	---	None	---	None	Jan-Dec	---	---
290B2:									
Warsaw----------------	B	---	---	None	---	None	Jan-Dec	---	---
290C2:									
Warsaw----------------	B	---	---	None	---	None	Jan-Dec	---	---
329A:									
Will------------------	B	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0
330A:									
Peotone---------------	C	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0
332A:									
Billett---------------	B	---	---	None	---	None	Jan-Dec	---	---
332B:									
Billett---------------	B	---	---	None	---	None	Jan-Dec	---	---
332C2:									
Billett---------------	B	---	---	None	---	None	Jan-Dec	---	---
355A:									
Binghampton-----------	B	---	---	None	---	None	Jan-May	1.0-2.0	3.7-6.0
356A:									
Elpaso----------------	B	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0
357B:									
Vanpetten-------------	B	---	---	None	---	None	Feb-Apr	3.0-5.0	4.0-6.0
361D2:									
Kidder----------------	B	---	---	None	---	None	Jan-Dec	---	---
363D2:									
Griswold--------------	B	---	---	None	---	None	Jan-Dec	---	---
369A:									
Waupecan--------------	B	---	---	None	---	None	Jan-Dec	---	---
369B2:									
Waupecan--------------	B	---	---	None	---	None	Jan-Dec	---	---
379B2:									
Dakota----------------	B	---	---	None	---	None	Jan-Dec	---	---

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
397D:									
Boone	A	---	---	None	---	None	Jan-Dec	---	---
397F:									
Boone	A	---	---	None	---	None	Jan-Dec	---	---
403D:									
Elizabeth	D	---	---	None	---	None	Jan-Dec	---	---
403F:									
Elizabeth	D	---	---	None	---	None	Jan-Dec	---	---
411B:									
Ashdale	B	---	---	None	---	None	Jan-Dec	---	---
411C2:									
Ashdale	B	---	---	None	---	None	Jan-Dec	---	---
429C:									
Palsgrove	B	---	---	None	---	None	Jan-Dec	---	---
440A:									
Jasper	B	---	---	None	---	None	Jan-Dec	---	---
440B:									
Jasper	B	---	---	None	---	None	Jan-Dec	---	---
440C2:									
Jasper	B	---	---	None	---	None	Jan-Dec	---	---
488A:									
Hooppole	B/D	---	---	None	---	None	Jan-May	0.0-1.0	>6.0
490A:									
Odell	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
501A:									
Morocco	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
503B:									
Rockton	B	---	---	None	---	None	Jan-Dec	---	---
503C2:									
Rockton	B	---	---	None	---	None	Jan-Dec	---	---
509B:									
Whalan	B	---	---	None	---	None	Jan-Dec	---	---
509D:									
Whalan	B	---	---	None	---	None	Jan-Dec	---	---
509F:									
Whalan	B	---	---	None	---	None	Jan-Dec	---	---
512B:									
Danabrook	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-5.0
512C2:									
Danabrook	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-5.0

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
523A:									
Dunham----------------	B	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0
526A:									
Grundelein------------	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
527B:									
Kidami----------------	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-4.5
527C2:									
Kidami----------------	B	---	---	None	---	None	Feb-Apr	2.0-3.5	3.5-4.5
564C2:									
Waukegan--------------	B	---	---	None	---	None	Jan-Dec	---	---
570A:									
