United States Department of Agriculture

NRCS

Natural Resources Conservation Service

In cooperation with the Illinois Agricultural Experiment Station

Soil Survey of Pike County, Illinois

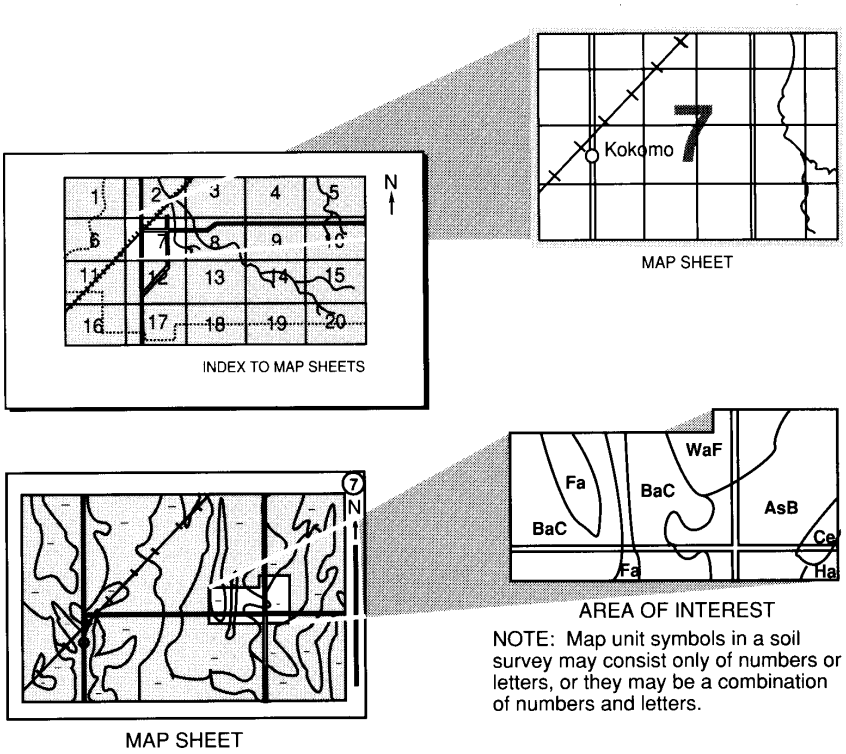
How To Use This Soil Survey

The **Detailed Soil Maps** in this survey 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.



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. The survey was partially funded by the Illinois Department of Agriculture and the Pike County Board. It is part of the technical assistance furnished to the Pike County Soil and Water Conservation District.

Major fieldwork for this soil survey was completed in 2002. Soil names and descriptions were approved in 2002. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. 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 Caption

The flood plain along the Illinois River. About 25 percent of Pike County is drained by the Illinois River and its tributaries.

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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Issued 2006

Numerical Index to Map Units

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, ranchers, 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.

William J. Gradle
State Conservationist
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Soil Survey of
Pike County, Illinois

By Robert A. Tegeler, Natural Resources Conservation Service

Original fieldwork by Michael E. Lilly, Daniel G. Mueller, and Gary R. Struben, Natural Resources Conservation Service, and Charles M. Harwood, Jane L. Johnson, and Martha E. Sheppard, Pike County

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Major assistance provided by Dale Baumgartner, Natural Resources Conservation Service

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

Pike County is in west-central Illinois (fig. 1). It has an area of 543,955 acres, or about 850 square miles. It is bordered on the north by Adams and Brown Counties, on the south by Calhoun County, on the west by the Mississippi River, and on the east by the Illinois River. In the year 2000, the population of the county was 17,384 and Pittsfield, the county seat, had a population of 4,211 (U.S. Census Bureau, 2002).

This soil survey updates the survey of Pike County published as Illinois Agricultural Experiment Station Soil Report 155 in 1999 (Struben and Lilly, 1999). It provides more information and has orthophotographic maps at a slightly larger scale, both in electronic and digital format.

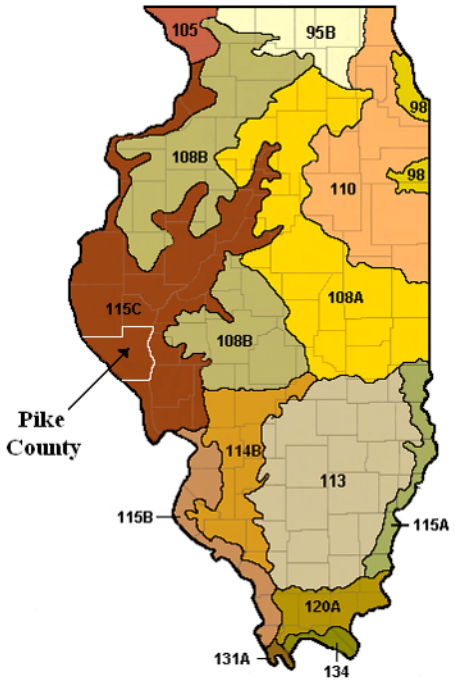
General Nature of the County

This section provides general information on some of the natural and cultural factors that affect land use in Pike County. It describes climate; history and development; physiography, relief, and drainage; and agriculture and silviculture; and transportation facilities.

Climate

The National Water and Climate Center, which is part of the Natural Resources Conservation Service, and the Illinois State Water Survey helped prepare this section.

Pike County has a continental climate of relatively cold winters and warm, humid summers. Although precipitation is heaviest during the warmer half of the year, winter snow cover and frost usually provide adequate moisture to the soils in spring. Table 1 gives data on temperature and precipitation for the survey area as recorded at



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 Pike County and the major land resource areas (MLRAs) in Illinois (USDA, 1981).

Griggsville in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 28.2 degrees F and the average daily minimum temperature is 19.4 degrees. The lowest temperature on record, which occurred at Griggsville on February 13, 1905, is –25 degrees. In summer, the average temperature is 74.2 degrees and the average daily maximum temperature is 85.0 degrees. The highest recorded temperature, which occurred at Griggsville on July 14, 1954, is 115 degrees F.

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

The total annual precipitation is 38.46 inches. Of this, 23.32 inches, or 60.6 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 11.6 inches. The heaviest 1-day rainfall on record was 6.04 inches at Griggsville on June 11, 1942.

The average seasonal snowfall is 25.8 inches. The greatest snow depth at any one time during the period of record was 21 inches at Griggsville on February 11, 1979. On the average, 38 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

History and Development

As part of the lower Illinois River Valley, Pike County was an important hunting and settlement area for Native Americans. Archaeologists continue to investigate the extent of Native American land use in Pike County.

Pike County was organized in 1821 as part of the Military Tract. It originally included the area that is now Chicago and Peoria. The county was assigned its final form in 1825. It is named for General Zebulon Pike.

Ebenezer Franklin pitched a tent near Atlas in March 1820 and thus is considered the first European settler in the area. Many of the existing towns were established during a period of accelerated settlement beginning in 1830. Early settlement was dominated by river travel. The population of the county grew from about 3,400 in 1830 to 33,000 in the 1880s (Chapman and others, 1880). In line with general trends in the country, the population in this mostly rural county has declined in comparison with the population in urban and suburban areas.

Physiography, Relief, and Drainage

Physiography and relief in Pike County are varied (fig. 2). The eastern and western sides of the county are dominated by nearly level flood plains. The central part is higher in elevation than the eastern and western parts. It consists of small prairie areas and rolling hills drained by many streams and creeks.

According to Paul F. Grote, a local resident, two engines were sometimes needed in the early railroad days to pull trains up to Baylis, which is 864 feet above sea level. Kinderhook, which is on bottom land along the Mississippi River, is 464 feet above sea level.

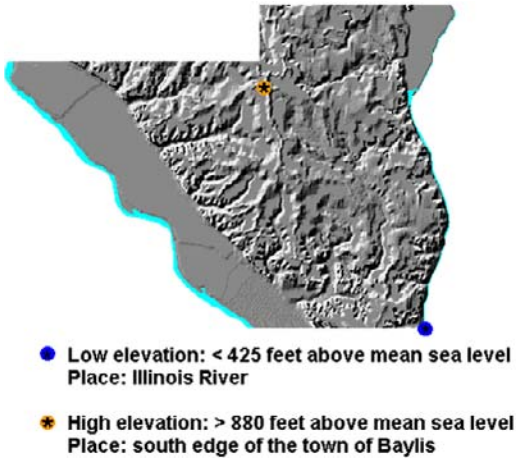


Figure 2.—Generalized relief map showing the highest and lowest points in Pike County. (Source: Illinois State Geologic Survey Web page).

The upland areas in the northern and northeastern parts of the county were largely shaped during the last of the Illinoian Glacial Episodes and were then covered by loess of varying thickness. Erosion of these materials has helped to create the current landscape. Upland areas in the southern part of the county were unglaciated and consist of limestone residuum. They also are covered by loess of varying thickness.

About 25 percent of Pike County is drained by the Illinois River and its tributaries, and 75 percent is drained by the Mississippi River and its tributaries. The flood plains adjacent to these rivers make up about 160 square miles in Pike County (Hopkins and others, 1915).

The bottom land along the Mississippi River is extensive and ranges from 3 to 6 miles in width. The Sny Island Levee Drainage District, organized in 1872 and extending from Adams County to Calhoun County, develops and maintains both drainage and flood protection in this area. Bay Creek, Dutch Creek, and Six Mile Creek empty into diversions in this drainage area.

The northern part of the bottom land along the Illinois River is protected by levees. Blue Creek and the South and Middle Forks of McKee Creek empty into this drainage area.

The largest areas of upland prairie soils are near Milton and Griggsville. Smaller tracts of prairie soils are in scattered areas throughout the uplands.

Agriculture and Silviculture

Agriculture is the primary industry in Pike County. The county ranks second in Illinois in beef cow inventories, fourth in hog inventories, tenth in all cattle inventories, and tenth in livestock cash receipts (Illinois Agricultural Statistics Service, 1997). About 52 percent of the county, or 282,194 acres, is planted to corn, soybeans, or wheat (USDA, 1997).

Pike County has 77,000 acres of upland deciduous forests and 37,600 acres of bottom-land forests. The upland forests consist primarily of oak and hickory. The bottom-land forests consist primarily of ash, cottonwood, and oak. Six sawmills are operating within the county. Three of these are full-time commercial mills, and three are small, part-time mills (Bretthauer and Edgington 2002).

Transportation Facilities

Pike County has two major highways—U.S. Route 54 and Interstate 72. State Highways 57, 96, 99, 100, 104, and 107 also serve the county. Barge service is available on the Illinois and Mississippi Rivers. Two railroads and one centrally located municipal airport serve the county.

How This Survey Was Made

This survey was made to provide updated information about the soils and miscellaneous areas in Pike County, which is in Major Land Resource Area 115C (fig. 1). Major Land Resource Areas (MLRAs) are geographically associated land resource units that share a common land use, elevation, topography, climate, pattern of water and soils, and vegetation (USDA, 1981). Map unit design is based on the occurrence of each soil throughout the MLRA. In some cases a soil component may be referred to that does not occur in the Pike County but that has been mapped within the MLRA.

The information in this soil survey includes a description of the soils and miscellaneous areas and their suitability, limitations, and management for specified uses.

Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They prepared new soil profile descriptions and studied many existing soil profile descriptions. These descriptions show 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 county occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the county. 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 county 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 the update, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an

understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they observed. The maximum depth of observation was about 80 inches (6.7 feet). The soil scientists noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, soil reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Interpretations are modified as necessary to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a seasonal high water table within certain depths in most years, but they cannot predict that the water table will always be at a specific level in the soil on a specific date. After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Aerial photographs used in this update survey area were taken in April of 1998. Soil scientists also studied U.S. Geological Survey topographic maps enlarged to a scale of 1:12,000 and orthophotographs to relate land and image features. Specific soil boundaries from the maps published in 1999 were drawn on the orthophotographs. Adjustments of soil boundary lines were made to coincide with the U.S. Geological Survey topographic map contour lines and tonal patterns on aerial photographs.

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

Soil Formation and Classification

This section relates the soils in Pike County to the major factors and processes of soil formation and describes the system of soil classification.

Formation of the Soils

Steve Suhl, Resource Soil Scientist, Natural Resources Conservation Service, prepared this section.

A soil is a three-dimensional natural body consisting of mineral and organic material that can support plant growth. The nature of any soil at a given site is the result of the interaction of the factors of soil formation and their influence on the processes of soil formation.

Factors of Soil Formation

The five major factors of soil formation are parent material, climate, plants and animals, topography, and time (Jenny, 1941). Climate and plants and animals act directly on the parent material, which is modified by topography over time. Theoretically, if all these factors were identical at different sites, the soils at these sites would be identical. Differences among the soils are caused by variations in one or more of these factors.

Parent Material

Parent material is the unconsolidated geologic material in which the soil forms. It determines the basis for the chemical and mineralogical composition of the soil. The properties of the parent material vary greatly, sometimes within small areas, depending on how the material was deposited. The soils in Pike County formed in a variety of parent materials. Most of the soils formed in loess. Other soils formed in glacial drift, alluvium, eolian deposits, bedrock residuum, or a combination of these.

Alluvium is material deposited by running water. There are two major types—stream alluvium and valley-side alluvium. Stream alluvium is soil material deposited by floodwater along streams. The source of the alluvium generally is material eroded from other parent materials farther upstream in the watershed. Stream alluvium is poorly graded, stratified, and well sorted. The texture of the soil material varies, depending on the speed of the floodwater, the duration of flooding, and the distance from the streambank. The more rapidly moving water within the stream channel slows quickly once it is outside the channel as the concentrated channel flow changes to broad overland flow. As the water velocity decreases, the coarser textured material is deposited first near the channel. The fine textured material is carried a greater distance from the channel. Ceresco and Sarpy soils are examples of soils that formed in areas close to the stream channel where the alluvium is coarser textured. Beaucoup and Tice soils formed in finer textured alluvium farther from the stream channel. Fine textured material settles out in backswamps and other areas that are flooded by slowly moving water for extensive periods. Darwin and Titus soils are examples of soils that formed in these areas.

Valley-side alluvium is poorly graded and stratified, but it generally is not well sorted. The source of the alluvium generally is material eroded from parent material directly upslope. The soils that formed in valley-side alluvium are similar in character to the upslope source. Raddle soils are an example.

Eolian sediments are materials transported and deposited by the wind. These sediments were derived from periglacial regions where sparse vegetation and low temperatures and precipitation rates left unconsolidated sediments exposed to wind action. The unconsolidated sediments, primarily outwash, were then stripped of their finer components by strong winds. Eolian sediments were deposited during the Wisconsin Episode. They are either loess or windblown sand. Loess is the major parent material in Pike County. The loess in the county ranges from a few inches to more than 80 feet in thickness (Willman and others, 1975). The loess is thickest along the Mississippi River bluffs on the western side of the county, thins eastward, and increases in thickness along the Illinois River bluffs. Seaton, Fayette, and Wakenda soils formed in loess.

Windblown sandy material is poorly graded and is made up primarily of very fine sand and fine sand. It generally is in scattered areas on hillslopes in the eastern part of the county. The soils that formed in windblown sand are of minor extent in Pike County. Lamont soils are an example.

Glacial drift is glacially deposited sediment. There are two main types of glacial drift—till and outwash. Till is material that was deposited directly by glacial ice with little or no water action. It typically has particles that vary in size, including sand, silt, clay, and some pebbles, cobbles, and larger rock fragments. The small pebbles in till generally have distinct edges and corners, indicating that they have not been subject to intense washing by water. Till is well graded and unstratified. The till in the northeastern part of Pike County was deposited during the Illinois Episode. The till in the northwestern part of the county was deposited during the Pre-Illinois Episode. The central and extreme southern parts of the county were not covered by glaciers (fig. 3). The soils that formed in till are of moderate extent in Pike County. Hickory soils are an example of soils that formed primarily in till, commonly with a thin overlying layer of loess.

During the Yarmouth and Sangamon interglacial episodes, which occurred before the Illinois Episode and between the Illinois and Wisconsin Episodes respectively, the relatively flat, stable till surface was exposed to intense weathering. A soil formed on the till surface and was subsequently buried by depositions of loess. The loess deposits in Pike County were thick enough to remove the soil from the influence of

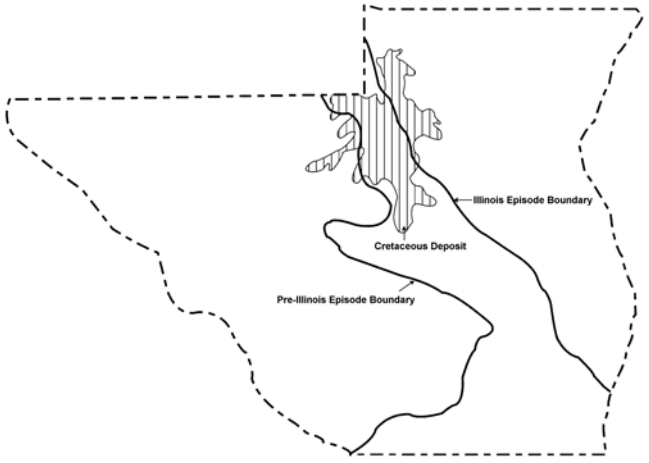


Figure 3.—Glacial till boundaries and location of Cretaceous deposits in Pike County.

the active soil-forming processes. The soils that formed in the till are called paleosols, and they reflect the conditions of their formation period. Two types of paleosols occur in the county—buried and exhumed. A buried paleosol is no longer subject to the soil-forming processes that created it. In some areas where the loess deposits are thinner, however, the current processes of soil formation have extended through the loess and into the upper part of the paleosol. The result is a welded soil profile. Elco soils are an example of soils that formed in loess and the underlying paleosol. An exhumed paleosol occurs in areas where erosion has removed the overlying loess and exposed the paleosol to the modern soil surface. Ursa soils formed in these areas.

Outwash includes all sediments deposited by running water from melting glaciers. The size of the particles that can be transported by water, either as bed load or suspended sediments, depends on the gradient, volume, and velocity of the moving water. Water velocity decreases when a stream loses grade or flows into a larger body of water. As the velocity decreases, suspended particles begin to settle out. The coarser materials, such as gravel and cobbles, are deposited nearer to the source; the finer materials, such as fine sand, silt, and clay, are carried farther downstream. The pebbles in outwash generally have rounded edges and corners, indicating that they have been subject to intense washing by water. Outwash is poorly graded, is stratified, and has variable composition because of variations in the flow of water. Outwash is generally permeable. The outwash in Pike County was deposited during the Wisconsin Episode. The soils that formed in outwash are of minor extent in the county. Kendall soils are an example.

The north-central part of Pike County has a deposit of sand and gravel of Cretaceous age (fig. 3). This deposit is on the prominent ridge forming the divide between the Illinois River and Mississippi River drainage. The ridge extends to the northwest from a point northwest of Pittsfield to nearly 10 miles into Adams County (Frye and Willman, 1964). El Dara soils formed in these Cretaceous deposits.

Bedrock residuum is material weathered from shale and/or limestone in place. It is generally grayish, unconsolidated, and unstratified. Marseilles soils formed in loess and in the underlying material weathered from shale. Goss and Elizabeth soils formed in material weathered from limestone.

Climate

The climate in Pike County has significantly affected the soil-forming processes. The county currently has a humid, temperate climate. In this climatic environment, physical and chemical weathering of the parent material can occur along with the accumulation of organic matter, the decomposition of minerals, the formation and translocation of clay, the leaching of soluble compounds, and alternating periods of freezing and thawing.

The two climatic factors that have the greatest influence on soil-forming processes are precipitation and temperature. Precipitation supplies the moisture needed for most physical and chemical processes and determines the depth to which these processes occur. The soil moisture regime, which is only a partial function of precipitation, determines the processes that occur in the soil. The rate at which these physical and chemical processes proceed depends on the temperature, particularly as it is related to the soil temperature regime.

Two soil moisture regimes occur in the county—aquic and udic. The aquic moisture regime is a reducing regime in a soil that is virtually free of dissolved oxygen because of saturation by water or by water of the capillary fringe. Biological activity is necessary to remove dissolved oxygen from ground water; therefore, the soil temperature must be above biologic zero (5 degrees C) for some time while the soil is saturated. Titus soils have an aquic soil moisture regime. The udic moisture regime is one in which the soil moisture control section is not dry in any part for as long as 90

cumulative days per year. Also required, except for short periods, is a three-phase system, solid-liquid-gas, in part or all of the soil moisture control section when the soil temperature is above biologic zero. Wakenda soils have a udic soil moisture regime.

The mesic soil temperature regime is the only temperature regime recognized in Pike County. This regime is one in which the mean annual soil temperature is 8 degrees C or higher but is lower than 15 degrees C and the difference between mean summer and mean winter soil temperatures is more than 5 degrees C at a depth of 20 inches.

Plants and Animals

The vegetation under which a soil forms influences several important soil properties, such as color, structure, reaction, and content and distribution of organic matter. Vegetation extracts water from the soil, recycles nutrients, and adds organic matter to the soil. Gases derived from root respiration combine with water to form acids that influence the weathering of minerals.

Several different types of vegetation have influenced the formation of the soils in Pike County. These include prairie vegetation, upland hardwood forests, forest-prairie transition areas, and vegetation on flood plains.

Prairie vegetation.—The decomposition of the roots of annual prairie grasses provides well distributed subsurface accumulations of organic material, resulting in a thick, dark surface layer. Wakenda soils formed under prairie vegetation. The average content of organic matter in the surface layer of these soils is 3 to 4 percent.

Upland hardwood forests.—The primary contribution of organic matter in these forested areas is from the annual additions of leaf litter to the surface layer, resulting in a thin, dark surface layer. Fayette soils formed under this type of vegetation. The average content of organic matter in the surface layer of these soils is 1 to 2 percent.

Forest-prairie transition areas.—Soils that formed in these areas exhibit modified characteristics of both forest and prairie vegetative regimes. Clarksdale soils, which formed in these transition areas, have a thinner surface layer than the soils that formed under prairie vegetation. The average content of organic matter in the surface layer of the Clarksdale soils is 1 to 3 percent.

Vegetation on flood plains.—Soils in these areas formed under a combination of trees and grasses. They have colors that largely reflect those of the sediments in which they formed. Tice and Wakeland soils are examples.

Bacteria, fungi, and many other micro-organisms decompose organic material and release nutrients to growing plants. They influence the formation of peds. Soil properties, such as drainage, temperature, and reaction, influence the type of micro-organisms that live in the soil. Fungi are generally more active in the more acid soils, and bacteria are more active in the less acid soils.

Earthworms, crayfish, insects, and small burrowing animals mix the soil and create small channels that influence soil aeration and the percolation of water. Earthworms help to incorporate crop residue or other organic material into the soil. The organic material improves soil tilth. In areas that are well populated with earthworms, the leaf litter that accumulates on the soil in the fall is generally incorporated into the soil by the following spring. If the earthworm population is low, part of the leaf litter can remain on the surface of the soil for several years.

Human activities have significantly influenced soil formation through their effect on soil health. Degradation processes, such as erosion, compaction, contamination, disaggregation, lessening of biological activity, and nutrient depletion have damaged soil health. Native forests have been cleared, and wet soils have been drained for farming and other uses. The development of land for urban uses or for surface mining has significantly influenced the soils in some areas.

Topography

Topography refers to the configuration of the land surface in terms of relief and contour. It influences soil formation mainly through its effect on the proportion of surface runoff to infiltration and on the degree of erosion or deposition. The less sloping areas in Pike County generally have a lower rate of runoff and a higher infiltration rate than the steeper areas. Soils that formed in the less sloping areas tend to be more strongly developed and have a deeper soil profile than the soils that formed in the steeper areas.

The degree of the effect of topography depends on the type and stability of the land surface. There are two types of land surfaces—aggrading and degrading—and three levels of stability—stable, metastable, and active. The aggrading surfaces in Pike County receive material either through the deposition associated with flooding or through the accumulation of erosional sediments. Wakeland soils formed on natural levees on flood plains, which are active-aggrading land surfaces. Natural levees receive sediments during frequent episodes of flooding. Raddle soils formed on footslopes that receive runoff with some accumulation of hillslope sediments. Footslopes are examples of metastable-aggrading land surfaces. Virden soils formed in broad, low-lying areas on drainage divides that receive runoff from upslope areas but accumulate little sediment through hillslope erosion. These broad, low-lying areas are examples of stable-aggrading land surfaces. Degrading surfaces lose material primarily through the process of erosion. Keomah soils formed on the broad summits of interfluves. Broad summits are examples of stable-degrading surfaces, where runoff is limited. Fayette soils occur on the shoulders of hillslopes and thus are more susceptible to runoff and erosion than the Keomah soils. Shoulders are metastable-degrading surfaces, where increased runoff results in higher rates of erosion. Backslopes are examples of active-degrading surfaces. Seaton soils are on backslopes, where runoff and erosion rates are highest.

Time

The length of time that the parent material has been exposed to the soil-forming processes influences the degree of genetic horizon development that occurs within the soil. The evaluation of time as a factor in soil formation is difficult because of the effects of the other soil-forming factors. The influence of time can be modified by erosion, deposition of material, topography, and kind of parent material. In some of the steeper areas, erosion removes the surface soil material as soon as the soil forms. Soils in these areas are immature even though the slopes have been exposed to weathering for thousands of years. Timula soils are an example. Soils on flood plains receive alluvial material during each flood. This repeated deposition interrupts soil formation. Wakeland soils are an example of soils that formed in stream alluvium.

Processes of Soil Formation

Soil forms through the complex interaction of four general processes. These processes are additions, transformations, removals, and transfers. The importance of these processes in the formation of a given soil varies.

The accumulation of organic matter in the A horizon of the mineral soils in Pike County is an example of an addition. The most striking example of this addition is the formation of a mollic epipedon. A mollic epipedon forms in an environment that features optimum amounts of moisture, temperature, and bivalent cations. Such an environment allows grasses to thrive. The underground decomposition of organic residues and of organic residues from the surface that have been taken underground by animals results in the characteristic thickness and darkness of the mollic epipedon. Ipava soils are an example of soils that have a mollic epipedon.

Transformations are changes that take place in the soil. An example is the reduction of iron and manganese. Typically, iron oxides coat soil particles and in an aerated environment produce yellowish, yellowish brown, or reddish colors. Manganese oxides produce black colors. Micro-organisms that are able to generate energy from the oxidation of organic matter in this aerated environment flourish. The energy is necessary for the micro-organisms to conduct the basic functions of life. When a soil becomes saturated with water and the dissolved oxygen is depleted or removed, anaerobic conditions develop. In an anaerobic environment, other micro-organisms, which can derive energy from the reduction of oxidized compounds, such as iron and manganese, become prevalent. The energy produced creates chemical compounds from organic matter. These compounds are necessary to sustain life. The reduced iron and manganese are mobile and migrate in the soil water throughout soil profile. They can move with the soil water to other parts of the soil (translocation) and can be removed entirely from the soil by leaching (removal). After the iron and manganese are gone, the leached area, or depletion zone, generally has a grayish or whitish color, which is the natural color of the mineral grain. If the reduced iron comes in contact with oxygen, it can reoxidize. The result is the formation of bright colored concentrations or accumulations.

The processes of reduction, translocation, and oxidation result in the development of distinctive soil morphological characteristics called redoximorphic features. Repeated cycles of saturation and drying create a mottled soil. Part of the soil is gray because of the loss of iron, and other parts are brown because the iron oxide has accumulated or has not been removed. The somewhat poorly drained Ipava soils are an example of soils in which this process has occurred. Iron may be leached from soils that remain saturated for long periods. Such soils are generally grayish, or gleyed. The poorly drained Titus soils are an example.

Removals that occur within the soil are commonly a result of leaching. The leaching of calcium carbonate from many of the soils in the county is an example of a removal. The parent material of these soils was initially high content of in calcium carbonate. Water percolating through the soils dissolved and transported the carbonate into the deeper soil layers. Calcium carbonate is relatively soluble and is removed relatively early during the formation of a soil. It also is a powerful flocculant, and its removal facilitates the translocation of clay and the formation of illuvial horizons. The loss of solid mineral and organic particles through erosion is another example of a removal. This loss can be serious because the material lost is typically from the most productive part of the soil profile.

Translocations are movements from one place to another in the soil. An example is the formation of an illuvial horizon through the translocation of clay from the A or E horizon, the zone of eluviation or loss, to the B horizon, the zone of illuviation or gain. In Fayette soils, for example, a significant amount of clay has accumulated, forming an illuvial horizon called an argillic horizon. The argillic horizon developed on a relatively old, stable landscape. Water from rainfall and melting snow transferred fine clay from the A or E horizon to the B horizon, where it was deposited on the faces of peds and along pores.

Soils and Soil-Landscape Units

Soils are natural bodies that are distributed on the landscape in a predictable way in response to a systematic interaction of the five major factors of soil formation. The relationship of the landscape to these five factors results in a soil-landscape unit (Hudson, 1992). A soil-landscape unit is similar to a landform that has been modified by one or more of the soil-forming factors. Within a particular soil-landscape unit, the same kind of soil should develop. Changes in the interaction of one or more of the five

factors results in a change in the soil-landscape unit. This change influences the soil-forming processes and the soil that forms within the unit.

The following paragraphs describe the relationships and interactions that occur in some common soil-landscape units in Pike County and the soils that have formed in these units.

Upland landscapes are dominant in Pike County. These landscapes range from broad, relatively undissected drainage divides to dissected areas adjacent to river bluffs. The parent material is loess. Much of the calcium carbonate that was in the loess during deposition has been leached to a sufficient depth to facilitate soil development.

Low-lying areas on the broad drainage divides are stable-aggrading land surfaces that receive water through direct precipitation and runoff from upslope areas. These conditions result in a wet soil microclimate. A seasonal high water table is near the surface much of the year, and at times the area is ponded. Redoximorphic features associated with prolonged saturated conditions, such as a depleted soil matrix and iron and manganese accumulations along root channels and pores, occur at the soil surface as a result of the seasonal high water table.

The native vegetation in this soil-landscape unit was prairie grasses. Additions of organic material from the decomposition of the extensive and deep root systems of these grasses resulted in a thick, dark surface layer called a mollic epipedon.

The saturated conditions and poor aeration influenced the rate of decomposition of organic material. This rate is slower in soils that are saturated for prolonged periods, resulting in a thicker mollic epipedon and a higher content of organic matter than is evident in the soils in better aerated areas upslope.

The water table, which is shallow during spring, often fluctuates and is commonly deep during summer. The fluctuations in the water table disrupt the soil fabric through wetting and drying cycles, which aid in the dispersal of clay, the movement of clay with percolating water, and the precipitation of clay as films on the faces of peds and as linings of pores. The result is the formation of an illuvial horizon called an argillic horizon. Virden soils formed in areas of this soil-landscape unit.

Upslope from the low-lying areas is a soil-landscape unit made up of the summits of broad rises on drainage divides. These areas are stable-degrading land surfaces that receive water primarily through direct precipitation. The seasonal high water table is at a lower depth than the water table in the soils in the adjacent low-lying areas, and the associated redoximorphic features indicate a fluctuating water table. The soil microclimate alternates between periods when the soil is saturated and periods when the soil is unsaturated. A yellowish brown soil matrix in the upper part of the profile indicates an oxidizing environment. The redoximorphic features are associated with periods of saturation.

The native vegetation in areas of this soil-landscape unit was prairie grasses, but these landscape positions are better aerated than the low-lying positions and tend to have a higher rate of decomposition of organic matter. As a result, the soils in these areas generally have a slightly thinner mollic epipedon and a lower content of organic matter than the soils in the low-lying areas.

The fluctuating water table disrupts the soil fabric through wetting and drying cycles. An argillic horizon has formed through the dispersal, movement, and precipitation of clay as films on the faces of peds and as linings of pores. Ipava soils formed in areas of this soil-landscape unit.

The soil-landscape unit in the more dissected areas is made of the broad summits of interfluves. It has characteristics similar to those of the unit on the summits of broad rises on drainage divides. The dissected areas are stable-degrading land surfaces that receive water primarily through direct precipitation. Depth to the seasonal high water table and the associated redoximorphic features are nearly identical to those of the soil-landscape unit on the summits of broad rises.

The native vegetation in this soil-landscape unit is transitional between forest and prairie vegetation. The soils in these areas have a dark surface layer, but this layer is not thick enough and does not have a sufficient accumulation of organic matter to meet the requirements for a mollic epipedon. This type of surface horizon is called an ochric epipedon.

A light colored, eluvial subsurface horizon (called an albic horizon) also has developed in the soils in these areas. This horizon is typical of soils that formed under forest vegetation. In this horizon, much of the clay and free iron oxides have been removed and the color is determined primarily by the uncoated silt and sand particles. The translocation of clay from the eluvial horizon to the illuvial horizon results in the formation of an argillic horizon. Clarksdale soils are in areas of this soil-landscape unit.

Adjacent to this soil-landscape unit is a unit that is also made up of the summits of interfluves but that is generally closer to the opposing interfluve drainageways and on narrower summits. These areas are stable-degrading land surfaces that receive water through direct precipitation. Water that does not infiltrate the soil is lost through surface flow or runoff. Runoff increases the susceptibility to erosion.

The seasonal high water table and the associated redoximorphic features occur at a much lower depth than is evident in the soils on the broad summits. The upper part of the soil profile is generally yellowish brown and free of depletions, indicating an oxidizing environment. Depletions occurring in the lower part of the subsoil are generally restricted to the pores within the soil.

The native vegetation in areas of this soil-landscape unit is forest. Under forest vegetation, most of the addition of organic material occurs above ground. Organic matter is not incorporated so deep in the soil profile as it is in soils that formed under prairie vegetation, and the content decreases rapidly with increasing depth. Therefore, the dark surface layer in these soils is thinner than that in the Clarksdale soils. An ochric epipedon and an albic horizon have developed.

The more acid leaching environment that occurs under forest vegetation allows dispersed clay particles to be translocated to a greater depth than in similar positions under prairie vegetation. The result is a well developed argillic horizon. Rozetta soils formed in areas of this soil-landscape unit.

A soil-landscape unit made up of the convex summits of narrow interfluves is on rolling landscapes adjacent to the major rivers in the county. These areas are metastable-degrading land surfaces that receive water through direct precipitation but also lose some of this water through runoff. Runoff increases the susceptibility to erosion and creates a drier soil microclimate. The seasonal high water table is below the depth of the developing soil profile. The entire profile is yellowish brown or brown, indicating an oxidizing environment.

The native vegetation in areas of this soil-landscape unit is forest. The soils have an ochric epipedon and an argillic horizon. Fayette soils are an example.

Downslope from this soil-landscape unit is a unit made up of the backslopes of side slopes. These areas are active-degrading land surfaces that receive water through direct precipitation but also lose much of this water through runoff. Depth to the seasonal high water table is similar to that in the Fayette soils, and thus the soil profile is yellowish brown or brown and is free of depletions.

The native vegetation in areas of this soil-landscape unit is forest. Like the Fayette soils, the soils in these areas have an ochric epipedon and albic and argillic horizons. Because much of the water is lost through runoff, however, less water infiltrates and percolates through the soils and less is available to aid in the translocation of clay. As a result, the argillic horizon is not so well developed as that in the Fayette soils. Seaton soils formed in areas of this soil-landscape unit.

On the narrow flood plains between opposing side slopes is an active-aggrading land surface that receives sediments during frequent episodes of flooding. The nearly

continual deposition of sediment interrupts the soil-forming processes. The result is a less developed soil profile. The soils in these areas have an ochric epipedon, but they also exhibit the fine stratification common to recent alluvial deposits and have no diagnostic subsurface horizons. Wakeland soils are an example.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 4 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

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 Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

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 Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic 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 Hapludalfs.

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, temperature regime, thickness of the root zone, cation-exchange capacity, 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 Hapludalfs.

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.

Soil Series and Detailed Soil Map Units

In this section each soil series recognized in the survey area is described. Each series description is followed by detailed 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). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

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 or of the underlying layers, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer or of the underlying layers. They also can differ in slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. The name of a soil phase commonly indicates a feature that affects use or management. For example, Fayette silt loam, 5 to 10 percent slopes, eroded, is a phase of the Fayette series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are called complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Ambraw-Ceresco-Sarpy complex, 0 to 2 percent slopes, occasionally flooded, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. An example of an undifferentiated group in this survey area is Stookey and Timula soils, 18 to 25 percent slopes, eroded.

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 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.

In the following descriptions, the letters “OSD” after the heading “Typical Pedon” mean “Official Series Description.”

Ambraw Series

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

Typical Pedon

Ambraw clay loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 440 feet; Cass County, Illinois; 375 feet north and 1,530 feet west of the southeast corner of sec. 1, T. 18 N., R. 12 W.; USGS Beardstown topographical quadrangle; lat. 40 degrees 2 minutes 9 seconds N. and long. 90 degrees 23 minutes 40 seconds W., NAD 27:

Ap—0 to 13 inches; black (10YR 2/1) clay loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to weak medium granular; firm; many very fine roots throughout; few fine and medium faint black (7.5YR 2/1) manganese concretions and stains between peds; 2 percent rock fragments; neutral; clear smooth boundary.

A—13 to 17 inches; very dark gray (10YR 3/1) clay loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure parting to weak

medium granular; friable; many distinct black (10YR 2/1) organic coatings on faces of peds; neutral; clear smooth boundary.

BAg—17 to 20 inches; dark grayish brown (2.5Y 4/2) clay loam; moderate fine and medium subangular blocky structure; friable; many distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common fine and medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation throughout; neutral; clear smooth boundary.

Bg1—20 to 30 inches; dark grayish brown (2.5Y 4/2) clay loam; moderate medium subangular blocky structure; friable; few distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine and medium distinct black (10YR 2/1) manganese concretions and common fine and medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; many medium faint dark grayish brown (2.5Y 5/2) iron depletions throughout; 2 percent rock fragments; neutral; clear smooth boundary.

Bg2—30 to 35 inches; dark grayish brown (2.5Y 4/2) and grayish brown (2.5Y 5/2) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; common fine and medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; 2 percent rock fragments; neutral; clear smooth boundary.

BCg—35 to 44 inches; dark grayish brown (2.5Y 4/2) and grayish brown (2.5Y 5/2) loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; common medium and coarse prominent strong brown (7.5YR 4/6) masses of iron accumulation throughout; 2 percent rock fragments; neutral; clear smooth boundary.

Cg—44 to 80 inches; dark gray (10YR 4/1) and grayish brown (2.5Y 5/2), stratified loamy sand to sandy loam; single grain; very friable; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of a diagnostic horizon: More than 60 inches
Depth to carbonates: More than 50 inches

Ap or A horizon(s):
- Hue—10YR
- Value—2 or 3 (3 to 5 dry)
- Chroma—1 or 2
- Texture—clay loam, silty clay loam, sandy loam, sandy clay loam, or loam

Bg horizon(s):
- Hue—10YR, 2.5Y, 5Y, or N
- Value—3 to 6
- Chroma—0 to 2
- Texture—clay loam, clay, sandy clay loam, or loam
- Content of rock fragments—less than 7 percent

BCg or Cg horizon(s):
- Hue—10YR, 2.5Y, 5Y, or N
- Value—4 or 5
- Chroma—0 to 2
- Texture—mainly clay loam or sandy clay loam; less commonly sandy loam or loam
- Content of rock fragments—less than 7 percent

3302L—Ambraw clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

Ambraw and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less sand in the underlying material
- Soils with a light colored surface layer
- Soils with more clay in the subsoil

Properties and Qualities of the Ambraw Soil

Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: 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: Moderate
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Ambraw—4w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ambraw—hydric

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

Setting

Landform: Flood plains (fig. 4)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the surface layer
- Soils with more clay in the subsoil

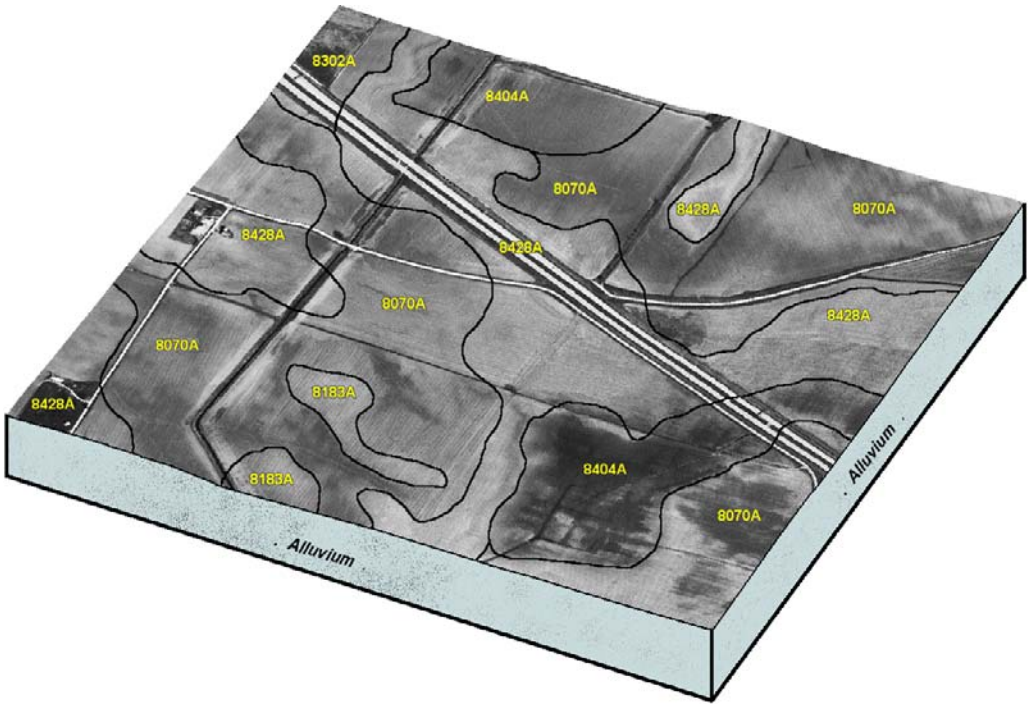


Figure 4.—Typical pattern of soils that formed in alluvium in nearly level areas on the flood plain along the Mississippi River.