Martinsville----------	B	---	---	None	---	None	Jan-Dec	---	---
570B:									
Martinsville----------	B	---	---	None	---	None	Jan-Dec	---	---
570C2:									
Martinsville----------	B	---	---	None	---	None	Jan-Dec	---	---
570D:									
Martinsville----------	B	---	---	None	---	None	Jan-Dec	---	---
610A:									
Tallmadge-------------	B	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	3.3-5.0
618B:									
Senachwine------------	B	---	---	None	---	None	Jan-Dec	---	---
618C2:									
Senachwine------------	B	---	---	None	---	None	Jan-Dec	---	---
618D3:									
Senachwine------------	B	---	---	None	---	None	Jan-Dec	---	---
618F:									
Senachwine------------	B	---	---	None	---	None	Jan-Dec	---	---
622B:									
Wyanet----------------	B	---	---	None	---	None	Jan-Dec	---	---
622B2:									
Wyanet----------------	B	---	---	None	---	None	Jan-Dec	---	---
622C2:									
Wyanet----------------	B	---	---	None	---	None	Jan-Dec	---	---
647A:									
Lawler----------------	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
648A:									
Clyde-----------------	B/D	0.0-0.5	Brief	Frequent	---	None	Jan-May	0.0-1.0	>6.0
649A:									
Nachusa---------------	B	---	---	None	---	None	Jan-May	1.0-2.0	2.5-2.8

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
650B:									
Prairieville----------	B	---	---	None	---	None	Jan-May	2.0-3.3	>6.0
675B:									
Greenbush-------------	B	---	---	None	---	None	Feb-Apr	4.0-6.0	>6.0
679A:									
Blackberry------------	B	---	---	None	---	None	Feb-Apr	2.0-3.5	>6.0
679B:									
Blackberry------------	B	---	---	None	---	None	Feb-Apr	2.0-3.5	>6.0
686B:									
Parkway---------------	B	---	---	None	---	None	Feb-Apr	4.0-6.0	>6.0
686C2:									
Parkway---------------	B	---	---	None	---	None	Feb-Apr	4.0-6.0	>6.0
689B:									
Coloma----------------	A	---	---	None	---	None	Jan-Dec	---	---
689D:									
Coloma----------------	A	---	---	None	---	None	Jan-Dec	---	---
689F:									
Coloma----------------	A	---	---	None	---	None	Jan-Dec	---	---
705A:									
Buckhart--------------	B	---	---	None	---	None	Feb-Apr	2.0-3.5	>6.0
715A:									
Arrowsmith------------	B	---	---	None	---	None	Jan-May	1.0-2.0	>6.0
727A:									
Waukee----------------	B	---	---	None	---	None	Jan-Dec	---	---
741D3:									
Oakville--------------	A	---	---	None	---	None	Jan-Dec	---	---
742B2:									
Dickinson-------------	B	---	---	None	---	None	Jan-Dec	---	---
742C2:									
Dickinson-------------	B	---	---	None	---	None	Jan-Dec	---	---
756B:									
Wyanet----------------	B	---	---	None	---	None	Jan-Dec	---	---
756C2:									
Wyanet----------------	B	---	---	None	---	None	Jan-Dec	---	---
757B2:									
Senachwine------------	B	---	---	None	---	None	Jan-Dec	---	---
757C2:									
Senachwine------------	B	---	---	None	---	None	Jan-Dec	---	---
761D:									
Eleva-----------------	B	---	---	None	---	None	Jan-Dec	---	---

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
761F:									
Eleva	B	---	---	None	---	None	Jan-Dec	---	---
777A:									
Adrian	A/D	0.0-1.0	Brief	Occasional	---	None	Nov-Jun	0.0-1.0	>6.0
781B:									
Friesland	B	---	---	None	---	None	Jan-Dec	---	---
802A:									
Orthents	B	---	---	None	---	None	Jan-Dec	---	---
864, 865.									