- Soils with a thicker dark surface soil
- Soils with a seasonal high water table at a depth of more than 1.0 foot

Dissimilar soils:
- Very poorly drained soils in depressions and sloughs

Properties and Qualities of the Ambraw Soil

Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.7 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Ambraw—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Ambraw—hydric

8789A—Ambraw-Ceresco-Sarpy complex, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Meander scrolls
Position on landform: Ambraw—toeslopes; Ceresco—shoulders; Sarpy—summits

Map Unit Composition

Ambraw and similar soils: 40 percent
Ceresco and similar soils: 25 percent
Sarpy and similar soils: 20 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils with more clay in the surface layer and subsoil
- Soils with a thicker dark surface soil
- Soils that have slopes of more than 2 percent

Dissimilar soils:
- Very poorly drained soils in depressions and sloughs

Properties and Qualities of the Ambraw Soil

Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Ceresco Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Surface runoff class: Negligible

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

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: Low
Corrosivity: Low for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: Ambraw and Ceresco—2w; Sarpy—4s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ambraw—hydric; Ceresco and Sarpy—not hydric

Baylis Series

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

Typical Pedon (OSD)

Baylis silt loam, 18 to 25 percent slopes, eroded, at an elevation of 610 feet; Pike County, Illinois; 100 feet west and 1,750 feet north of the southeast corner of sec. 17, T. 4 S., R. 6 W.; USGS Barry, Illinois, topographic quadrangle; lat. 39 degrees 43 minutes 4 seconds N. and long. 91 degrees 6 minutes 24 seconds W., NAD 27:

Ap—0 to 7 inches; dark yellowish brown (10YR 4/4) silt loam, brown (10YR 5/3) dry; moderate medium granular structure; friable; many fine and medium roots throughout; moderately acid; abrupt smooth boundary.

Bt1—7 to 16 inches; dark yellowish brown (10YR 4/6) silty clay loam; moderate fine subangular blocky structure; firm; many fine and medium roots between peds; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; moderately acid; clear wavy boundary.

Bt2—16 to 24 inches; brown (7.5YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; common medium and coarse roots between peds; many distinct dark brown (7.5YR 3/4) clay films on faces of peds; few fine prominent black (10YR 2/1) masses of manganese accumulation lining root channels and pores; strongly acid; clear wavy boundary.

2Bt3—24 to 42 inches; yellowish red (5YR 4/6) silty clay loam; moderate coarse subangular blocky structure; firm; few coarse roots throughout; many distinct reddish brown (5YR 4/4) and dark brown (7.5YR 3/4) clay films on faces of peds; common fine and medium faint dark red (2.5YR 3/6) masses of iron and manganese accumulation between peds and common fine and medium prominent black (5YR 2/1) masses of manganese accumulation lining root

channels and pores; 10 percent cherty gravel; strongly acid; gradual wavy boundary.

2Bt4—42 to 60 inches; yellowish red (5YR 4/6) gravelly silty clay loam; moderate coarse subangular blocky structure; very firm; few coarse roots throughout; common distinct reddish brown (5YR 4/4) and dark brown (7.5YR 3/4) clay films on faces of peds; common fine and medium faint dark red (2.5YR 3/6) masses of iron and manganese accumulation and prominent black (5YR 2/1) masses of manganese accumulation throughout; 20 percent cherty gravel; moderately acid; clear wavy boundary.

2Bt5—60 to 80 inches; yellowish red (5YR 5/6) extremely gravelly clay; massive; very firm; common prominent dark brown (7.5YR 3/4) and distinct reddish brown (5YR 4/4) clay films on rock fragments; common fine and medium prominent dark red (2.5YR 3/6) masses of iron and manganese accumulation and prominent black (5YR 2/1) masses of manganese accumulation throughout; 70 percent cherty gravel; strongly acid.

Range in Characteristics

Thickness of loess: 20 to 40 inches
Depth to lithic or paralithic contact: More than 60 inches
Depth to the base of a diagnostic horizon: More than 60 inches

Ap or A horizon(s):
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam

E horizon(s), where present:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—silt loam

Bt horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam

2Bt horizon(s):
Hue—10YR, 2.5YR, 5YR, or 7.5YR
Value—4 to 6
Chroma—4 to 6
Texture (fine-earth fraction)—silty clay loam, clay loam, silty clay, or clay
Content of rock fragments—10 to 90 percent

472D2—Baylis silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with cherty residuum at a depth of more than 40 inches
- Soils with more clay in the subsoil
- Soils with a lower content of gravel in the subsoil
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits
- The well drained Goss soils downslope from the Baylis soil
- The somewhat poorly drained Bunkum and Passport soils in landscape positions similar to those of the Baylis soil or upslope from the Baylis soil

Properties and Qualities of the Baylis Soil

Parent material: Loess over residuum weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Baylis—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Baylis—not hydric

472E2—Baylis silt loam, 18 to 25 percent slopes, eroded

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with bedrock at a depth of 40 to 60 inches
- Soils with more clay or rock fragments in the subsoil
- Soils with more sand in the lower part of the subsoil
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits and shoulders
- The well drained Goss soils downslope from the Baylis soil

Properties and Qualities of the Baylis Soil

Parent material: Loess over residuum weathered from limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Baylis—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Baylis—not hydric

Beaucoup Series

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

Typical Pedon (OSD)

Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 480 feet; Adams County, Illinois; 727 feet south and 2,577 feet west of the northeast corner of sec. 9, T. 1 N., R. 9 W.; USGS Long Island, Illinois, topographic quadrangle; lat. 40 degrees 5 minutes 39 seconds N. and long. 91 degrees 26 minutes 49 seconds W., NAD 27:

Ap—0 to 6 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak fine granular structure; friable; common fine roots; few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation between peds; neutral; gradual smooth boundary.

A—6 to 15 inches; very dark gray (10YR 3/1) silty clay loam, gray (10YR 5/1) dry; weak fine prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; few fine distinct dark yellowish brown (10YR 3/4) masses of iron and manganese accumulation between peds; neutral; gradual smooth boundary.

Bg1—15 to 24 inches; dark gray (10YR 4/1) silty clay loam; weak fine prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; few fine distinct dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation throughout; neutral; clear smooth boundary.

Bg2—24 to 35 inches; gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; very few

faint dark gray (5Y 4/1) organo-clay films in root channels and pores; common fine prominent dark yellowish brown (10YR 4/4) and few fine prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

Bg3—35 to 48 inches; gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; very few faint dark gray (5Y 4/1) organo-clay films in root channels and pores; few fine prominent dark yellowish brown (10YR 4/4) and few fine prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

BCg—48 to 60 inches; gray (5Y 5/1), stratified silt loam and silty clay loam; weak medium prismatic structure; friable; very few faint dark gray (5Y 4/1) organo-clay films in root channels and pores; common fine prominent dark yellowish brown (10YR 4/4) and few fine prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

Cg1—60 to 70 inches; dark gray (10YR 4/1), stratified silt loam and silty clay loam; massive; friable; common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

Cg2—70 to 80 inches; dark gray (10YR 4/1), stratified silt loam and silty clay loam; massive; friable; common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to carbonates: More than 40 inches
Depth to the base of a diagnostic horizon: 35 to 65 inches

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

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

Cg horizon(s):
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—stratified silty clay loam, silt loam, loam, sandy loam, fine sandy loam, or very fine sandy loam

1070A—Beaucoup silty clay loam, undrained, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Beaucoup and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface soil more than 24 inches thick
- Soils with more sand in the underlying material
- Soils with more clay in the surface soil and subsoil
- Soils with more sand in the surface soil and in the upper part of the subsoil

Properties and Qualities of the Beaucoup Soil

Parent material: Alluvium
Drainage class: Very poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: 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: 5.0 to 6.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 1.0 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Beaucoup—5w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Beaucoup—hydric

3070A—Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Beaucoup and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface soil more than 24 inches thick
- Soils with more sand in the underlying material
- Soils with more sand in the subsoil
- Soils with more clay in the subsoil

Properties and Qualities of the Beaucoup Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.2 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Beaucoup—3w
Prime farmland status of the map unit: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Beaucoup—hydric

3070L—Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

Beaucoup and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface soil more than 24 inches thick
- Soils with more sand in the underlying material
- Soils with more sand in the subsoil
- Soils with more clay in the subsoil
- Soils with more sand in the surface soil and in the upper part of the subsoil

Properties and Qualities of the Beaucoup Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.2 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface

Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Beaucoup—4w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Beaucoup—hydric

8070A—Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains (fig. 4)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface soil more than 24 inches thick
- Soils with more sand in the underlying material
- Soils with a lighter colored surface soil
- Soils with a seasonal high water table at a depth of more than 1.0 foot
- Soils with more clay in the surface soil and subsoil

Dissimilar soils:
- Very poorly drained soils in depressions and sloughs

Properties and Qualities of the Beaucoup Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.3 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Beaucoup—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Beaucoup—hydric

Bethalto Series

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

Typical Pedon

Bethalto silt loam, 0 to 2 percent slopes, at an elevation of 715 feet; Adams County, Illinois; 2,075 feet south and 525 feet west of the northeast corner of sec. 2, T. 1 N., R. 8 W.; USGS Mendon, Illinois, topographic quadrangle; lat. 40 degrees 6 minutes 21 seconds N. and long. 91 degrees 16 minutes 56 seconds W., NAD 27:

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

Eg—8 to 14 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak medium platy structure parting to moderate fine and medium subangular blocky; friable; few very fine roots throughout; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few fine distinct brown (7.5YR 4/3) masses of iron and manganese accumulation and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; neutral; abrupt smooth boundary.

Bt1—14 to 20 inches; brown (10YR 5/3) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots throughout; few distinct very dark gray (10YR 3/1) organic coatings in root channels and pores and many prominent dark grayish brown (10YR 4/2) clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; slightly acid; clear smooth boundary.

Bt2—20 to 29 inches; brown (10YR 5/3) silty clay loam; moderate medium subangular blocky structure; firm; few very fine roots throughout; few distinct very dark gray (10YR 3/1) organic coatings in root channels and pores and many prominent dark grayish brown (10YR 4/2) clay films on faces of peds; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation, few fine prominent black (2.5Y 2/1) masses of manganese accumulation, and few fine faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear smooth boundary.

Bt3—29 to 38 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots throughout; few distinct very dark gray (10YR 3/1) organic coatings in root channels and pores and common distinct grayish brown (10YR 5/2) clay films on faces of peds; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation, few fine prominent black (2.5Y 2/1) masses of manganese accumulation, and many fine faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; gradual smooth boundary.

BC1—38 to 47 inches; brown (10YR 5/3) silty clay loam; weak coarse subangular blocky structure; friable; common prominent very dark gray (10YR 3/1) organic coatings in root channels and pores; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation, few fine prominent black (2.5Y 2/1) masses of manganese accumulation, and many fine faint light brownish gray (10YR 6/2) iron depletions throughout; slightly acid; gradual smooth boundary.

BC2—47 to 63 inches; 35 percent light brownish gray (10YR 6/2), 35 percent strong brown (7.5YR 5/6), and 30 percent brown (10YR 5/3) silt loam; weak coarse subangular blocky structure; friable; common prominent very dark gray (10YR 3/1) organic coatings in root channels and pores; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; neutral; gradual smooth boundary.

C—63 to 80 inches; 35 percent light brownish gray (10YR 6/2), 35 percent strong brown (7.5YR 5/6), and 30 percent brown (10YR 5/3) silt loam; massive; friable; few prominent very dark gray (10YR 3/1) organic coatings in root channels and pores; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; neutral.

Range in Characteristics

Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: 42 to 80 inches

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

E or Eg horizon(s):
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—silt loam

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

C or Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—1 to 4
Texture—silt loam

90A—Bethalto silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a lighter colored surface layer
- Soils with a thicker dark surface soil

- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The poorly drained Virden soils in depressions

Properties and Qualities of the Bethalto Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Bethalto—1
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Bethalto—not hydric

Blake Series

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

Typical Pedon

Blake silt loam, in an area of Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration, at an elevation of 465 feet; Adams County; 490 feet west and 40 feet north of the southeast corner of sec. 16, T. 2 S., R. 9 W.; USGS Quincy West, Illinois, topographic quadrangle; lat. 39 degrees 53 minutes 34 seconds N. and long. 91 degrees 26 minutes 9 seconds W., NAD 83:

AC—0 to 6 inches; stratified, 85 percent very dark grayish brown (10YR 3/2) and 15 percent brown (10YR 5/3) silt loam; moderate fine subangular blocky structure; friable; common very fine and fine roots; strongly effervescent; slightly alkaline; clear smooth boundary.

C1—6 to 14 inches; stratified, 95 percent very dark grayish brown (10YR 3/2) and 5 percent brown (10YR 5/3) silt loam; weak thick platy structure parting to moderate fine subangular blocky; friable; common very fine and fine roots; very slightly effervescent; slightly alkaline; clear smooth boundary.

C2—14 to 31 inches; stratified, 78 percent dark grayish brown (10YR 4/2) and 20 percent light olive brown (2.5Y 5/3) silt loam; weak thick platy structure parting to moderate fine subangular blocky; friable; common very fine and fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and few fine faint grayish brown (10YR 5/2) iron depletions throughout, the yellowish brown accumulations occurring below a depth of 20 inches; very slightly effervescent; slightly alkaline; clear smooth boundary.

C3—31 to 60 inches; stratified, 70 percent very dark grayish brown (10YR 3/2) and 24 percent light olive brown (2.5Y 5/3) silt loam; massive with bedding planes; friable; common very fine roots; few distinct very dark gray (10YR 3/1) organic coatings in root channels and pores; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions throughout; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: 0 to 10 inches
Depth to the base of a diagnostic horizon: Less than 10 inches

AC, Ap, or A horizon(s):
Hue—10YR or 2.5Y
Value—3 or 4
Chroma—1 or 2
Texture—silty clay loam or silt loam

C horizon(s):
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 to 4
Texture—silt loam, silty clay loam, loam, or very fine sandy loam

3877L—Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains
Position on landform: Blake—summits; Slacwater—toeslopes

Map Unit Composition

Blake and similar soils: 45 percent
Slacwater and similar soils: 45 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils that are occasionally flooded
- Soils with more sand in the underlying material
- Soils with more sand and less clay throughout

Dissimilar soils:
- Soils that do not have carbonates

Properties and Qualities of the Blake Soil

Parent material: Calcareous silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.6 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

Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Slacwater Soil

Parent material: Calcareous alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Blake and Slacwater—5w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Blake and Slacwater—hydric

Blyton Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Oxyaquic Udifluvents

Typical Pedon (OSD)

Blyton silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 515 feet; Fulton County, Illinois; 1,384 feet east and 824 feet south of the northwest corner of sec. 3, T. 5 N., R. 3 E.; USGS Lewistown, Illinois, topographic quadrangle; lat. 40 degrees 26 minutes 57 seconds N. and long. 90 degrees 9 minutes 24 seconds W., NAD 27:

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure; very friable; many very fine roots; neutral; abrupt smooth boundary.
C1—10 to 23 inches; 55 percent brown (10YR 4/3) and 35 percent brown (10YR 5/3) silt loam; massive with thin bedding planes; very friable; many very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; abrupt smooth boundary.
C2—23 to 26 inches; brown (10YR 4/3) silt loam; massive with thin bedding planes; very friable; common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; common fine distinct dark

yellowish brown (10YR 4/6) masses of iron accumulation throughout and common fine faint grayish brown (10YR 5/2) iron depletions along pores; neutral; clear smooth boundary.

C3—26 to 80 inches; brown (10YR 4/3) silt loam; massive with thin bedding planes; very friable; common fine faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation throughout and common fine faint grayish brown (10YR 5/2) and light brownish gray (10YR 6/2) iron depletions along pores; neutral.

Range in Characteristics

Ap or A horizon(s):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam

C or Cg horizon(s):
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or loam

8634A—Blyton silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of more than 3.5 feet
- Soils with a buried soil at a depth of 20 to 40 inches

Dissimilar soils:
- The excessively drained Sarpy soils in the higher landscape positions
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Blyton Soil

Parent material: Silty alluvium
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.8 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
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High

Corrosivity: Moderate 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: Blyton—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Blyton—not hydric

Bunkum Series

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

Typical Pedon

Bunkum silt loam, 5 to 10 percent slopes, eroded, at an elevation of 660 feet; Adams County, Illinois; 2,053 feet south and 2,388 feet west of the northeast corner of sec. 23, T. 2 S., R. 8 W.; USGS Quincy East, Illinois, topographic quadrangle; lat. 39 degrees 53 minutes 2 seconds N. and long. 91 degrees 17 minutes 30 seconds W., NAD 27:

Ap—0 to 4 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak thick platy structure parting to weak fine subangular blocky; friable; common fine and medium roots throughout; few fine distinct black (2.5Y 2/1) iron and manganese concretions and few fine distinct light gray (10YR 7/2) clay depletions throughout; neutral; abrupt smooth boundary.

AE—4 to 7 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; weak medium subangular blocky structure; friable; common fine roots throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout; slightly acid; clear smooth boundary.

Bt1—7 to 10 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium subangular blocky structure; friable; few fine roots throughout; few distinct brown (10YR 4/3) clay films on faces of peds; few fine prominent black (2.5Y 2/1) manganese concretions throughout, few fine prominent black (2.5Y 2/1) masses of manganese accumulation between peds, and few fine distinct light brownish gray (10YR 6/2) iron depletions between peds; moderately acid; clear smooth boundary.

Bt2—10 to 22 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few fine roots throughout; common distinct brown (10YR 4/3) clay films on faces of peds; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation, common fine prominent black (2.5Y 2/1) masses of manganese accumulation, and common medium distinct light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear smooth boundary.

Bt3—22 to 34 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure; friable; few fine roots throughout; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; many medium faint brown (10YR 5/3) masses of iron and manganese accumulation, common medium distinct yellowish brown (10YR 5/8) masses of iron accumulation, common fine prominent black (2.5Y 2/1) masses of manganese accumulation, and many medium distinct light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; gradual wavy boundary.

BCt—34 to 50 inches; yellowish brown (10YR 5/4) silt loam; weak coarse prismatic structure; friable; few fine roots throughout; very few distinct dark yellowish brown

(10YR 4/4) clay films in root channels and/or pores; common medium faint brown (10YR 5/3) masses of iron and manganese accumulation and few medium distinct yellowish brown (10YR 5/8) masses of iron accumulation throughout, few fine prominent black (2.5Y 2/1) masses of manganese accumulation between peds, and many medium distinct light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; gradual wavy boundary.

2C1—50 to 65 inches; pale brown (10YR 6/3) silt loam; massive; friable; few fine roots between peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation, common medium faint brown (10YR 5/3) masses of iron and manganese accumulation, and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; many medium faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear wavy boundary.

2C2—65 to 78 inches; pale brown (10YR 6/3) silt loam; massive; friable; few fine roots between peds; many coarse faint yellowish brown (10YR 5/4) and few medium distinct yellowish brown (10YR 5/6) masses of iron accumulation, few fine prominent (2.5Y 2/1) masses of manganese accumulation, and many coarse faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; gradual wavy boundary.

2C3—78 to 85 inches; yellowish brown (10YR 5/4) silt loam; massive; firm; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation, common fine and medium prominent black (2.5Y 2/1) masses of manganese accumulation, and few coarse distinct light brownish gray (10YR 6/2) iron depletions throughout; moderately acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: 24 to 60 inches
Thickness of loess: 24 to 60 inches

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

Bt or Btg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—silty clay loam or silt loam

2C or 2Cg horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam

515C2—Bunkum silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that have more clay in the subsoil
- Soils that have more clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet and with less sand in the lower part of the subsoil and in the underlying material

Dissimilar soils:
- The well drained Rozetta soils on summits
- The somewhat poorly drained Clarksdale and Keomah soils on summits

Properties and Qualities of the Bunkum Soil

Parent material: Loess over silty pedisediment
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 feature: 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: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Bunkum—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Bunkum—not hydric

515C3—Bunkum silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with less clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet and with less sand in the lower part of the subsoil and in the underlying material

Dissimilar soils:
- The well drained Rozetta soils on summits
- The somewhat poorly drained Clarksdale and Keomah soils on summits

Properties and Qualities of the Bunkum Soil

Parent material: Loess over silty pedisediment
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 feature: 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: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: 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: Bunkum—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Bunkum—not hydric

515D2—Bunkum silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with more sand in the subsoil

Dissimilar soils:
- The well drained Rozetta soils upslope from the Bunkum soil
- The well drained Lindley soils on side slopes below the Bunkum soil
- The moderately well drained Winfield soils upslope from the Bunkum soil

Properties and Qualities of the Bunkum Soil

Parent material: Loess over silty pedisediment
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 feature: 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: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Bunkum—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Bunkum—not hydric

515D3—Bunkum silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the surface layer
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with more sand in the subsoil

Dissimilar soils:
- The well drained Rozetta soils upslope from the Bunkum soil
- The moderately well drained Winfield soils upslope from the Bunkum soil

Properties and Qualities of the Bunkum Soil

Parent material: Loess over silty pedisediment
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 feature: 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: 0.0 to 1.0 percent

Shrink-swell potential: Moderate
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Bunkum—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Bunkum—not hydric

Caseyville Series

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

Typical Pedon

Caseyville silt loam, 0 to 2 percent slopes, at an elevation of 715 feet; Pike County, Illinois; 320 feet east and 160 feet north of the southwest corner of sec. 36, T. 7 S., R. 3 W.; USGS Pearl West, Illinois, topographic quadrangle; lat. 39 degrees 23 minutes 52 seconds N. and long. 90 degrees 42 minutes 20 seconds W., NAD 27:

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, grayish brown (10YR 5/2) dry; weak medium granular structure; friable; few fine roots throughout; strongly acid; abrupt smooth boundary.

E—9 to 16 inches; pale brown (10YR 6/3) silt loam; weak thin platy structure; friable; few fine roots throughout; few medium prominent black (2.5Y 2/1) masses of iron and manganese accumulation and few fine faint grayish brown (10YR 5/2) iron depletions throughout; very strongly acid; clear smooth boundary.

Bt1—16 to 22 inches; brown (10YR 5/3) silty clay loam; weak medium subangular blocky structure; firm; very few fine roots throughout; few distinct brown (10YR 4/3) and dark grayish brown (10YR 4/2) clay films on faces of peds; few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation, few fine and medium prominent black (2.5Y 2/1) masses of manganese accumulation, and common fine faint light brownish gray (10YR 6/2) iron depletions throughout; very strongly acid; clear smooth boundary.

Bt2—22 to 36 inches; brown (10YR 5/3) silty clay loam; weak medium subangular blocky structure; firm; very few fine roots throughout; few faint brown (10YR 4/3) and dark grayish brown (10YR 4/2) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation, few medium prominent black (2.5Y 2/1) masses of manganese accumulation, and common medium faint light brownish gray (10YR 6/2) iron depletions throughout; very strongly acid; clear smooth boundary.

Btg—36 to 43 inches; grayish brown (10YR 5/2) silty clay loam; weak medium subangular blocky structure; firm; very few fine roots throughout; few distinct brown (10YR 4/3) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation, few medium prominent black (2.5Y 2/1) masses of manganese accumulation, and common medium faint

light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; gradual smooth boundary.
BCg—43 to 50 inches; 60 percent light brownish gray (10YR 6/2) and 40 percent yellowish brown (10YR 5/6) silt loam; weak coarse subangular blocky structure; friable; few medium prominent black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; gradual smooth boundary.
Cg—50 to 60 inches; 60 percent light brownish gray (10YR 6/2) and 40 percent yellowish brown (10YR 5/6) silt loam; massive; friable; few medium prominent black (2.5Y 2/1) masses of manganese accumulation throughout; slightly acid.

Range in Characteristics

Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: 40 to 76 inches
Slope range: 0 to 5 percent

Ap or A horizon(s):
Hue—10YR
Value—3 to 6
Chroma—1 or 2
Texture—silt loam

E or Eg horizon(s):
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—silt loam

Bt or Btg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 4
Texture—silty clay loam or silt loam

Cg or C horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—1 to 4
Texture—silt loam

Taxadjunct Feature

The Caseyville soils in this survey area are browner in the upper part of the subsoil than is defined as the range for the series. This difference, however, does not significantly affect the use or behavior of the soils. The soils are classified as fine-silty, mixed, superactive, mesic Aquic Hapludalfs.

267A—Caseyville silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The moderately well drained Winfield soils in the more sloping areas
- The well drained Menfro soils in the more sloping areas
- The poorly drained Rushville soils in depressions

Properties and Qualities of the Caseyville Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Caseyville—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Caseyville—not hydric

267B—Caseyville silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet
- Soils with slopes of more than 5 percent

Dissimilar soils:
- The well drained Menfro and Sylvan soils in the more sloping areas

Properties and Qualities of the Caseyville Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Caseyville—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Caseyville—not hydric

Ceresco Series

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

Typical Pedon

Ceresco loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 460 feet; Pike County, Illinois; 1,980 feet south and 40 feet west of the northeast corner of sec. 24, T. 4 S., R. 8 W.; USGS Hannibal East topographical quadrangle; lat. 39 degrees 42 minutes 24 seconds N. and long. 91 degrees 16 minutes 0 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; weak fine subangular blocky structure parting to weak fine granular; very friable; few fine roots throughout; slightly alkaline; clear smooth boundary.

A—9 to 15 inches; very dark grayish brown (10YR 3/2) fine sandy loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; very friable; few fine roots throughout; slightly alkaline; clear smooth boundary.

Bw1—15 to 23 inches; dark grayish brown (10YR4/2) fine sandy loam; moderate fine subangular blocky structure; very friable; few fine faint very dark brown (10YR 2/2) manganese concretions and masses of manganese accumulation throughout; slightly alkaline; gradual smooth boundary.

Bw2—23 to 29 inches; brown (10YR 4/3) fine sandy loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; common faint dark grayish brown (10YR 4/2) coatings on faces of peds; common fine distinct dark brown (7.5YR 3/4) masses of iron and manganese accumulation and common fine distinct black (2.5Y 2/1) manganese concretions throughout; neutral; clear smooth boundary.

Bw3—29 to 38 inches; brown (10YR 4/3) fine sandy loam; weak medium subangular blocky structure; friable; common faint dark yellowish brown (10YR 4/4) coatings on faces of peds; few fine distinct strong brown (7.5YR 4/6) masses of iron accumulation and common medium distinct dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; neutral; gradual smooth boundary.

C1—38 to 51 inches; strong brown (7.5YR 4/6) fine sandy loam; massive; friable; few fine prominent dark brown (7.5YR 3/2) masses of iron and manganese accumulation and few medium distinct yellowish brown (10YR 5/4) masses of iron accumulation throughout; neutral; gradual smooth boundary.
C2—51 to 80 inches; strong brown (7.5YR 4/6), stratified loam and silty clay loam; massive; friable; few fine distinct strong brown (7.5YR 4/8) masses of iron accumulation and few fine prominent dark brown (7.5YR 3/2) masses of iron and manganese accumulation throughout; neutral.

Range in Characteristics

Profile feature: An Ab horizon in some pedons

Ap or A horizon(s):
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, very fine sandy loam, or silt loam

Bw horizon(s):
Value—4 or 5
Chroma—2 to 6
Texture—loam, silt loam, sandy loam, fine sandy loam, loamy fine sand, or very fine sandy loam

C horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—dominantly sandy loam, fine sandy loam, loam, very fine sandy loam, or silt loam; strata of very fine sand in some pedons; gravelly sand at a depth of 30 to 60 inches in some pedons

8395A—Ceresco loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner or lighter colored surface soil
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils with more sand in the surface layer
- Soils with more sand in the upper part of the subsoil

Dissimilar soils:
- The well drained Zumbro soils in the higher landscape positions

- The excessively drained Sarpy soils in the higher landscape positions
- The poorly drained Ambraw soils in depressions

Properties and Qualities of the Ceresco Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Ceresco—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Ceresco—not hydric

8789A—Ambraw-Ceresco-Sarpy complex, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Meander scrolls
Position on landform: Ambraw—toeslopes; Ceresco—shoulders; Sarpy—summits

Map Unit Composition

Ambraw and similar soils: 40 percent
Ceresco and similar soils: 25 percent
Sarpy and similar soils: 20 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils with more clay in the surface layer and subsoil
- Soils with a thicker dark surface soil
- Soils that have slopes of more than 2 percent

Dissimilar soils:
- Very poorly drained soils in depressions and sloughs

Properties and Qualities of the Ambraw Soil

Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow

Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Ceresco Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: Low
Corrosivity: Low for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: Ambraw and Ceresco—2w; Sarpy—4s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ambraw—hydric; Ceresco and Sarpy—not hydric

Clarksdale Series

Taxonomic classification: Fine, smectitic, mesic Udollic Endoaqualfs

Typical Pedon (OSD)

Clarksdale silt loam, 0 to 2 percent slopes, at an elevation of 650 feet; Adams County, Illinois; 800 feet south and 550 feet east of the northwest corner of sec. 16, T. 2 N., R. 7 W.; USGS Loraine, Illinois, topographic quadrangle; lat. 40 degrees 9 minutes 58 seconds N. and long. 91 degrees 13 minutes 17 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; common fine roots throughout; neutral; abrupt smooth boundary.

E—8 to 12 inches; dark grayish brown (10YR 4/2) silt loam; moderate medium platy structure parting to weak very fine subangular blocky; friable; common very fine and fine roots throughout; many distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and in pores and many fine distinct light gray (10YR 7/1 and 7/2) clay depletions between peds; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation lining root channels and pores and few fine faint black (2.5Y 2/1) masses of manganese accumulation throughout; neutral; clear smooth boundary.

BE—12 to 16 inches; grayish brown (10YR 5/2) silt loam; moderate fine subangular blocky structure; friable; few fine roots throughout; common distinct very dark grayish brown (10YR 3/2) organo-clay films on faces of peds and in pores and common fine faint light gray (10YR 7/1) clay depletions between peds; few fine prominent black (2.5Y 2/1) masses of manganese accumulation and common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation throughout; moderately acid; clear smooth boundary.

Bt1—16 to 23 inches; brown (10YR 5/3) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine and fine roots throughout; many faint dark grayish brown (10YR 4/2) clay films on faces of peds and many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; common fine prominent black (2.5Y 2/1) masses of manganese accumulation and common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout; moderately acid; clear smooth boundary.

Bt2—23 to 31 inches; brown (10YR 5/3) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots throughout; many faint grayish brown (10YR 5/2) clay films on faces of peds and many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; many fine distinct yellowish brown (10YR 5/6) and few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation and common fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; common fine faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; gradual wavy boundary.

Btg1—31 to 47 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate coarse prismatic structure parting to moderate coarse subangular blocky; firm; few fine roots throughout; common distinct grayish brown (10YR 5/2) clay films on faces of peds and many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; many fine and medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; few fine faint light brownish gray (10YR 6/2) iron depletions lining root channels and pores; neutral; gradual wavy boundary.

Btg2—47 to 57 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse prismatic structure; firm; few fine roots throughout; common distinct dark grayish brown (10YR 4/2) clay films in root channels and pores; many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; neutral; clear wavy boundary.

BCg—57 to 67 inches; light brownish gray (2.5Y 6/2) silt loam; weak coarse subangular blocky structure; firm; common prominent dark grayish brown (10YR 4/2) clay films in root channels and pores; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and common medium prominent yellowish red (5YR 5/6) masses of iron accumulation throughout; neutral; clear wavy boundary.

Cg—67 to 80 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; few distinct dark grayish brown (10YR 4/2) clay films in root channels and pores; many medium prominent yellowish red (5YR 4/6) and common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation throughout; neutral.

Range in Characteristics

Depth to carbonates: More than 40 inches
Depth to the base of a diagnostic horizon: 40 to 60 inches

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

E or BE horizon(s):
Hue—10YR
Value—4 to 6
Chroma—1 or 2
Texture—silt loam

Bt or Btg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—silty clay loam, silty clay, or silt loam

C or Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—silt loam

257A—Clarksdale silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a lighter colored surface layer
- Soils with a thicker dark surface soil

Dissimilar soils:
- The poorly drained Virden soils in depressions

Properties and Qualities of the Clarksdale Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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: High
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Clarksdale—1
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Clarksdale—not hydric

257B—Clarksdale silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

Clarksdale and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a lighter colored surface layer
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils with more sand in the subsoil

Properties and Qualities of the Clarksdale Soil

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

Available water capacity: 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: High
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Clarksdale—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Clarksdale—not hydric

Coffeen Series

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

Typical Pedon

Coffeen silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 590 feet; Whiteside County, Illinois; 860 feet north and 1,740 feet west of the southeast corner of sec. 24, T. 20 N., R. 3 E.; USGS Erie topographic quadrangle; lat. 41 degrees 42 minutes 09 seconds N. and long. 90 degrees 05 minutes 56 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; neutral; abrupt smooth boundary.
A—9 to 17 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium and fine subangular blocky structure parting to moderate fine granular; friable; neutral; clear smooth boundary.
Bw1—17 to 24 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common fine faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation and common fine faint dark grayish brown (10YR 4/2) iron depletions throughout; neutral; clear smooth boundary.
Bw2—24 to 33 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; common fine faint brown (10YR 5/3) masses of iron and manganese accumulation and common fine faint grayish brown (10YR 5/2) iron depletions throughout; slightly alkaline; clear smooth boundary.
BCg—33 to 46 inches; grayish brown (2.5Y 5/2) silt loam; weak medium subangular blocky structure; friable; common fine prominent strong brown (7.5YR 4/6) masses of iron accumulation, common fine distinct dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation, and common fine prominent black (10YR 2/1) manganese concretions throughout; slightly alkaline; gradual smooth boundary.
Cg—46 to 60 inches; grayish brown (2.5Y 5/2) and brown (10YR 5/3) silt loam; massive; friable; few fine prominent black (10YR 2/1) manganese concretions throughout; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 18 inches

Depth to the base of a diagnostic horizon: 30 to 64 inches

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

Bw, Bg, or BCg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 or 3
Texture—silt loam or silt loam with thin strata of loam or sandy loam

C or Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 8
Chroma—1 to 3
Texture—silt loam or silt loam with thin strata of loam, fine sandy loam, or sandy loam

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

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a thicker surface soil
- Soils with a lighter colored surface soil
- Soils with a buried soil at a depth of 20 to 40 inches

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Coffeen Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.5 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High

Corrosivity: 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: Coffeen—2w
Prime farmland status of the map unit: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Coffeen—not hydric

3428L—Coffeen silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a thicker dark surface layer

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Coffeen Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Coffeen—3w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Coffeen—hydric

8428A—Coffeen silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains (fig. 4)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a lighter colored surface soil
- Soils with a buried soil at a depth of 20 to 40 inches

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Coffeen 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 or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Coffeen—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Coffeen—not hydric

Darwin Series

Taxonomic classification: Fine, smectitic, mesic Fluvaquentic Vertic Endoaquolls

Typical Pedon

Darwin silty clay, 0 to 2 percent slopes, occasionally flooded, at an elevation of 435 feet; Schuyler County, Illinois; 297 feet west and 462 feet north of the center of sec. 11, T. 2 N., R. 2 E.; USGS Astoria topographical quadrangle; lat. 40 degrees 9 minutes 54 seconds N. and long. 90 degrees 15 minutes 1 second W., NAD 27:

Ap—0 to 7 inches; very dark gray (10YR 3/1) silty clay, dark gray (10YR 4/1) dry; moderate fine angular blocky structure; firm; many very fine roots; few fine faint

black (2.5Y 2/1) manganese concretions throughout; neutral; abrupt smooth boundary.

A—7 to 12 inches; very dark gray (10YR 3/1) silty clay, dark gray (10YR 4/1) dry; moderate fine angular blocky structure; very firm; many very fine roots; few fine faint black (2.5Y 2/1) manganese concretions throughout; neutral; abrupt smooth boundary.

Bg1—12 to 18 inches; very dark gray (10YR 3/1) silty clay, dark gray (10YR 4/1) dry; weak medium prismatic structure parting to moderate medium angular blocky; very firm; common very fine roots; many medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation, few medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, and few fine and medium faint black (2.5Y 2/1) manganese concretions throughout; slightly alkaline; clear smooth boundary.

Bg2—18 to 27 inches; dark gray (10YR 4/1) silty clay; moderate medium prismatic structure parting to moderate medium angular blocky; very firm; common very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds and lining pores; common medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, few fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation, and few fine distinct black (2.5Y 2/1) manganese concretions throughout; slightly alkaline; clear smooth boundary.

Bg3—27 to 40 inches; gray (10YR 5/1) silty clay; weak coarse prismatic structure parting to moderate medium angular blocky; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds and lining pores; many medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation, and few fine prominent black (2.5Y 2/1) manganese concretions throughout; slightly alkaline; clear smooth boundary.

Bg4—40 to 45 inches; gray (10YR 5/1) silty clay loam; weak coarse prismatic structure parting to weak medium angular blocky; firm; few very fine roots; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds and lining pores; many medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, common fine prominent brownish yellow (10YR 6/8) masses of iron accumulation, and few fine prominent black (2.5Y 2/1) manganese concretions throughout; slightly alkaline; clear smooth boundary.

BCg—45 to 50 inches; gray (10YR 5/1) silty clay loam; weak medium subangular blocky structure; firm; few very fine roots; few distinct very dark gray (10YR 3/1) organic coatings lining pores; many medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, common fine prominent brownish yellow (10YR 6/8) masses of iron accumulation, and few fine prominent black (2.5Y 2/1) manganese concretions throughout; slightly alkaline; clear smooth boundary.

Cg1—50 to 56 inches; gray (10YR 5/1) silty clay loam; massive; firm; few very fine roots; few distinct very dark gray (10YR 3/1) organic coatings lining pores; many medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, common fine prominent brownish yellow (10YR 6/8) masses of iron accumulation, and few fine prominent black (2.5Y 2/1) manganese concretions; 1 percent fine gravel; slightly alkaline; clear smooth boundary.

Cg2—56 to 60 inches; dark gray (10YR 4/1) silty clay loam; massive; firm; few very fine roots; few distinct very dark gray (10YR 3/1) organic coatings lining pores; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and few fine prominent black (2.5Y 2/1) manganese concretions throughout; many medium faint light gray (10YR 6/1) iron depletions throughout; slightly alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches

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

Bg horizon(s):
Hue—10YR, 2.5Y, 5Y, or N
Value—3 to 6
Chroma—0 to 2
Texture—silty clay, clay, or silty clay loam in the lower part

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

3071L—Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface soil more than 24 inches thick
- Soils that are more acid in the subsoil

Dissimilar soils:
- The somewhat poorly drained Dupo and Orion soils upslope from the Darwin soil

Properties and Qualities of the Darwin Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: Very high
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 1 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete

Surface runoff class: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Darwin—5w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Darwin—hydric

8071A—Darwin silty clay, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface soil more than 24 inches thick
- Soils that are more acid in the subsoil
- Soils with less clay in the surface soil and subsoil

Dissimilar soils:
- The somewhat poorly drained Dupo soils upslope from the Darwin soil

Properties and Qualities of the Darwin Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Very slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: 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: 4.0 to 5.0 percent
Shrink-swell potential: Very high
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 1 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: High
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Darwin—3w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Darwin—hydric

Downsouth Series

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

Typical Pedon

Downsouth silt loam, 2 to 5 percent slopes, at an elevation of 705 feet; Adams County, Illinois; 900 feet south and 30 feet east of the northwest corner of sec. 9, T. 1 S., R. 8 W.; USGS Mendon, Illinois, topographic quadrangle; lat. 40 degrees 0 minutes 18 seconds N. and long. 91 degrees 20 minutes 17 seconds W., NAD 27:

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

E—7 to 11 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium platy structure parting to weak fine granular; friable; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

BE—11 to 15 inches; brown (10YR 4/3) silt loam; weak medium subangular blocky structure; friable; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

Bt1—15 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; friable; common distinct light gray (10YR 7/1) silt coatings and many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—21 to 30 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; common distinct light gray (10YR 7/1) silt coatings and many distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct black (10YR 2/1) manganese concretions throughout; moderately acid; clear smooth boundary.

Bt3—30 to 41 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few distinct light gray (10YR 7/1) silt coatings and common distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct black (10YR 2/1) manganese concretions and few fine distinct strong brown (7.5YR 4/6) masses of iron accumulation throughout; few fine distinct light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear smooth boundary.

Bt4—41 to 51 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure; friable; few distinct light gray (10YR 7/1) silt coatings and common distinct brown (10YR 4/3) clay films on faces of peds; few fine distinct black (10YR 2/1) manganese concretions and few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; few fine distinct light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; gradual smooth boundary.

Bt5—51 to 63 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse prismatic structure; friable; common distinct light gray (10YR 7/1) silt coatings and common distinct brown (10YR 4/3) clay films on faces of peds; few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation and few fine distinct light brownish gray (10YR 6/2) iron depletions throughout; slightly acid; clear smooth boundary.

BC—63 to 73 inches; yellowish brown (10YR 5/4) silt loam; weak coarse prismatic structure; friable; few distinct light gray (10YR 7/1) silt coatings on faces of peds and few distinct brown (10YR 4/3) clay films in root channels and pores; few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation and few fine distinct light brownish gray (10YR 6/2) iron depletions throughout; slightly acid; clear smooth boundary.

C—73 to 80 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few distinct brown (10YR 4/3) clay films in root channels and pores; common fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation and few fine distinct black (10YR 2/1) manganese concretions throughout; common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; slightly acid.