Pits									
1082A:									
Millington	B/D	0.0-0.5	Long	Frequent	Brief	Frequent	Nov-Jun	0.0-1.0	>6.0
1200A:									
Orio	B/D	0.0-0.5	Long	Frequent	---	None	Jan-Jun	0.0-1.0	>6.0
1776A:									
Comfrey	D	0.0-1.0	Long	Frequent	Brief	Frequent	Jan-Jun	0.0-1.0	>6.0
3076A:									
Otter	B/D	0.0-0.5	Brief	Frequent	Brief	Frequent	Jan-May	0.0-1.0	>6.0
3302A:									
Ambraw	B/D	0.0-0.5	Very brief	Occasional	Brief	Frequent	Jan-May	0.0-1.0	>6.0
3451A:									
Lawson	B	---	---	None	Brief	Frequent	Jan-May	1.0-2.0	>6.0
7073A:									
Ross	B	---	---	None	---	Rare	Feb-Apr	4.0-6.0	>6.0
7682A:									
Medway	B	---	---	None	---	Rare	Feb-Apr	1.5-3.0	>6.0
8067A:									
Harpster	B/D	0.0-0.5	Brief	Frequent	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8076A:									
Otter	B/D	0.0-0.5	Brief	Frequent	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8166A:									
Cohoctah	B/D	0.0-0.5	Brief	Occasional	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8302A:									
Ambraw	B/D	0.0-0.5	Brief	Occasional	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8321A:									
Du Page	B	---	---	None	Brief	Occasional	Feb-Apr	4.0-6.0	>6.0
8404A:									
Titus	B/D	0.0-0.5	Brief	Frequent	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8451A:									
Lawson	C	---	---	None	Brief	Occasional	Jan-May	1.0-2.0	>6.0

Table 21.---Water Features--Continued

Map symbol and soil name	Hydro-logic group	Annual ponding: Surface water depth	Annual ponding: Duration	Annual ponding: Frequency	Annual flooding: Duration	Annual flooding: Frequency	Water table: Months	Water table: Upper limit	Water table: Lower limit
		Ft						Ft	Ft
8492A:									
Normandy--------------	B/D	---	---	None	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8499A:									
Fella-----------------	B/D	0.0-0.5	Brief	Occasional	Brief	Occasional	Jan-May	0.0-1.0	>6.0
8776A:									
Comfrey---------------	B/D	---	---	None	Brief	Occasional	Jan-May	0.0-1.0	>6.0
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			Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
45A:								
Denny------------------	Abrupt textural change	10-24	Noncemented	---	---	High	High	Moderate
51A:								
Muscatune--------------	---	---	---	---	---	High	High	Moderate
60B2:								
La Rose----------------	---	---	---	---	---	Moderate	Moderate	Low
60C2:								
La Rose----------------	---	---	---	---	---	Moderate	Moderate	Low
67A:								
Harpster---------------	---	---	---	---	---	High	High	Low
68A:								
Sable------------------	---	---	---	---	---	High	High	Low
86B:								
Osco-------------------	---	---	---	---	---	High	Moderate	Moderate
86C2:								
Osco-------------------	---	---	---	---	---	High	Moderate	Moderate
87A:								
Dickinson--------------	---	---	---	---	---	Moderate	Low	Moderate
87B:								
Dickinson--------------	---	---	---	---	---	Moderate	Low	Moderate
87B2:								
Dickinson--------------	---	---	---	---	---	Moderate	Low	Moderate
88B2:								
Sparta-----------------	---	---	---	---	---	Low	Low	Moderate
88D2:								
Sparta-----------------	---	---	---	---	---	Low	Low	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	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
88E:								
Sparta	---	---	---	---	---	Low	Low	Moderate
93E:								
Rodman	---	---	---	---	---	Low	Low	Low
102A:								
La Hogue	---	---	---	---	---	High	High	Moderate
103A:								
Houghton	---	---	---	6-18	55-60	High	High	Moderate
106B:								
Hitt	Bedrock (lithic)	40-60	---	---	---	Moderate	Moderate	Moderate
125A:								
Selma	---	---	---	---	---	High	High	Low
145B2:								
Saybrook	---	---	---	---	---	High	High	Moderate
145C2:								
Saybrook	---	---	---	---	---	High	High	Low
152A:								
Drummer	---	---	---	---	---	High	High	Low
152A+:								
Drummer	---	---	---	---	---	High	High	Moderate
154A:								
Flanagan	---	---	---	---	---	High	High	Moderate
171B:								
Catlin	---	---	---	---	---	High	High	Moderate
171C2:								
Catlin	---	---	---	---	---	High	High	Moderate
172A:								
Hoopeston	---	---	---	---	---	High	Moderate	Moderate
198A:								
Elburn	---	---	---	---	---	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	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
199C2:								
Plano	---	---	---	---	---	High	Moderate	Low
200A:								
Orio	---	---	---	---	---	High	High	Low