Range in Characteristics

Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: 42 to 70 inches

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

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

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

C horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—5 or 6
Chroma—1 to 4
Texture—silt loam

283B—Downsouth silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

Downsouth and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with slopes of less than 2 percent
- Soils with a thinner and lighter colored surface layer
- Soils with a dark surface soil more than 10 inches thick
- Soils with less clay in the subsoil
- Soils where carbonates are within a depth of 40 inches
- Soils with a seasonal high water table at a depth of less than 2.0 feet
- Soils with more clay in the subsoil

Properties and Qualities of the Downsouth Soil

Parent material: Loess

Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Downsouth—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Downsouth—not hydric

283C2—Downsouth silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

Downsouth and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with a thicker dark surface soil
- Soils with less clay in the subsoil
- Soils with a lighter colored surface layer
- Soils with a seasonal high water table at a depth of more than 3.5 feet
- Soils with a seasonal high water table at a depth of less than 2.0 feet
- Soils with more clay in the subsoil

Properties and Qualities of the Downsouth Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 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
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: 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: Downsouth—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Downsouth—not hydric

Dozaville Series

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

Typical Pedon

Dozaville silt loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of about 140 feet; Pike County, Illinois; 1,240 feet west and 1,680 feet south of the northeast corner of sec. 28, T. 6 S., R. 5 W.; USGS Summer Hill, Illinois, topographic quadrangle; lat. 39 degrees 30 minutes 52 seconds N. and long. 90 degrees 58 minutes 43 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; many fine and medium 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; many fine and medium roots; neutral; clear smooth boundary.
AB—13 to 18 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry, moderate fine subangular blocky structure; friable; many fine and medium roots; common distinct very dark brown (10YR 3/2) organic coatings in root channels and pores and on faces of peds; slightly acid; clear smooth boundary.
Bw1—18 to 30 inches; brown (10YR 4/3) silt loam; moderate fine subangular blocky structure; friable; many fine roots; common distinct very dark brown (10YR 3/2) organic coatings in root channels and pores and on faces of peds; few distinct light brownish gray (10YR 6/2) clay depletions on faces of peds; medium acid; clear smooth boundary.
Bw2—30 to 59 inches; brown (10YR 4/3) silt loam; moderate fine subangular blocky structure; friable; common fine roots; few distinct very dark brown (10YR 3/2) organic coatings in root channels and pores and on faces of peds; few distinct light brownish gray (10YR 6/2) clay depletions on faces of peds; medium acid; clear smooth boundary.
Bw3—59 to 69 inches; brown (10YR 4/3) loam; weak medium subangular blocky structure; friable; few fine roots; few distinct very dark brown (10YR 3/2) organic coatings in root channels and pores and on faces of peds; few distinct light brownish gray (10YR 6/2) silt coatings on faces of peds; medium acid; clear smooth boundary.
BC—69 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; weak coarse subangular blocky structure; friable; few fine roots; very few distinct dark brown (10YR 3/3) organic coatings in root channels and pores; medium acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 23 inches
Depth to the base of a diagnostic horizon: 35 to more than 80 inches
Profile features: A BA or AB horizon in some pedons; buried soils below a depth of 60 inches in some pedons

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

Bw horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 or 4
Texture—silt loam or very fine sandy loam

BC horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 or 4
Texture—silt loam, loam, or very fine sandy loam

2BC or 2C horizon(s), where present:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 4
Texture—loamy fine sand, loamy very fine sand, very fine sand, or fine sand

8674A—Dozaville silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a thicker dark surface soil
- Soils with a lighter colored surface soil
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The somewhat poorly drained Coffeen and Lawson soils in the slightly lower landscape positions

Properties and Qualities of the Dozaville Soil

Parent material: Silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 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
Seasonal high water table: More than 6.0 feet below the surface

Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Dozaville—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Dozaville—not hydric

Drury Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Dystric Eutrudepts

Typical Pedon (OSD)

Drury silt loam, 2 to 5 percent slopes, rarely flooded, at an elevation of about 465 feet; Monroe County, Illinois; approximately 2,380 feet southeast of the intersection of Bluff Road and railroad crossing and 820 feet northeast of railroad tracks, parcel S. 701, C. 495, T. 3 S., R. 11 W.; USGS Selma, Illinois, topographic quadrangle; lat. 38 degrees 13 minutes 52 seconds N. and long. 90 degrees 16 minutes 54 seconds W., NAD 27:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; common very fine and few fine roots; neutral; abrupt smooth boundary.

Bw1—7 to 12 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine subangular blocky structure; friable; few very fine and fine roots; many distinct dark brown (10YR 3/3) organo-clay films on faces of peds and lining pores; neutral; clear smooth boundary.

Bw2—12 to 19 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine prismatic structure parting to moderate fine subangular blocky; friable; few very fine and fine roots; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds and lining pores; neutral; gradual smooth boundary.

Bw3—19 to 26 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; few very fine and fine roots; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds and lining pores; neutral; gradual smooth boundary.

Bw4—26 to 36 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine and fine roots; few distinct dark brown (10YR 3/3) organo-clay films on faces of peds and lining pores; neutral; gradual smooth boundary.

Bw5—36 to 43 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to weak medium subangular blocky; very friable; few very fine roots; few distinct dark brown (10YR 3/3) organo-clay films on faces of peds and lining pores; neutral; gradual smooth boundary.

C1—43 to 70 inches; dark yellowish brown (10YR 4/4) silt loam; massive; very friable; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine rounded prominent black (N 2.5/0) masses of manganese accumulation; neutral; gradual smooth boundary.

C2—70 to 80 inches; dark yellowish brown (10YR 4/4) silt loam; massive; friable; few fine rounded prominent black (N 2.5/0) masses of manganese accumulation; neutral.

Range in Characteristics

Depth to the base of a diagnostic horizon: 26 to 55 inches

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

E horizon(s), where present:
Hue—10YR
Value—4 or 5 (6 or 7 dry)
Chroma—3 or 4
Texture—silt loam or silt

Bw horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6 in the upper part, 2 to 6 in the lower part
Texture—silt loam

C horizon(s):
Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—silt loam

75C—Drury silt loam, 5 to 10 percent slopes

Setting

Landform: Alluvial fans

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with more clay in the subsoil
- Soils with gravel in lower part of the subsoil
- Soils with a darker surface layer

Dissimilar soils:
- The moderately well drained Blyton soils on flood plains
- The well drained Elsah and Haymond soils on flood plains

Properties and Qualities of the Drury Soil

Parent material: Silty local alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent

Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Drury—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Drury—not hydric

75C2—Drury silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Alluvial fans

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with more clay in the subsoil
- Soils with gravel in lower part of the subsoil
- Soils with a darker surface layer

Dissimilar soils:
- The moderately well drained Blyton soils on flood plains
- The well drained Elsah and Haymond soils on flood plains

Properties and Qualities of the Drury Soil

Parent material: Silty local alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.5 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Drury—3e

Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Drury—not hydric

7075B—Drury silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform: Alluvial fans (fig. 5)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with slopes of less than 2 percent
- Soils with more clay in the subsoil
- Soils with gravel in lower part of the subsoil
- Soils with a darker surface layer

Dissimilar soils:
- The well drained Elsah and Haymond soils on flood plains

Properties and Qualities of the Drury Soil

Parent material: Silty local alluvium

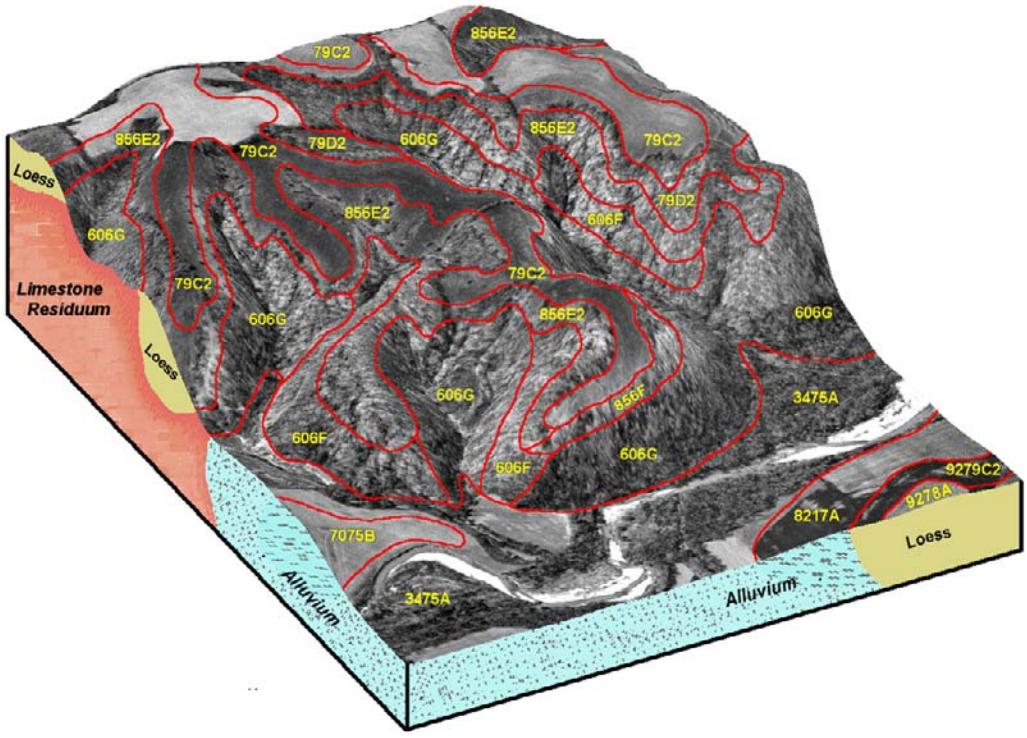


Figure 5.—Typical pattern of forested soils that formed in loess or limestone residuum in moderately sloping to very steep areas on uplands.

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Rare, November-June
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Drury—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Drury—not hydric

Dupo Series

Taxonomic classification: Coarse-silty over clayey, mixed over smectitic, superactive, nonacid, mesic Aquic Udifluvents

Typical Pedon

Dupo silt loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 470 feet; Adams County, Illinois; 800 feet south and 2,100 feet east of the northwest corner of sec. 14, T. 1 N., R. 9 W.; USGS Long Island, Illinois, topographic quadrangle; lat. 40 degrees 4 minutes 47 seconds N. and long. 91 degrees 24 minutes 42 seconds W., NAD 27:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; few very fine roots; common fine faint black (10YR 2/1) masses of manganese accumulation between peds; slightly acid; clear smooth boundary.

C—7 to 25 inches; stratified, 60 percent brown (10YR 4/3), 15 percent brown (10YR 5/3), and 15 percent dark grayish brown (10YR 4/2) silt loam; massive; friable; few very fine roots; common fine and medium faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation throughout; neutral; clear smooth boundary.

Cg—25 to 36 inches; stratified, 80 percent dark gray (10YR 4/1) and 15 percent brown (10YR 5/3) silt loam; massive; friable; common fine and medium distinct dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation throughout; neutral; clear smooth boundary.

2Ab—36 to 51 inches; very dark gray (10YR 3/1) silty clay; weak fine prismatic structure; firm; slightly alkaline; clear smooth boundary.

2Bgb1—51 to 72 inches; dark gray (5Y 4/1) silty clay; moderate medium prismatic structure; firm; common fine prominent brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; neutral; clear smooth boundary.

2Bgb2—72 to 85 inches; gray (5Y 5/1) silty clay; weak medium prismatic structure; firm; common fine prominent black (10YR 2/1) masses of manganese accumulation and many fine and medium prominent brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; neutral.

Range of Characteristics

Depth to a buried soil: 20 to 40 inches
Depth to carbonates: More than 40 inches

Ap or A horizon(s):
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—silt loam or silt

C or Cg horizon(s):
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—dominantly silt loam; strata of silt in some pedons

2Ab horizon(s):
Hue—10YR or N
Value—2 to 4
Chroma—0 to 2
Texture—silty clay, clay, or silty clay loam

2Bgb or 2Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—3 to 6
Chroma—1 or 2
Texture—silty clay, clay, or silty clay loam

8180A—Dupo silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the buried soil layers
- Soils with a buried soil at a depth of more than 40 inches
- Soils with a buried soil at a depth of less than 20 inches

Dissimilar soils:
- The poorly drained Darwin and Titus soils in depressions

Properties and Qualities of the Dupo Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent

Shrink-swell potential: High
Perched seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Dupo—3w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Dupo—not hydric

835G—Earthen Dam

This unit consists of cut and fill areas designed to retain water.

Map Unit Composition

Earthen Dam: 90 percent
Dissimilar components: 10 percent

Minor Components

Dissimilar components:
- Rock or concrete spillways
- Small areas of natural soils
- Small areas of roads or lanes

Interpretive Groups

Land capability classification: Earthen Dam—none assigned
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Earthen Dam—unranked

El Dara Series

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

Typical Pedon (OSD)

El Dara silt loam, 5 to 10 percent slopes, eroded, at an elevation of 775 feet; Adams County, Illinois; 460 feet west and 600 feet north of the southeast corner of sec. 1, T. 3 S., R. 7 W.; USGS Payson, Illinois, topographic quadrangle; lat. 39 degrees 49 minutes 54 seconds N. and long. 91 degrees 8 minutes 56 seconds W., NAD 27:

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak thin platy structure parting to moderate fine subangular blocky; friable; many very fine roots throughout and few fine roots between peds; moderately acid; clear smooth boundary.

Bt1—6 to 9 inches; brown (10YR 5/3) loam; moderate medium subangular blocky structure; friable; common fine roots throughout and many very fine roots between peds; few distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—9 to 17 inches; yellowish brown (10YR 5/4) loam; weak coarse prismatic structure parting to moderate medium subangular blocky; friable; common fine roots throughout and many very fine roots between peds; common distinct light

gray (10YR 7/1) silt coatings on faces of peds and common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; very strongly acid; clear wavy boundary.

Bt3—17 to 27 inches; light yellowish brown (10YR 6/4) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; many very fine roots between peds; few distinct light gray (10YR 7/2) silt coatings on faces of peds and common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation between peds; very strongly acid; clear smooth boundary.

Bt4—27 to 31 inches; light yellowish brown (10YR 6/4) loam; weak medium subangular blocky structure; friable; few very fine roots between peds; very few distinct light gray (10YR 7/2) silt coatings on faces of peds and few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout; very strongly acid; gradual wavy boundary.

Bt5—31 to 39 inches; brownish yellow (10YR 6/6) sandy loam; weak medium subangular blocky structure; friable; few very fine roots between peds; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine faint yellowish brown (10YR 5/6) masses of iron accumulation throughout; very strongly acid; gradual wavy boundary.

Bt6—39 to 53 inches; light yellowish brown (10YR 6/4) sandy loam; weak coarse prismatic structure parting to weak coarse subangular blocky; friable; few very fine roots between peds; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) iron depletions throughout; very strongly acid; clear wavy boundary.

Bt7—53 to 61 inches; light yellowish brown (10YR 6/4) loam; weak coarse prismatic structure; friable; very few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and very few distinct light gray (10YR 7/1) silt coatings on faces of peds; few fine prominent strong brown (7.5YR 5/8) and common medium prominent reddish yellow (7.5YR 6/8) masses of iron accumulation throughout; common medium distinct light brownish gray (10YR 6/2) iron depletions throughout; very strongly acid; clear wavy boundary.

BC—61 to 66 inches; light yellowish brown (10YR 6/4) sandy clay loam; moderate coarse prismatic structure; friable; very few faint yellowish brown (10YR 5/4) clay films and common distinct light gray (10YR 7/1) silt coatings on faces of peds and in pores; common fine prominent strong brown (7.5YR 5/8), common medium prominent reddish yellow (7.5YR 6/8), and common coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout; common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; 1 percent rounded quartzite; very strongly acid; clear wavy boundary.

C1—66 to 78 inches; light yellowish brown (10YR 6/4) sandy clay loam; moderate medium prismatic structure parting to weak medium subangular blocky; friable; very few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; common fine prominent strong brown (7.5YR 5/8), common medium prominent reddish yellow (7.5YR 6/8), and common coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout; common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; clear wavy boundary.

C2—78 to 88 inches; light brownish gray (10YR 6/2) sandy clay loam; weak coarse prismatic structure parting to moderate coarse subangular blocky; friable; very few faint grayish brown (10YR 5/2) clay films and very few faint gray (10YR 5/1) clay films on faces of peds and in pores; few fine prominent strong brown (7.5YR

5/8), common medium prominent reddish yellow (7.5YR 6/8), and common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation throughout; strongly acid; clear wavy boundary.

C3—88 to 96 inches; light brownish gray (10YR 6/2) sandy clay loam; weak coarse prismatic structure; firm; very few faint gray (10YR 6/1) clay films on faces of peds and in pores; few fine prominent brownish yellow (10YR 6/6) masses of iron accumulation throughout; strongly acid.

Range in Characteristics

Thickness of loess: 0 to 20 inches
Depth to the base of a diagnostic horizon: 40 to 80 inches

Ap or A horizon(s):
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

E horizon(s), where present:
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—sandy loam, fine sandy loam, loam, or silt loam

Bt or 2Bt horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—sandy clay loam, clay loam, loam, sandy loam, fine sandy loam, or silty clay loam
Content of rock fragments—0 to 15 percent

C or 2C horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 8
Texture—sandy loam, loamy sand, sand, loam, silt loam, or sandy clay loam
Content of rock fragments—0 to 15 percent

264D3—El Dara sandy loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

El Dara and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils with more clay in the surface layer
- Soils with more clay and less sand in the lower part of the subsoil and in the underlying material

- Soils with less clay and more sand in the subsoil
- Soils with a seasonal high water table at a depth of less than 2.0 feet

Dissimilar soils:
- The well drained Rozetta soils on summits
- The moderately well drained Downsouth and Winfield soils on summits

Properties and Qualities of the El Dara Soil

Parent material: Cretaceous-age loamy sediments
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.4 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
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Corrosivity: High for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: El Dara—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: El Dara—not hydric

264E2—El Dara sandy loam, 18 to 25 percent slopes, eroded

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

El Dara and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils with less sand in the surface layer
- Soils with more clay and less sand in the lower part of the subsoil and in the underlying material
- Soils with less clay and more sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Bunkum and Passport soils upslope from the El Dara soil
- The well drained Goss soils on the lower part of side slopes
- The well drained Stookey soils upslope from the El Dara soil

Properties and Qualities of the El Dara Soil

Parent material: Cretaceous-age loamy sediments
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 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
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: El Dara—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: El Dara—not hydric

264G—El Dara fine sandy loam, 35 to 60 percent slopes

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

El Dara and similar soils: 90 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils with less sand in the surface layer
- Soils with more clay and less sand in the lower part of the subsoil and in the underlying material
- Soils with less clay and more sand in the subsoil

Dissimilar soils:
- The well drained Stookey soils upslope from the El Dara soil
- The well drained Goss soils on the lower part of side slopes

Properties and Qualities of the El Dara Soil

Parent material: Cretaceous-age loamy sediments
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low

Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: High for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderately high

Interpretive Groups

Land capability classification: El Dara—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: El Dara—not hydric

Elco Series

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

Typical Pedon (OSD)

Elco silt loam, 10 to 18 percent slopes, at an elevation of about 575 feet; Sangamon County, Illinois; 2,520 feet east and 2,200 feet south of the northwest corner of sec. 35, T. 15 N., R. 4 W.; USGS New City, Illinois, topographic quadrangle; lat. 39 degrees 42 minutes 26 seconds N. and long. 89 degrees 30 minutes 27 seconds W., NAD 27:

Ap—0 to 4 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; strong very fine granular structure; friable; many roots throughout; slightly acid; clear smooth boundary.

E—4 to 12 inches; brown (10YR 4/3) silt loam; weak thin platy structure parting to moderate very fine granular; friable; many distinct light gray (10YR 7/1 dry) clay depletions on faces of peds; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds and lining pores; few distinct yellowish brown (10YR 5/4) flecks and fragments of subsoil material; slightly acid; clear smooth boundary.

BE—12 to 15 inches; yellowish brown (10YR 5/4) silt loam; moderate very fine and fine subangular blocky structure; friable; few distinct dark brown (10YR 3/3) organic coatings and very few distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few distinct light gray (10YR 7/l dry) clay depletions on faces of peds; few fine prominent black (5YR 2.5/1) manganese concretions throughout; slightly acid; clear smooth boundary.

Bt—15 to 26 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; 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 yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine distinct grayish brown (10YR 5/2) iron depletions along micropores; few fine prominent black (5YR 2.5/1) manganese concretions throughout; slightly acid; clear smooth boundary.

2Btg1—26 to 39 inches; grayish brown (2.5Y 5/2) and yellowish brown (10YR 5/6) silty clay loam; moderate medium and coarse subangular and angular blocky structure; firm; common distinct olive brown (2.5Y 4/4) and brown (10YR 4/3) clay films on faces of peds; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; common very fine prominent black (5YR 2.5/1) manganese concretions throughout; slightly acid; gradual smooth boundary.

3Btg2—39 to 55 inches; grayish brown (2.5Y 5/2) and yellowish brown (10YR 5/6) silty clay; weak medium prismatic structure parting to moderate coarse subangular and angular blocky; firm; many distinct gray (5Y 5/1) clay films on

faces of peds; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; few fine black (5YR 2.5/1) manganese concretions throughout; slightly acid; clear smooth boundary.

3Btg3—55 to 70 inches; grayish brown (2.5Y 5/2) silty clay; moderate fine and medium subangular and angular blocky structure; friable; common distinct gray (5Y 5/1) clay films on faces of peds and in pores; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation in the matrix; few fine black (5YR 2.5/1) manganese concretions throughout; slightly acid; clear smooth boundary.

3Btg4—70 to 80 inches; gray (5Y 5/1) silty clay; moderate coarse subangular blocky structure; firm; common prominent greenish gray (5GY 5/1) clay films on faces of peds; few prominent black (10YR 2/1) organic coatings in root channels and pores; many fine prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; few fine black (5YR 2.5/1) manganese concretions throughout; slightly alkaline.