201A:								
Gilford	---	---	---	---	---	High	High	Moderate
204B2:								
Ayr	---	---	---	---	---	Moderate	Moderate	High
221B2:								
Parr	---	---	---	---	---	Moderate	High	Moderate
221C2:								
Parr	---	---	---	---	---	Moderate	High	Moderate
233B:								
Birkbeck	---	---	---	---	---	High	High	Moderate
233C2:								
Birkbeck	---	---	---	---	---	High	High	Moderate
243A:								
St. Charles	---	---	---	---	---	High	Moderate	Moderate
243B:								
St. Charles	---	---	---	---	---	High	Moderate	Moderate
244A:								
Hartsburg	---	---	---	---	---	High	High	Low
259C2:								
Assumption	---	---	---	---	---	High	High	Moderate
280B:								
Fayette	---	---	---	---	---	High	Moderate	Moderate
280C2:								
Fayette	---	---	---	---	---	High	Moderate	Moderate
280D:								
Fayette	---	---	---	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In		In	In			
290A:								
Warsaw-----------------	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Moderate	Moderate
290B2:								
Warsaw-----------------	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Moderate
290C2:								
Warsaw-----------------	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Moderate
329A:								
Will-------------------	Strongly contrasting textural stratification	24-40	Noncemented	---	---	High	High	Moderate
330A:								
Peotone----------------	---	---	---	---	---	High	High	Moderate
332A:								
Billett----------------	---	---	---	---	---	Moderate	Low	Moderate
332B:								
Billett----------------	---	---	---	---	---	Moderate	Low	Moderate
332C2:								
Billett----------------	---	---	---	---	---	Moderate	Low	Moderate
355A:								
Binghampton------------	Strongly contrasting textural stratification	24-40	Noncemented	---	---	High	Moderate	Moderate
356A:								
Elpaso-----------------	---	---	---	---	---	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	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
357B:								
Vanpetten	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Moderate	Moderate
361D2:								
Kidder	---	---	---	---	---	Moderate	Moderate	Moderate
363D2:								
Griswold	---	---	---	---	---	Moderate	Low	Low
369A:								
Waupecan	---	---	---	---	---	High	Moderate	Moderate
369B2:								
Waupecan	---	---	---	---	---	High	Moderate	Moderate
379B2:								
Dakota	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Moderate
397D:								
Boone	Bedrock (paralithic)	20-40	Weakly cemented	---	---	Low	Low	High
397F:								
Boone	Bedrock (paralithic)	20-40	Weakly cemented	---	---	Low	Low	High
403D:								
Elizabeth	Bedrock (lithic)	4-20	Very strongly cemented	---	---	Moderate	Low	Low
403F:								
Elizabeth	Bedrock (lithic)	4-20	Very strongly cemented	---	---	Moderate	Low	Low
411B:								
Ashdale	Bedrock (lithic)	40-60	---	---	---	High	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In		In	In			
411C2:								
Ashdale	Bedrock (lithic)	40-60	---	---	---	High	Moderate	Moderate
429C:								
Palsgrove	Bedrock (lithic)	40-60	Very strongly cemented	---	---	High	High	Moderate
440A:								
Jasper	---	---	---	---	---	Moderate	Moderate	High
440B:								
Jasper	---	---	---	---	---	Moderate	Moderate	High
440C2:								
Jasper	---	---	---	---	---	Moderate	Moderate	High
488A:								
Hooppole	---	---	---	---	---	High	High	Low
490A:								
Odell	---	---	---	---	---	High	High	Moderate
501A:								
Morocco	---	---	---	---	---	Moderate	Low	High
503B:								
Rockton	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Low	Low
503C2:								
Rockton	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Low	Low
509B:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
509D:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	Moderate	Low
509F:								
Whalan	Bedrock (lithic)	20-40	Very strongly cemented	---	---	Moderate	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	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
512B:								
Danabrook	---	---	---	---	---	High	High	Moderate
512C2:								
Danabrook	---	---	---	---	---	High	High	Moderate
523A:								
Dunham	---	---	---	---	---	High	High	Moderate
526A:								
Grundelein	---	---	---	---	---	High	High	Moderate
527B:								
Kidami	---	---	---	---	---	Moderate	High	Moderate
527C2:								
Kidami	---	---	---	---	---	Moderate	High	Moderate
564C2:								