Range in Characteristics

Depth to the base of a diagnostic horizon: More than 48 inches
Thickness of loess: 20 to 40 inches

Ap or A horizon(s):
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—silt loam or silty clay loam

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

BE horizon(s):
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silty clay loam

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

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

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

119D2—Elco silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of less than 2.0 feet
- Soils with more clay in the surface layer
- Soils with more sand in the subsoil
- Soils with more clay in the subsoil

Dissimilar soils:
- The well drained Rozetta soils on summits
- The moderately well drained Winfield soils on summits

Properties and Qualities of the Elco 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

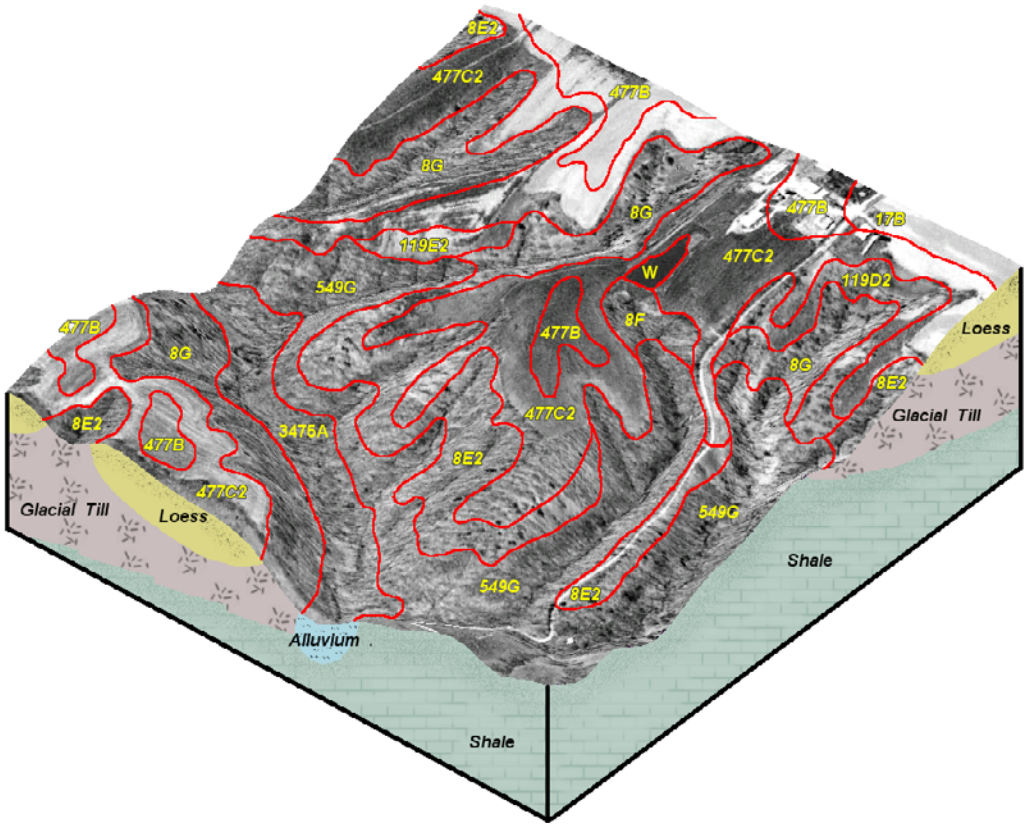


Figure 6.—Typical pattern of forested soils that formed in loess over till, till, or shale residuum in gently sloping to very steep areas on uplands.

Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: 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 2.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: 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: Elco—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Elco—not hydric

119D3—Elco silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of less than 2.0 feet
- Soils with less clay in the surface layer
- Soils with more sand in the subsoil

Dissimilar soils:
- The well drained Rozetta soils on summits
- The moderately well drained Winfield soils on summits

Properties and Qualities of the Elco 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 feature: 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: 0.0 to 1.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High

Corrosivity: 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: Elco—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Elco—not hydric

119E2—Elco silt loam, 18 to 25 percent slopes, eroded

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with more clay in the surface layer
- Soils with more sand in the upper part of the subsoil
- Soils with more clay in the subsoil

Dissimilar soils:
- The well drained Rozetta soils on summits and shoulders
- The somewhat poorly drained Bunkum and Passport soils upslope from the Elco soil

Properties and Qualities of the Elco 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 feature: 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: 1.0 to 2.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Elco—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Elco—not hydric

Elizabeth Series

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

Typical Pedon (OSD)

Elizabeth silt loam, 10 to 18 percent slopes, at an elevation of 750 feet; Jo Davies County, Illinois; 1,900 feet west and 560 feet south of the northeast corner of sec. 10, T. 27 N., R. 2 E.; USGS Hanover topographic quadrangle; lat. 42 degrees 21 minutes 19 seconds N. and long. 90 degrees 16 minutes 9 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 colored silt loam in the cracks in the upper few inches.

Range in Characteristics

Depth to the base of a diagnostic horizon: 7 to 20 inches
Depth to bedrock: 7 to 20 inches
Profile feature: A Cr horizon in some pedons

A horizon(s):
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture (fine-earth fraction)—silt loam, loam, clay loam, or silty clay loam
Content of rock fragments—less than 15 percent in the upper part to more than 90 percent in the lower part

R horizon(s):
Kind of bedrock—fractured limestone

403G—Elizabeth very channery silt loam, 35 to 60 percent slopes

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a lighter colored surface layer

- Soils with bedrock at a depth of 20 to 40 inches
- Soils with a thin subsoil above the bedrock

Dissimilar soils:
- The well drained Goss soils upslope from the Elizabeth soil

Properties and Qualities of the Elizabeth Soil

Parent material: Loamy residuum weathered from limestone
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Unspecified
Depth to restrictive feature (lithic bedrock): 7 to 20 inches
Available water capacity: About 3.0 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: Low for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Not susceptible because of rock fragments on the surface

Interpretive Groups

Land capability classification: Elizabeth—7s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Elizabeth—not hydric

Elsah Series

Taxonomic classification: Loamy-skeletal, mixed, superactive, nonacid, mesic Typic Udifluvents

Typical Pedon

Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 540 feet; Pike County, Illinois; 1,900 feet south and 1,450 feet west of the northeast corner of sec. 8, T. 5 S., R. 6 W.; USGS Barry, Illinois, topographic quadrangle; lat. 39 degrees 38 minutes 55 seconds N. and long. 91 degrees 6 minutes 36 seconds W., NAD 27:

A—0 to 6 inches; 70 percent brown (10YR 5/3) and 30 percent dark brown (10YR 3/3) gravelly loam, light yellowish brown (10YR 6/4) dry; weak medium granular structure; friable; many fine and common coarse roots; 20 percent cherty gravel; neutral; clear wavy boundary.
C1—6 to 12 inches; brown (10YR 5/3) very gravelly loam; massive; friable; common fine and few coarse roots; 25 percent cherty gravel and 15 percent cobbles; slightly effervescent; slightly alkaline; clear wavy boundary.
C2—12 to 29 inches; yellowish brown (10YR 5/6) very gravelly sandy loam; massive; very friable; few medium and coarse roots; 40 percent cherty gravel and 15 percent cobbles; slightly alkaline; gradual wavy boundary.
C3—29 to 42 inches; dark yellowish brown (10YR 4/4) very gravelly sandy loam; massive; friable; few fine and medium roots; 40 percent cherty gravel and 10 percent cobbles; slightly alkaline; clear wavy boundary.

C4—42 to 56 inches; stratified, 60 percent yellowish brown (10YR 5/6) and 40 percent brown (10YR 5/3) gravelly loam; massive; friable; 20 percent cherty gravel and 5 percent cobbles; slightly effervescent; slightly alkaline; clear wavy boundary.
C5—56 to 60 inches; yellowish brown (10YR 5/6) very gravelly sandy loam; massive; very friable; 45 percent cherty gravel and 10 percent cobbles; neutral.

Range in Characteristics

Depth to the base of a diagnostic horizon: 6 to 18 inches
Slope range: 0 to 2 percent

Ap or A horizon(s):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Texture (fine-earth fraction)—silt loam or loam
Content of rock fragments—0 to 60 percent

C horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture (fine-earth fraction)—silt loam, loam, or sandy loam
Content of rock fragments—5 to 85 percent

3475A—Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains (figs. 5 and 6)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with no rock fragments in the surface soil or in the upper part of the underlying material
- Soils that are not frequently flooded
- Soils with slopes of more than 2 percent

Dissimilar soils:
- The somewhat poorly drained Wakeland soils in the slightly lower landscape positions farther from stream channels
- The well drained Haymond soils in landscape positions farther from stream channels
- The well drained Drury soils on alluvial fans
- The excessively drained Sarpy soils, which have more sand and a lower content of rock fragments than the Elsah soil and are in landscape positions similar to those of the Elsah soil
- The poorly drained Birds soils in depressions

Properties and Qualities of the Elsah Soil

Parent material: Gravelly alluvium
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 feature: More than 80 inches
Available water capacity: About 5.6 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
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: Moderate
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Elsah—2s
Prime farmland status of the map unit: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Elsah—not hydric

3475L—Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with no rock fragments in the surface soil or in the upper part of the underlying material
- Soils that are not frequently flooded
- Soils with slopes of more than 2 percent

Dissimilar soils:
- The somewhat poorly drained Wakeland soils in the slightly lower landscape positions farther from stream channels
- The well drained Haymond soils in landscape positions farther from stream channels
- The well drained Drury soils on alluvial fans
- The excessively drained Sarpy soils, which have more sand and a lower content of rock fragments than the Elsah soil and are in landscape positions similar to those of the Elsah soil
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Elsah Soil

Parent material: Gravelly alluvium

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 feature: More than 80 inches
Available water capacity: About 5.6 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
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: Moderate
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Elsah—2s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Elsah—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 685 feet; Warren County, Illinois; 2,100 feet north and 1,700 feet west of the southeast corner of sec. 31, T. 12 N., R. 3 W.; USGS Rozetta topographic quadrangle; lat. 40 degrees 59 minutes 13 seconds N. and long. 90 degrees 46 minutes 18 seconds W., NAD 27:

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

EB—5 to 9 inches; mixed brown (10YR 5/3) and yellowish brown (10YR 5/4) silt loam; weak medium platy structure parting to moderate fine subangular blocky; friable; common fine roots between peds; few distinct 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 distinct 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 distinct 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 distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2 dry) silt coatings on faces of peds; few prominent dark brown (7.5YR 3/2) masses of iron and manganese accumulation 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 distinct dark yellowish brown

(10YR 4/4) clay films on faces of peds; common distinct light gray (10YR 7/2 dry) silt coatings on faces of peds; few distinct dark brown (7.5YR 3/2) masses of iron and manganese accumulation on faces of peds; moderately acid; clear wavy boundary.

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

Range in Characteristics

Depth to the base of a diagnostic horizon: 36 to 70 inches

Ap or A horizon(s):
Hue—10YR
Value—2 to 4
Chroma—1 to 3
Texture—silt loam or silty clay loam

E horizon(s), where present:
Hue—10YR
Value—4 or 5
Chroma—1 to 4
Texture—silt loam

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

C horizon(s):
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 landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner surface soil
- Soils with a darker and thicker surface soil
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with less clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Atterberry and Stronghurst soils in the less sloping areas

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Fayette—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Fayette—not hydric

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

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the subsoil
- Soils with more clay in the surface layer
- Soils with more rock fragments and clay in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Seasonal high water table: More than 6.0 feet below the surface

Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Fayette—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Fayette—not hydric

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

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the subsoil
- Soils with less clay in the surface layer
- Soils with more rock fragments and clay in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Fayette—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Fayette—not hydric

280D2—Fayette silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

Fayette and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with a redder color in the lower part of the subsoil
- Soils with more rock fragments and clay in the lower part of the subsoil

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Fayette—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Fayette—not hydric

280D3—Fayette silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines

Position on landform: Backslopes

Map Unit Composition

Fayette and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the surface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with a redder color in the lower part of the subsoil
- Soils with more rock fragments and clay in the lower part of the subsoil

Properties and Qualities of the Fayette Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Fayette—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Fayette—not hydric

Gorham Series

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

Typical Pedon

Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 470 feet; Adams County, Illinois; 2,300 feet west and 570 feet south of the northeast corner of sec. 34, T. 2 S., R. 9 W.; USGS Quincy Southwest, Illinois, topographic quadrangle; lat. 39 degrees 51 minutes 41 seconds N. and long. 91 degrees 25 minutes 26 seconds W., NAD 27:

Ap—0 to 10 inches; very dark gray (10YR 3/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine subangular blocky structure parting to weak fine granular; firm; few very fine roots; neutral; clear smooth boundary.

Btg1—10 to 15 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak medium subangular blocky structure; friable; few very fine roots; few distinct dark gray

(2.5Y 4/1) clay films on faces of peds; few fine prominent brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; neutral; gradual smooth boundary.

Btg2—15 to 32 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate fine prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; many distinct dark gray (2.5Y 4/1) clay films on faces of peds; few fine prominent brown (7.5YR 4/4) masses of iron and manganese accumulation and few fine distinct gray (10YR 5/1) iron depletions throughout; neutral; gradual smooth boundary.

Btg3—32 to 40 inches; dark grayish brown (2.5Y 4/2) silty clay loam; moderate medium subangular blocky structure; friable; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine distinct brown (7.5YR 4/3) masses of iron and manganese accumulation and few fine faint gray (2.5Y 5/1) iron depletions throughout; neutral; abrupt smooth boundary.

2BCtg—40 to 44 inches; dark grayish brown (2.5Y 4/2) clay loam; moderate medium subangular blocky structure; friable; few distinct dark gray (2.5Y 4/1) clay films on faces of peds; common fine distinct brown (7.5YR 4/3) masses of iron and manganese accumulation and few fine faint gray (2.5Y 5/1) iron depletions throughout; neutral; clear smooth boundary.

2BCg—44 to 50 inches; grayish brown (2.5Y 5/2) loamy fine sand and stratified sandy loam; weak coarse subangular blocky structure; very friable; very few distinct dark grayish brown (10YR 4/2) clay films lining pores; common fine prominent strong brown (7.5YR 4/6) masses of iron accumulation and few fine faint gray (2.5Y 5/1) iron depletions throughout; slightly acid; clear smooth boundary.

2C—50 to 60 inches; yellowish brown (10YR 5/4) sand; single grain; loose; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Thickness of silty or loamy alluvium: More than 40 inches
Depth to the base of a diagnostic horizon: 35 to 60 inches

Ap or A horizon(s):
- Hue—10YR
- Value—2 or 3
- Chroma—1 or 2
- Texture—silty clay loam, silt loam, or silty clay

Btg horizon(s):
- Hue—10YR, 2.5Y, 5Y, or N
- Value—3 to 5
- Chroma—0 to 2
- Texture—silty clay loam or silty clay

2BCtg, 2Bt, 2Btg, 2Bg, or 2BCg horizon(s):
- Hue—7.5YR, 10YR, 2.5Y, 5Y, or N
- Value—3 to 5
- Chroma—0 to 4
- Texture—sandy clay loam, clay loam, loam, sandy loam, loamy sand, or loamy fine sand

2C or 2Cg horizon(s):
- Hue—10YR, 2.5Y, or 5Y
- Value—3 to 6
- Chroma—2 to 6

Texture—sand, loamy sand, or sandy loam

8162A—Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the surface soil and in the upper part of the subsoil
- Soils with less sand in the underlying material
- Soils with a seasonal high water table at a depth of more than 1.0 foot
- Soils with more sand in the surface soil and in the upper part of the subsoil

Dissimilar soils:
- Very poorly drained soils in depressions and sloughs

Properties and Qualities of the Gorham 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 rapid or rapid
Depth to restrictive feature: 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: 4.0 to 5.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Gorham—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Gorham—hydric

Goss Series

Taxonomic classification: Clayey-skeletal, mixed, active, mesic Typic Paleudalfs

Typical Pedon

Goss gravelly silt loam, 35 to 60 percent slopes, at an elevation of 615 feet; Adams County, Illinois; 2,560 feet east and 25 feet south of the northwest corner of sec. 30, T.

3 S., R. 6 W.; USGS Payson, Illinois, topographic quadrangle; lat. 39 degrees 47 minutes 12 seconds N. and long. 91 degrees 8 minutes 17 seconds W., NAD 27:

A—0 to 7 inches; brown (7.5YR 4/2) gravelly silt loam, pinkish gray (7.5YR 6/2) dry; weak fine granular structure; friable; 20 percent cherty gravel; slightly acid; clear wavy boundary.

BE—7 to 11 inches; reddish brown (5YR 4/4) gravelly silt loam; moderate very fine angular blocky structure; firm; few distinct brown (7.5YR 4/3) clay films throughout; 20 percent cherty gravel; moderately acid; clear wavy boundary.

2Bt1—11 to 19 inches; reddish brown (5YR 4/4) very gravelly silty clay; moderate very fine angular blocky structure; firm; common distinct reddish brown (5YR 4/3) clay films on faces of peds and few distinct brown (7.5YR 4/3) clay films throughout; 50 percent cherty gravel and cobbles; moderately acid; gradual wavy boundary.

2Bt2—19 to 30 inches; reddish brown (5YR 4/4) very gravelly silty clay; moderate very fine angular blocky structure; firm; common distinct reddish brown (5YR 4/3) clay films on faces of peds; 50 percent cherty gravel and cobbles; strongly acid; gradual wavy boundary.

2Bt3—30 to 47 inches; reddish brown (5YR 4/4) very gravelly clay; moderate very fine angular blocky structure; firm; few distinct reddish brown (2.5YR 4/4) clay films on faces of peds; 50 percent cherty gravel and cobbles; strongly acid; gradual wavy boundary.

2Bt4—47 to 62 inches; reddish brown (5YR 4/4) very gravelly clay; moderate very fine angular blocky structure; firm; few distinct reddish brown (5YR 4/3) clay films on faces of peds; 55 percent cherty gravel and cobbles; strongly acid; gradual wavy boundary.

2Bt5—62 to 80 inches; 49 percent yellowish red (5YR 5/6) and 49 percent dark reddish brown (5YR 3/3) very gravelly clay; moderate very fine angular blocky structure; firm; few distinct reddish brown (5YR 4/3) clay films on faces of peds; 55 percent cherty gravel and cobbles; strongly acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: More than 60 inches

Ap or A horizon(s):
- Hue—7.5YR or 10YR
- Value—2 to 4
- Chroma—2 to 4
- Texture (fine-earth fraction)—silt loam or loam
- Content of rock fragments—0 to 60 percent

E horizon(s), where present:
- Hue—7.5YR or 10YR
- Value—4 to 6
- Chroma—3 or 4
- Texture (fine-earth fraction)—silt loam, loam, or silty clay loam
- Content of rock fragments—15 to more than 60 percent

2Bt horizon(s):
- Hue—7.5YR or 10YR
- Value—3 to 5
- Chroma—4 to 8
- Texture (fine-earth fraction)—silty clay loam, silty clay, or clay
- Content of rock fragments—15 to more than 60 percent

606F—Goss gravelly silt loam, 18 to 35 percent slopes

Setting

Landform: Hillslopes (fig. 5)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with slopes of less than 18 percent
- Soils with less clay and a lower content of rock fragments in the subsoil
- Soils with shale residuum in the lower part of the subsoil

Dissimilar soils:
- The somewhat excessively drained Elizabeth soils downslope from the Goss soil
- The well drained Baylis, Seaton, and Stookey soils upslope from the Goss soil

Properties and Qualities of the Goss Soil

Parent material: Clayey residuum weathered from cherty limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.6 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Goss—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Goss—not hydric

606G—Goss gravelly silt loam, 35 to 60 percent slopes

Setting

Landform: Hillslopes (fig. 5)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with slopes of more than 60 percent
- Soils with slopes of less than 35 percent
- Soils with less clay and a lower content of rock fragments in the subsoil
- Soils with shale residuum in the lower part of the subsoil

Dissimilar soils:
- The somewhat excessively drained Elizabeth soils downslope from the Goss soil
- The well drained Baylis, Seaton, and Stookey soils upslope from the Goss soil

Properties and Qualities of the Goss Soil

Parent material: Clayey residuum weathered from cherty limestone
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.6 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Goss—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Goss—not hydric

Hamburg Series

Taxonomic classification: Coarse-silty, mixed, superactive, calcareous, mesic Typic Udorthents

Typical Pedon

Hamburg silt loam, 35 to 60 percent slopes, at an elevation of 620 feet; Cass County, Illinois; 450 feet north and 810 feet west of the center of sec. 5, T. 18 N., R. 9 W.; USGS Chanderville, Illinois, topographic quadrangle; lat. 40 degrees 2 minutes 28 seconds N. and long. 90 degrees 8 minutes 16 seconds W., NAD 27:

A1—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine and medium granular structure; friable; common very fine roots throughout; strongly effervescent; moderately alkaline; abrupt smooth boundary.

C1—7 to 11 inches; brown (10YR 4/3) silt loam; massive; friable; common very fine roots throughout; violently effervescent; moderately alkaline; clear smooth boundary.

C2—11 to 39 inches; yellowish brown (10 YR 5/4) silt; massive; friable; few very fine roots throughout; violently effervescent; moderately alkaline; gradual smooth boundary.

C3—39 to 60 inches; light yellowish brown (10 YR 6/4) silt; massive; friable; few very fine roots throughout; violently effervescent; moderately alkaline.

Range in Characteristics

Depth to carbonates: Less than 6 inches

A horizon(s):
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Texture—silt loam, silt, or very fine sandy loam

AC horizon(s), where present:
Hue—10YR
Value—4 to 6
Chroma—3 or 4
Texture—silt loam, silt, or very fine sandy loam

C horizon(s):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam, silt, or very fine sandy loam

30F—Hamburg silt loam, 18 to 35 percent slopes

Setting

Landform: Loess bluffs
Position on landform: Backslopes

Map Unit Composition

Hamburg and similar soils: 85 percent
Dissimilar components: 15 percent

Minor Components

Similar soils:
- Soils with slopes of less than 18 percent

Dissimilar components:
- The well drained Seaton, Stookey, and Timula soils upslope from the Hamburg soil
- Bedrock outcrops on the lower parts of the backslopes

Properties and Qualities of the Hamburg Soil

Parent material: Calcareous loess
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None

Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hamburg—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Hamburg—not hydric

30G—Hamburg silt loam, 35 to 60 percent slopes

Setting

Landform: Loess bluffs
Position on landform: Backslopes

Map Unit Composition

Hamburg soil: 85 percent
Dissimilar components: 15 percent

Minor Components

Dissimilar components:
- The well drained Lacrescent soils downslope from the Hamburg soil
- The well drained Seaton and Timula soils on side slopes and summits upslope from the Hamburg soil
- Bedrock outcrops on the lower part of the backslopes

Properties and Qualities of the Hamburg Soil

Parent material: Calcareous loess
Drainage class: Somewhat excessively drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hamburg—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Hamburg—not hydric

Haymond Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts

Typical Pedon

Haymond silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 525 feet; Adams County, Illinois; 715 feet south and 2,480 feet east of the northwest corner of sec. 15, T. 2 N., R. 8 W.; USGS Tioga, Illinois, topographic quadrangle; lat. 40 degrees 10 minutes 0 seconds N. and long. 91 degrees 18 minutes 31 seconds W., NAD 27:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; common fine and few very fine roots; neutral; abrupt smooth boundary.
Bw1—7 to 14 inches; brown (10YR 4/3) silt loam; moderate fine granular structure; friable; common fine and many very fine roots; neutral; clear smooth boundary.
Bw2—14 to 25 inches; brown (10YR 4/3) silt loam; weak fine granular structure; friable; common very fine and fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; gradual wavy boundary.
Bw3—25 to 39 inches; brown (10YR 4/3) silt loam; weak fine granular structure; friable; few fine and common very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; gradual wavy boundary.
Bw4—39 to 58 inches; brown (10YR 4/3) silt loam; weak fine granular structure; friable; few fine and common very fine roots; neutral; clear wavy boundary.
Bw5—58 to 69 inches; brown (10YR 4/3) silt loam; weak medium granular structure; friable; few fine and common very fine roots; neutral; clear wavy boundary.
C—69 to 86 inches; brown (10YR 5/3) silt loam; massive; friable; few fine and common very fine roots; neutral.

Range in Characteristics

Depth to the base of a diagnostic horizon: 30 to 70 inches

Ap or A horizon(s):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silt

Bw horizon(s):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam

C horizon(s):
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam, fine sandy loam, sandy loam, or loam
Content of rock fragments—0 to 5 percent

3331A—Haymond silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with carbonates in the underlying material
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Orion and Wakeland soils in the slightly lower landscape positions
- The excessively drained Sarpy soils in the slightly higher landscape positions
- The well drained Elsah soils in areas closer to stream channels
- The poorly drained Beaucoup soils in depressions
- The poorly drained Twomile soils in the slightly higher areas

Properties and Qualities of the Haymond Soil

Parent material: Silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

3331L—Haymond silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with carbonates in the underlying material
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with more clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Orion and Wakeland soils in the slightly lower landscape positions
- The excessively drained Sarpy soils in the slightly lower landscape positions
- The well drained Elsah soils in areas closer to stream channels
- The poorly drained Beaucoup soils in sloughs and depressions

Properties and Qualities of the Haymond Soil

Parent material: Silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Haymond—2w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Haymond—hydric

8331A—Haymond silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 6.0 feet

Dissimilar soils:
- The somewhat poorly drained Orion and Wakeland soils in the slightly lower landscape positions
- The poorly drained Beaucoup soils in depressions
- The excessively drained Sarpy soils in the slightly higher landscape positions

Properties and Qualities of the Haymond Soil

Parent material: Silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.5 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
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Haymond—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Haymond—not hydric

Hickory Series

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

Typical Pedon

Hickory silt loam, 35 to 60 percent slopes, at an elevation of 565 feet; Cass County, Illinois; 1,935 feet north and 2,130 feet west of the southeast corner of sec. 27, T. 18 N., R. 9 W.; USGS Ashland, Illinois, topographic quadrangle; lat. 39 degrees 58 minutes 47 seconds N. and long. 90 degrees 5 minutes 46 seconds W., NAD 27:

A1—0 to 1 inch; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many very fine roots; slightly acid; abrupt smooth boundary.

A2—1 to 4 inches; 90 percent dark grayish brown (10YR 4/2) and 10 percent brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine subangular blocky and granular structure; friable; many very fine roots; moderately acid; abrupt smooth boundary.

E—4 to 8 inches; brown (10YR 5/3) loam, light gray (10YR 7/2) dry; moderate thin platy structure; friable; few very fine and fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; common fine distinct very pale brown (10YR 8/2) clay depletions between peds; 3 percent gravel; strongly acid; abrupt smooth boundary.

BE—8 to 12 inches; yellowish brown (10YR 5/4) loam, light gray (10YR 7/2) dry; moderate very fine and fine subangular blocky structure; friable; few very fine roots; very few faint brown (10YR 5/3) and very few distinct dark grayish brown (10YR 4/2) organic coatings in root channels and pores; common fine prominent

very pale brown (10YR 8/2) clay depletions between peds; 3 percent gravel; strongly acid; clear smooth boundary.

Bt1—12 to 22 inches; yellowish brown (10YR 5/4) clay loam; moderate fine and medium subangular blocky structure; firm; few very fine roots; common faint dark yellowish brown (10YR 4/4) clay films and common distinct very pale brown (10YR 7/3) silt coatings on faces of peds; 5 percent gravel; very strongly acid; clear smooth boundary.

Bt2—22 to 29 inches; yellowish brown (10YR 5/4) clay loam; moderate fine and medium subangular blocky structure; firm; few very fine roots; many faint dark yellowish brown (10YR 4/4) clay films and few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; 5 percent gravel; strongly acid; clear smooth boundary.

Bt3—29 to 40 inches; yellowish brown (10YR 5/4) clay loam; moderate medium prismatic and subangular blocky structure; firm; few very fine roots; many distinct brown (7.5YR 4/4) clay films and very few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; 5 percent gravel; moderately acid; clear smooth boundary.

Bt4—40 to 53 inches; yellowish brown (10YR 5/6) clay loam; weak medium prismatic and weak medium and coarse subangular blocky structure; firm; few very fine roots; many distinct brown (7.5YR 4/4) clay films on faces of peds; few prominent fine black (10YR 2/1) masses of manganese accumulation throughout; 5 percent gravel; moderately acid; gradual smooth boundary.

BCt—53 to 58 inches; yellowish brown (10YR 5/6) loam; weak medium prismatic and weak medium and coarse subangular blocky structure; firm; few very fine roots; common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine prominent black (10YR 2/1) masses of manganese accumulation and common distinct brown (10YR 5/3) iron depletions throughout; 5 percent gravel; neutral; gradual smooth boundary.

C—58 to 63 inches; yellowish brown (10YR 5/6) loam; massive; firm; very few distinct brown (7.5YR 4/4) clay films in root channels and/or pores; few prominent fine black (10YR 2/1) masses of manganese accumulation and many fine prominent light brownish gray (2.5Y 6/2) iron depletions throughout; 3 percent gravel; slightly alkaline.

Range in Characteristics

Depth to carbonates: More than 40 inches
Depth to the base of a diagnostic horizon: More than 40 inches
Thickness of loess: Less than 20 inches

Ap or A horizon(s):
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—2 to 4
Texture—silt loam, loam, clay loam, or silty clay loam
Content of rock fragments—0 to 5 percent

E horizon(s):
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or loam
Content of rock fragments—0 to 5 percent

Bt horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6

Chroma—3 to 6
Texture—clay loam, silty clay loam, loam, or gravelly clay loam
Content of rock fragments—0 to 20 percent

C horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—5 to 7
Chroma—1 to 8
Texture—loam, clay loam, sandy loam, or the gravelly analogs of those textures
Content of rock fragments—2 to 20 percent

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

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material
- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with less sand in the surface soil and in the upper part of the subsoil and with more clay in the lower part of the subsoil

Dissimilar soils:
- The well drained Fayette, Menfro, and Rozetta soils on summits
- The moderately well drained Winfield soils on summits

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hickory—3e
Prime farmland status of the map unit: Not prime farmland

Hydric soil status: Hickory—not hydric

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

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material
- Soils with more clay in the subsoil
- Soils with less clay in the surface layer
- Soils with less sand in the surface soil and in the upper part of the subsoil and with more clay in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Passport soils upslope from the Hickory soil

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.4 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hickory—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Hickory—not hydric

8E2—Hickory loam, 18 to 25 percent slopes, eroded

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material
- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with less sand in the surface soil and in the upper part of the subsoil
- Soils with less sand in the surface soil and in the upper part of the subsoil and with more clay in the lower part of the subsoil

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits and shoulders
- The well drained Goss and Marseilles soils downslope from the Hickory soil

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.1 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hickory—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Hickory—not hydric

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

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material

- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with less sand in the surface soil and in the upper part of the subsoil
- Soils with less sand in the surface soil and in the upper part of the subsoil and with more clay in the lower part of the subsoil

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits and shoulders
- The well drained Goss and Marseilles soils downslope from the Hickory soil

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.5 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hickory—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Hickory—not hydric

8G—Hickory silt loam, 35 to 60 percent slopes

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material
- Soils with more clay in the subsoil
- Soils with less sand in the surface soil and in the upper part of the subsoil

Dissimilar soils:
- The moderately well drained Elco soils upslope from the Hickory soil
- The well drained Fayette and Menfro soils on summits and shoulders
- The well drained Goss and Marseilles soils downslope from the Hickory soil

Properties and Qualities of the Hickory Soil

Parent material: Loamy till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.2 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Hickory—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Hickory—not hydric

Ipava Series

Taxonomic classification: Fine, smectitic, mesic Aquic Argiudolls

Typical Pedon (OSD)

Ipava silt loam, 0 to 2 percent slopes, at an elevation of 623 feet; Knox County, Illinois; 2,046 feet west and 594 feet north of the southeast corner of sec. 25, T. 13 N., R. 2 E.; USGS Oneida topographic quadrangle; lat. 41 degrees 04 minutes 48 seconds N. and long. 90 degrees 13 minutes 03 seconds W., NAD 27:

Ap—0 to 10 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; moderate fine and medium subangular blocky structure; friable; moderately acid; abrupt smooth boundary.

A—10 to 18 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; friable; common faint black (10YR 2/1) organic coatings on faces of peds; moderately acid; clear smooth boundary.

BA—18 to 24 inches; brown (10YR 4/3) silty clay loam; moderate fine and medium subangular blocky structure; friable; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; few distinct yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; few fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; moderately acid; clear smooth boundary.

Btg1—24 to 31 inches; dark grayish brown (10YR 4/2) silty clay; moderate fine prismatic structure parting to moderate fine subangular blocky; friable; common distinct dark gray (10YR 4/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix; slightly acid; clear smooth boundary.

Btg2—31 to 37 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; friable; common

distinct dark gray (10YR 4/1) clay films on faces of peds; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) very weakly cemented manganese concretions throughout; few fine prominent black (7.5YR 2.5/1) manganese stains on faces of peds; common fine faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; slightly alkaline; gradual smooth boundary.

BCg—37 to 50 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium angular blocky; friable; few distinct very dark grayish brown (10YR 3/2) organo-clay films lining pores and on a few vertical faces of peds; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) very weakly cemented manganese concretions throughout; common fine prominent black (7.5YR 2.5/1) manganese stains on faces of peds; common fine faint light brownish gray (2.5Y 6/2) iron depletions in the matrix; slightly alkaline; clear smooth boundary.

Cg—50 to 60 inches; light brownish gray (2.5Y 6/2) silt loam; massive; friable; few faint very dark grayish brown (10YR 3/2) organo-clay films lining pores; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation in the matrix; few fine prominent black (7.5YR 2.5/1) very weakly cemented manganese concretions throughout; few fine prominent black (7.5YR 2.5/1) manganese stains on faces of vertical cracks; moderately alkaline.

Range in Characteristics

Depth to carbonates: More than 40 inches
Depth to the base of a diagnostic horizon: 35 to 55 inches
Thickness of the mollic epipedon: 10 to 24 inches

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

Bt or Btg horizon(s):
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—2 to 4
Texture—silty clay loam, silty clay, or silt loam

Cg or C horizon(s):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—1 to 4
Texture—silt loam or silty clay loam

43A—Ipava silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a light colored subsurface layer
- Soils with a thinner dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The well drained Wakenda soils in the more sloping areas
- The poorly drained Virden soils in depressions

Properties and Qualities of the Ipava Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.6 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Ipava—1
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Ipava—not hydric

43B—Ipava silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a light colored subsurface layer
- Soils with a thinner dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The well drained Wakenda soils in the higher landscape positions

Properties and Qualities of the Ipava Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 4.0 to 5.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Ipava—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Ipava—not hydric

Jules Series

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

Typical Pedon (OSD)

Jules silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 540 feet; Peoria County, Illinois; 2,200 feet east and 75 feet south of the northwest corner of sec. 36, T. 10 N., R. 6 E.; USGS Oak Hills topographic quadrangle; lat. 40 degrees 48 minutes 47 seconds N. and long. 89 degrees 46 minutes 3 seconds W., NAD 27:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; some yellowish brown (10YR 5/4) peds; moderate medium granular structure; friable; few very fine roots; common faint very dark grayish brown (10YR 3/2) organic films on faces of peds; slightly effervescent; slightly alkaline; clear smooth boundary.

C1—8 to 18 inches; stratified dark grayish brown (10YR 4/2), very dark grayish brown (10YR 3/2), and yellowish brown (10YR 5/4) silt loam with very thin strata of loam; thin bedding planes along strata; massive; friable; few very fine roots; slightly effervescent; slightly alkaline; clear smooth boundary.

C2—18 to 32 inches; stratified dark grayish brown (10YR 4/2), very dark grayish brown (10YR 3/2), and yellowish brown (10YR 5/4) silt loam with thin strata of very fine sandy loam and loam; thin bedding planes along strata; massive; friable; few very fine roots; slightly effervescent; slightly alkaline; clear smooth boundary.

C3—32 to 46 inches; stratified dark grayish brown (10YR 4/2), very dark grayish brown (10YR 3/2), and yellowish brown (10YR 5/4) silt loam with thin strata of loamy sand and loam; thin bedding planes along strata; massive; friable; slightly effervescent; slightly alkaline; clear smooth boundary.

C4—46 to 60 inches; stratified brown (10YR 4/3), dark grayish brown (10YR 4/2), very dark grayish brown (10YR 3/2), and yellowish brown (10YR 5/4) silt loam with thin strata of loamy sand and loam; thin bedding planes along strata;

massive; friable; common fine masses of iron and manganese accumulation; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to the base of a diagnostic horizon: Less than 10 inches
Depth to carbonates: Less than 10 inches

Ap or A horizon(s):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or loam

C horizon(s):
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam or silt with thin strata of loam, very fine sandy loam, fine sandy loam, loamy sand, or sand

3028A—Jules silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with carbonates at the surface
- Soils with a darker surface layer
- Soils with more sand or gravel in the lower part of the underlying material

Dissimilar soils:
- The somewhat poorly drained Orion and Wakeland soils in the slightly lower landscape positions
- The well drained Drury soils on alluvial fans
- The poorly drained Birds soils in depressions

Properties and Qualities of the Jules Soil

Parent material: Silty alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 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
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June

Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

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

Kendall Series

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

Typical Pedon (OSD)

Kendall silt loam, 0 to 2 percent slopes, at an elevation of about 650 feet; Douglas County, Illinois; about 1,160 feet north and 400 feet west of the center of sec. 36, T. 15 N., R. 10 E.; USGS Oakland topographic quadrangle; lat. 39 degrees 42 minutes 24 seconds N. and long. 88 degrees 2 minutes 17 seconds W., NAD 27:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, light grayish brown (10YR 6/2) dry; weak medium granular structure; friable; many very fine and fine roots; few fine and medium distinct black (7.5YR 2.5/1) manganese nodules throughout; neutral; abrupt smooth boundary.

E—7 to 11 inches; grayish brown (10YR 5/2) silt loam; moderate fine and medium granular structure; friable; many very fine and fine roots; common fine and medium distinct black (7.5YR 2.5/1) manganese nodules throughout; slightly acid; clear smooth boundary.

BE—11 to 14 inches; brown (10YR 5/3) silty clay loam; moderate fine subangular blocky structure; firm; many very fine and fine roots; common fine and medium distinct black (7.5YR 2.5/1) manganese nodules throughout; slightly acid; clear smooth boundary.

Btg1—14 to 25 inches; grayish brown (10YR 5/2) silty clay loam; moderate fine and medium prismatic structure parting to moderate fine and medium subangular blocky; firm; few very fine and fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; few medium distinct black (7.5YR 2.5/1) manganese nodules throughout; common fine faint brown (10YR 5/3) masses of iron and manganese accumulation in the matrix; strongly acid; clear smooth boundary.

Btg2—25 to 41 inches; grayish brown (2.5Y 5/2) silty clay loam; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; firm; few very fine and fine roots; common distinct dark grayish brown (10YR 4/2) clay films on faces of peds; few medium distinct black (7.5YR 2.5/1) manganese nodules throughout; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation in the matrix; moderately acid; clear smooth boundary.

Btg3—41 to 51 inches; 55 percent yellowish brown (10YR 5/6) and 45 percent gray (5Y 5/1) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; firm; few very fine and fine roots; common distinct gray (10YR 5/1) clay films on faces of peds; few medium prominent black (7.5YR 2.5/1) manganese nodules throughout; slightly acid; clear smooth boundary.

2Btg4—51 to 58 inches; 40 percent strong brown (7.5YR 5/6), 30 percent yellowish brown (10YR 5/6), and 30 percent gray (5Y 5/1) loam; weak coarse subangular blocky structure; friable; few distinct discontinuous dark gray (10YR 4/1) clay films on faces of peds; common fine and medium prominent black (7.5YR 2.5/1) manganese nodules throughout; about 5 percent fine gravel; neutral; clear smooth boundary.

2Cg1—58 to 74 inches; 45 percent yellowish brown (10YR 5/6), 45 percent gray (5Y 5/1), and 10 percent strong brown (7.5YR 5/6), stratified loam, sandy loam, and silt loam; massive; friable; about 5 percent fine gravel; slightly alkaline; abrupt smooth boundary.

2Cg2—74 to 80 inches; 60 percent grayish brown (10YR 5/2), 30 percent gray (10YR 5/1), and 10 percent yellowish brown (10YR 5/6), stratified gravelly loam, gravelly sandy loam, and silt loam; massive; friable; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: 40 inches or more
Depth to the base of a diagnostic horizon: 40 to more than 60 inches
Thickness of loess: 40 to 60 inches

Ap or A horizon(s):
Hue—10YR
Value—2 to 5 (2 or 3 in A horizons less than 7 inches thick)
Chroma—1 to 3
Texture—silt loam

E or Eg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—2 or 3
Texture—silt loam

BE horizon(s), where present:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silty clay loam

Btg or Bt horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—silty clay loam

2Btg, 2Bt, 2BCg, or 2BC horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—loam, clay loam, silt loam, or sandy loam

2Cg or 2C horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—stratified silt loam, loam, sandy loam, clay loam, silty clay loam, sandy clay loam, or the gravelly analogs of those textures

7242A—Kendall silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landform: Flood-plain steps

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker surface layer
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils with more clay in the subsoil
- Soils with less sand in the lower part of the subsoil and in the underlying material

Dissimilar soils:
- The poorly drained Vesser soils on flood plains

Properties and Qualities of the Kendall 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: Moderate
Depth to restrictive feature: 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: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Frequency and most likely period of flooding: Rare, November-June
Potential for frost action: High
Corrosivity: 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: Kendall—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Kendall—not hydric

Keomah Series

Taxonomic classification: Fine, smectitic, mesic Aeric Endoaqualfs

Typical Pedon

Keomah silt loam, 0 to 2 percent slopes, at an elevation of 655 feet; Adams County, Illinois; 2,495 feet south and 300 feet west of the northeast corner of sec. 4, T. 2 N., R. 7 W.; USGS Loraine topographic quadrangle; lat. 40 degrees 11 minutes 24 seconds N. and long. 91 degrees 12 minutes 14 seconds W., NAD 27:

Ap1—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak thick platy structure parting to weak fine subangular

blocky; friable; many very fine and fine roots; moderately acid; abrupt smooth boundary.