Waukegan	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Low	Low	Low
570A:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
570B:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
570C2:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
570D:								
Martinsville	---	---	---	---	---	Moderate	Moderate	Moderate
610A:								
Tallmadge	Bedrock (lithic)	40-60	Strongly cemented	---	---	High	High	Low
618B:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
618C2:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In		In	In			
618D3:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
618F:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
622B:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
622B2:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
622C2:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
647A:								
Lawler	Strongly contrasting textural stratification	24-40	Noncemented	---	---	High	High	Moderate
648A:								
Clyde	---	---	---	---	---	High	High	Low
649A:								
Nachusa	---	---	---	---	---	High	High	Moderate
650B:								
Prairieville	---	---	---	---	---	Moderate	High	Moderate
675B:								
Greenbush	---	---	---	---	---	High	Moderate	Low
679A:								
Blackberry	---	---	---	---	---	High	High	Moderate
679B:								
Blackberry	---	---	---	---	---	High	High	Moderate
686B:								
Parkway	---	---	---	---	---	High	Moderate	Moderate
686C2:								
Parkway	---	---	---	---	---	High	Moderate	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	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
689B:								
Coloma	---	---	---	---	---	Low	Low	Moderate
689D:								
Coloma	---	---	---	---	---	Low	Low	Moderate
689F:								
Coloma	---	---	---	---	---	Low	Low	Moderate
705A:								
Buckhart	---	---	---	---	---	High	High	Moderate
715A:								
Arrowsmith	---	---	---	---	---	High	High	Low
727A:								
Waukee	Strongly contrasting textural stratification	24-40	Noncemented	---	---	Moderate	Low	Moderate
741D3:								
Oakville	---	---	---	---	---	Low	Low	Moderate
742B2:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
742C2:								
Dickinson	---	---	---	---	---	Moderate	Low	Moderate
756B:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
756C2:								
Wyanet	---	---	---	---	---	Moderate	High	Moderate
757B2:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
757C2:								
Senachwine	---	---	---	---	---	Moderate	Moderate	Moderate
761D:								
Eleva	Bedrock (lithic)	20-40	Strongly cemented	---	---	Moderate	Low	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	Hardness	Initial	Total		Uncoated steel	Concrete
		In		In	In			
761F:								
Eleva------------------	Bedrock (lithic)	20-40	Strongly cemented	---	---	Moderate	Low	Moderate
777A:								
Adrian-----------------	---	---	---	6-18	29-33	High	High	Moderate
781B:								
Friesland--------------	---	---	---	---	---	Moderate	Moderate	Moderate
802A:								
Orthents---------------	---	---	---	---	---	Moderate	Moderate	Moderate
864, 865.								
Pits								
1082A:								
Millington-------------	---	---	---	---	---	High	High	Low
1200A:								
Orio-------------------	---	---	---	---	---	High	High	Moderate
1776A:								
Comfrey----------------	---	---	---	---	---	High	High	Low
3076A:								
Otter------------------	---	---	---	---	---	High	High	Low
3302A:								
Ambraw-----------------	---	---	---	---	---	High	High	Moderate
3451A:								
Lawson-----------------	---	---	---	---	---	High	High	Low
7073A:								
Ross-------------------	---	---	---	---	---	Moderate	Low	Low
7682A:								
Medway-----------------	---	---	---	---	---	High	High	Low
8067A:								
Harpster---------------	---	---	---	---	---	High	High	Low
8076A:								
Otter------------------	---	---	---	---	---	High	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In		In	In			
8166A:								
Cohoctah	---	---	---	---	---	High	High	Low
8302A:								
Ambraw	---	---	---	---	---	High	High	Moderate
8321A:								
Du Page	---	---	---	---	---	Moderate	Low	Low
8404A:								
Titus	---	---	---	---	---	High	High	Low
8451A:								
Lawson	---	---	---	---	---	High	High	Low
8492A:								
Normandy	---	---	---	---	---	High	High	Low
8499A:								
Fella	---	---	---	---	---	High	High	Low
8776A:								
Comfrey	---	---	---	---	---	High	High	Low
M-W.								
Miscellaneous water								
W.								
Water								