Ap2—6 to 11 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak medium platy structure parting to weak fine subangular blocky; friable; common very fine and fine roots; few distinct brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; moderately acid; abrupt smooth boundary.

E—11 to 18 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak medium platy structure parting to weak fine subangular blocky; friable; common fine roots; few faint dark grayish brown (10YR 4/2) coatings on faces of peds and in pores; few faint light gray (10YR 7/2) clay depletions throughout; few prominent black (2.5Y 2/1) masses of manganese accumulation and few prominent strong brown (7.5YR 5/6) masses of iron accumulation throughout; slightly acid; clear smooth boundary.

Bt1—18 to 25 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate fine subangular blocky; firm; common fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent strong brown (7.5YR 5/6) masses of iron accumulation, common prominent black (2.5Y 2/1) masses of manganese accumulation, and few faint grayish brown (10YR 5/2) iron depletions throughout; strongly acid; clear smooth boundary.

Bt2—25 to 33 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; common prominent black (2.5Y 2/1) masses of manganese accumulation and many prominent strong brown (7.5YR 5/6) masses of iron accumulation throughout; strongly acid; clear smooth boundary.

Bt3—33 to 44 inches; brown (10YR 5/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; many prominent strong brown (7.5YR 5/6) masses of iron accumulation, common prominent black (2.5Y 2/1) masses of manganese accumulation, and common faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear smooth boundary.

Bt4—44 to 51 inches; light brownish gray (10YR 6/2) silty clay loam; weak coarse prismatic structure; firm; few fine roots; few distinct dark grayish brown (10YR 4/2) clay films in root channels and/or pores; few prominent black (2.5Y 2/1) masses of manganese accumulation and many prominent strong brown (7.5YR 5/6) masses of iron accumulation throughout; moderately acid; clear smooth boundary.

BC1—51 to 63 inches; light brownish gray (10YR 6/2) silt loam; weak coarse prismatic structure; friable; few very fine roots; common distinct very dark grayish brown (10YR 3/2) organo-clay films in root channels and/or pores; many prominent strong brown (7.5YR 5/6) masses of iron accumulation and few prominent black (2.5Y 2/1) masses of manganese accumulation throughout; slightly acid; clear smooth boundary.

BC2—63 to 76 inches; light brownish gray (10YR 6/2) silt loam; weak coarse prismatic structure; friable; common distinct very dark grayish brown (10YR 3/2) organo-clay films in root channels and/or pores; few prominent black (2.5Y 2/1) masses of manganese accumulation and many prominent strong brown (7.5YR 5/6) masses of iron accumulation throughout; slightly acid; clear smooth boundary.

C—76 to 89 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few distinct strong brown (7.5YR 5/6) masses of iron accumulation, few prominent black

(2.5Y 2/1) masses of manganese accumulation, and common distinct light brownish gray (10YR 6/2) iron depletions throughout; slightly acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: 40 to 76 inches

Ap or A horizon(s):
Hue—10YR
Value—3 or 4 (3 in horizons less than 3 inches thick)
Chroma—1 or 2
Texture—silt loam

E horizon(s):
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—silt loam

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

C horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 6
Texture—silty clay loam or silt loam

17A—Keomah silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface layer

Dissimilar soils:
- The well drained Rozetta soils in the more sloping areas
- The poorly drained Rushville soils in depressions

Properties and Qualities of the Keomah Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: 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: High
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Keomah—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Keomah—not hydric

17B—Keomah silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The well drained Navlys and Rozetta soils in the more sloping areas

Properties and Qualities of the Keomah Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: 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: High
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Keomah—2e
Prime farmland status of the map unit: Prime farmland in all areas

Hydric soil status: Keomah—not hydric

Keswick Series

Taxonomic classification: Fine, smectitic, mesic Oxyaquic Vertic Hapludalfs

Typical Pedon

Keswick loam, 18 to 25 percent slopes, eroded, at an elevation of 650 feet; Adams County, Illinois; 2,550 feet west and 900 feet north of the southeast corner of sec. 24, T. 2 N., R. 8 W.; USGS Tioga, Illinois, topographic quadrangle; lat. 40 degrees 8 minutes 28.7 seconds N. and long. 91 degrees 16 minutes 8.5 seconds W., NAD 27:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; many fine and medium roots throughout; neutral; clear smooth boundary.

Bt1—8 to 12 inches; 75 percent strong brown (7.5YR 4/6) and 25 percent reddish brown (5YR 5/4) silty clay loam; weak fine subangular blocky structure; friable; common fine and medium roots throughout; slightly acid; clear smooth boundary.

2Bt2—12 to 16 inches; yellowish red (5YR 5/6) silty clay; weak fine subangular blocky structure; firm; common fine and medium roots throughout; few distinct reddish brown (5YR 5/4) clay films on faces of peds; moderately acid; clear smooth boundary.

2Bt3—16 to 21 inches; brown (7.5YR 5/4) silty clay; weak fine prismatic structure; firm; common fine and medium roots throughout; few distinct reddish brown (5YR 5/4) clay films on faces of peds; common fine distinct yellowish red (5YR 5/6) masses of iron accumulation throughout; 1 percent subangular gravel; strongly acid; clear smooth boundary.

2Bt4—21 to 28 inches; brown (7.5YR 5/4) silty clay; weak fine prismatic structure; firm; common fine and medium roots throughout; few distinct reddish brown (5YR 5/4) clay films on faces of peds; common fine distinct yellowish red (5YR 5/6) masses of iron accumulation between peds; 1 percent subangular gravel; strongly acid; clear smooth boundary.

2Bt5—28 to 39 inches; yellowish brown (10YR 5/6) clay loam; weak medium prismatic structure; firm; few fine and medium roots throughout; few prominent brown (7.5YR 5/3) clay films on faces of peds; common fine prominent black (7.5YR 2/1) masses of manganese accumulation between peds; 1 percent subangular gravel; strongly acid; clear smooth boundary.

2Bt6—39 to 47 inches; yellowish brown (10YR 5/6) clay loam; weak fine prismatic structure; firm; few fine and medium roots throughout; few prominent brown (7.5YR 5/2) clay films on faces of peds and in pores and few prominent brown (7.5YR 5/3) clay films on faces of peds; common fine distinct black (7.5YR 2/1) masses of manganese accumulation between peds; 3 percent subangular gravel; moderately acid; clear smooth boundary.

2BC—47 to 52 inches; brown (7.5YR 5/4) clay loam; weak medium prismatic structure; firm; few very fine roots throughout; few distinct brown (7.5YR 5/2) clay films in root channels and pores; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation and many fine prominent black (7.5YR 2/1) masses of manganese accumulation throughout; 3 percent subangular gravel; moderately acid; clear smooth boundary.

2Cg—52 to 60 inches; grayish brown (10YR 5/2) clay loam; massive; firm; 1 percent subangular gravel; moderately acid.

Range in Characteristics

Depth to carbonates: 42 to 75 inches

Depth to the base of a diagnostic horizon: 42 to 75 inches

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

E horizon(s), where present:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—clay loam, silt loam, or loam

2Bt and 2Cg horizon(s):
Hue—5YR, 7.5YR, 10YR, or 5Y
Value—4 or 5
Chroma—1 to 6
Texture—clay loam, clay, or silty clay

Taxadjunct Feature

The Keswick soils in this survey area have gray colors at a lower depth than is defined as the range for the series. This difference, however, does not significantly affect the use or behavior of the soils. The soils are classified as fine, smectitic, mesic Oxyaquic Vertic Hapludalfs.

651D2—Keswick loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

Keswick and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with more sand in the subsoil
- Soils with less clay in the subsoil
- Soils with more clay in the surface layer
- Soils with a seasonal high water table at a depth of more than 3.5 feet
- Soils with a seasonal high water table at a depth of less than 2.0 feet and with less clay in the subsoil
- Soils with less sand in the surface soil and in the upper part of the subsoil and with more clay in the lower part of the subsoil

Properties and Qualities of the Keswick Soil

Parent material: A paleosol that formed in pre-Illinoian till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Perched seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Keswick—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Keswick—not hydric

651D3—Keswick clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

Keswick and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less clay in the surface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of more than 3.5 feet
- Soils with a seasonal high water table at a depth of less than 2.0 feet and with less clay in the subsoil

Properties and Qualities of the Keswick Soil

Parent material: A paleosol that formed in pre-Illinoian till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Keswick—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Keswick—not hydric

651E2—Keswick loam, 18 to 25 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the surface layer
- Soils with less clay in the subsoil

Dissimilar soils:
- The well drained Marseilles soils downslope from the Keswick soil

Properties and Qualities of the Keswick Soil

Parent material: A paleosol that formed in pre-Illinoian till
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Perched seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Keswick—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Keswick—not hydric

Lacrescent Series

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

Typical Pedon

Lacrescent channery silt loam, 35 to 60 percent slopes, at an elevation of 580 feet; Pike County, Illinois; 2,600 feet east and 1,550 feet south of the northwest corner of

sec. 31, T. 4 S., R. 6 W.; USGS Hull, Illinois, topographic quadrangle; lat. 39 degrees 40 minutes 49 seconds N. and long. 91 degrees 8 minutes 21 seconds W., NAD 27:

A1—0 to 7 inches; very dark gray (10YR 3/1) channery silt loam, gray (10YR 5/1) dry; moderate medium granular structure; friable; many fine and few coarse roots throughout; strongly effervescent; 30 percent channers and 5 percent flagstones; slightly alkaline; clear wavy boundary.

A2—7 to 21 inches; very dark gray (10YR 3/1) gravelly silt loam, gray (10YR 5/1) dry; moderate medium subangular blocky structure parting to moderate medium granular; friable; common medium and few coarse roots throughout; strongly effervescent; 30 percent gravel; slightly alkaline; gradual wavy boundary.

Bw—21 to 38 inches; dark brown (10YR 3/3) very gravelly silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; friable; common medium and few coarse roots throughout; many faint dark gray (10YR 3/2) organic coatings on faces of peds; violently effervescent; 40 percent gravel; moderately alkaline; gradual wavy boundary.

C—38 to 60 inches; dark yellowish brown (10YR 4/4) very flaggy silt loam; massive; friable; common medium roots throughout; common distinct dark brown (10YR 3/3) organic coatings in root channels and pores; violently effervescent; 30 percent flagstones and 25 percent channers; moderately alkaline.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 38 inches
Depth to lithic contact: More than 42 inches
Depth to carbonates: 0 to 36 inches
Depth to the base of a diagnostic horizon: 20 to 38 inches

A horizon(s):
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam
Content of rock fragments—0 to 70 percent

Bw horizon(s):
Hue—10YR
Value—4
Chroma—3 or 4
Texture (fine-earth fraction)—loam, fine sandy loam, sandy loam, or silt loam
Content of rock fragments—35 to 70 percent

C horizon(s):
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—3 or 4
Texture (fine-earth fraction)—loam, fine sandy loam, or silt loam
Content of rock fragments—35 to 70 percent

785G—Lacrescent channery silt loam, 35 to 60 percent slopes

Setting

Landform: Hillslopes
Position on landform: Backslopes and footslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with slopes of less than 35 percent

Dissimilar components:
- The somewhat excessively drained Elizabeth soils, which have bedrock at a depth of less than 20 inches and are in landscape positions similar to those of the Lacrescent soil
- Limestone bedrock escarpments upslope from the Lacrescent soil

Properties and Qualities of the Lacrescent Soil

Parent material: Limestone colluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 6.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Very low

Interpretive Groups

Land capability classification: Lacrescent—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Lacrescent—not hydric

Lamont Series

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

Typical Pedon

Lamont sandy loam, 35 to 60 percent slopes, at an elevation of 640 feet; Adams County, Illinois; 400 feet east and 1,400 feet south of the northwest corner of sec. 24, T. 2 S., R. 5 W.; USGS Kellerville, Illinois, topographic quadrangle; lat. 39 degrees 53 minutes 32 seconds N. and long. 90 degrees 56 minutes 4 seconds W., NAD 27:

A—0 to 3 inches; very dark grayish brown (10YR 3/2) sandy loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; common fine roots throughout; slightly acid; clear smooth boundary.
E—3 to 6 inches; brown (10YR 5/3) fine sandy loam, very pale brown (10YR 7/3) dry; weak fine granular structure; very friable; common fine roots throughout; very few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; moderately acid; clear smooth boundary.

Bt1—6 to 11 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots throughout; few distinct dark yellowish brown (10YR 4/4) clay films between sand grains; moderately acid; clear smooth boundary.
Bt2—11 to 24 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots throughout; common distinct yellowish brown (10YR 5/4) clay bridges between sand grains; many fine and medium distinct yellowish brown (10YR 5/8) masses of iron accumulation throughout; strongly acid; clear smooth boundary.
Bt3—24 to 32 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable; few fine roots throughout; common distinct yellowish brown (10YR 5/4) clay bridges between sand grains; common fine distinct yellowish brown (10YR 5/8) masses of iron accumulation throughout; strongly acid; clear smooth boundary.
Bt4—32 to 45 inches; yellowish brown (10YR 5/6) loamy sand; weak medium subangular blocky structure; friable; few fine roots throughout; few distinct yellowish brown (10YR 5/4) clay bridges between sand grains; strongly acid; clear smooth boundary.
Bt5—45 to 50 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots throughout; many distinct brown (7.5YR 5/4) clay films between sand grains; strongly acid; clear smooth boundary.
C—50 to 80 inches; strong brown (7.5YR 5/6) sandy clay loam and loamy sand; single grain; friable; strongly acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: 30 to 60 inches

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

E horizon(s):
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—fine sandy loam or loamy fine sand

Bt horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—fine sandy loam, loam, sandy clay loam, loamy sand, or sandy loam

2E and Bt horizon(s), where present:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—5 or 6
Texture—fine sandy loam, loamy fine sand, loamy sand, or sand

C or 2C horizon(s):
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—5 or 6
Texture—fine sandy loam, loam, sandy clay loam, or loamy sand

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

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less sand in the surface layer
- Soils with more clay and less sand in the lower part of the subsoil and in the underlying material
- Soils with less clay and more sand in the subsoil

Dissimilar soils:
- The somewhat poorly drained Bunkum and Passport soils upslope from the Lamont soil
- The well drained Goss soils on the lower part of side slopes
- The well drained Stookey soils upslope from the Lamont soil

Properties and Qualities of the Lamont Soil

Parent material: Eolian deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.5 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: 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: Lamont—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Lamont—not hydric

175G—Lamont sandy loam, 35 to 60 percent slopes

Setting

Landform: Hillslopes
Position on landform: Backslopes

Map Unit Composition

Lamont and similar soils: 90 percent

Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils with less sand in the surface layer
- Soils with more clay and less sand in the lower part of the subsoil and in the underlying material
- Soils with less clay and more sand in the subsoil

Dissimilar soils:
- The well drained Stookey soils upslope from the Lamont soil
- The well drained Goss soils on the lower part of side slopes

Properties and Qualities of the Lamont Soil

Parent material: Eolian deposits
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.5 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: 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: Lamont—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Lamont—not hydric

Lawson Series

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

Typical Pedon

Lawson silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 685 feet; Adams County, Illinois; 1,900 feet east and 265 feet south of the northwest corner of sec. 3, T. 1 S., R. 5 W.; USGS Clayton, Illinois, topographic quadrangle; lat. 40 degrees 1 minute 4 seconds N. and long. 90 degrees 57 minutes 53 seconds W., NAD 27:

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; many fine roots; neutral; abrupt smooth boundary.
A1—6 to 14 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate fine granular structure; friable; common fine roots; neutral; clear smooth boundary.
A2—14 to 22 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common fine roots; common

fine faint brown (10YR 4/3) masses of iron and manganese accumulation throughout; neutral; clear smooth boundary.

A3—22 to 33 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common fine roots; common fine faint brown (10YR 4/3) masses of iron and manganese accumulation throughout; neutral; clear smooth boundary.

C1—33 to 40 inches; stratified, 70 percent very dark grayish brown (10YR 3/2) and 20 percent dark brown (10YR 3/3) silt loam; massive; friable; common fine roots; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and common fine and medium faint dark grayish brown (10YR 4/2) iron depletions throughout; slightly acid; clear smooth boundary.

C2—40 to 56 inches; stratified, 60 percent very dark grayish brown (10YR 3/2) and 30 percent dark brown (10YR 3/3) silt loam; massive; friable; few fine roots; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and common medium faint dark grayish brown (10YR 4/2) iron depletions throughout; slightly acid; clear smooth boundary.

C3—56 to 75 inches; stratified, 80 percent very dark grayish brown (10YR 3/2) and 10 percent dark brown (10YR 3/3) silt loam; massive; friable; few fine roots; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation between peds, common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation between peds, and many medium faint dark grayish brown (10YR 4/2) iron depletions throughout; slightly acid; clear smooth boundary.

C4—75 to 80 inches; stratified, 80 percent dark grayish brown (10YR 4/2) and 10 percent very dark grayish brown (10YR 3/2) silt loam; massive; friable; common medium and coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation, common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation, and common fine faint dark gray (10YR 4/1) iron depletions throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches

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

C horizon(s):
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 to 3
Texture—mainly stratified silt loam or silty clay loam; strata containing more sand below a depth of 40 inches in some pedons

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 with a thinner dark surface soil
- Soils with a light colored surface layer
- Soils with a seasonal high water table at a depth of more than 2.0 feet

Dissimilar soils:
- The well drained Raddle and Worthen soils on alluvial fans
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Lawson Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Lawson—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Lawson—not hydric

Lindley Series

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

Typical Pedon

Lindley loam, 18 to 35 percent slopes, at an elevation of 615 feet; Adams County, Illinois; 2,200 feet east and 1,980 feet north of the southwest corner of sec. 2, T. 2 S., R. 8 W.; USGS Quincy East, Illinois, topographic quadrangle; lat. 39 degrees 55 minutes 26 seconds N. and long. 91 degrees 17 minutes 40 seconds W., NAD 27:

A—0 to 6 inches; dark grayish brown (10YR 4/2) loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; few very fine roots throughout; 1 percent gravel; strongly acid; abrupt smooth boundary.

BE—6 to 12 inches; yellowish brown (10YR 5/4) loam; weak thick platy structure parting to moderate fine subangular blocky; friable; few very fine roots throughout; common distinct dark grayish brown (10YR 4/2) organic coatings on faces of peds; 1 percent gravel; strongly acid; clear smooth boundary.

Bt1—12 to 22 inches; yellowish brown (10YR 5/6) clay loam; weak coarse prismatic structure parting to weak medium subangular blocky; firm; few very fine roots

throughout; few distinct brown (10YR 4/3) clay films on faces of peds; 1 percent gravel; strongly acid; gradual smooth boundary.

Bt2—22 to 31 inches; yellowish brown (10YR 5/6) clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common distinct brown (10YR 5/3) clay films on faces of peds; 1 percent gravel; moderately acid; gradual smooth boundary.

Bt3—31 to 42 inches; yellowish brown (10YR 5/6) clay loam; weak coarse prismatic structure parting to weak coarse subangular blocky; firm; common distinct brown (10YR 5/3) clay films on faces of peds; few fine prominent gray (10YR 6/1) iron depletions in root channels and pores; 1 percent gravel; strongly acid; clear smooth boundary.

Bt4—42 to 58 inches; yellowish brown (10YR 5/6) clay loam; weak coarse prismatic structure; firm; many distinct brown (10YR 5/3) clay films on faces of peds; few medium prominent black (10YR 2/1) masses of manganese accumulation throughout and common fine prominent gray (10YR 6/1) iron depletions between peds; 1 percent gravel; slightly acid; gradual smooth boundary.

C—58 to 80 inches; strong brown (7.5YR 5/6) loam; massive; friable; very few faint brown (10YR 5/3) clay films in root channels and/or pores; 1 percent gravel; slightly alkaline.

Range in Characteristics

Depth to the base of a diagnostic horizon: 40 to 60 inches

Ap or A horizon(s):
Hue—10YR
Value—3 to 5
Chroma—1 to 5
Texture—loam, silt loam, or clay loam

E or BE horizon(s), where present:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam, silt loam, or clay loam

Bt horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—clay loam or loam
Content of rock fragments—0 to 5 percent

C horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—1 to 6
Texture—loam or clay loam
Content of rock fragments—1 to 5 percent

559F—Lindley loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material
- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with less sand in the surface soil and in the upper part of the subsoil
- Soils with less sand in the surface soil and in the upper part of the subsoil and with more clay in the lower part of the subsoil

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits and shoulders
- The well drained Goss and Marseilles soils downslope from the Lindley soil

Properties and Qualities of the Lindley Soil

Parent material: Pre-Illinoian 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 feature: 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: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Perched seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Lindley—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Lindley—not hydric

559G—Lindley loam, 35 to 60 percent slopes

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand in the lower part of the subsoil and in the underlying material
- Soils with more clay in the subsoil

- Soils with less sand in the surface soil and in the upper part of the subsoil

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits and shoulders
- The well drained Goss and Marseilles soils downslope from the Lindley soil
- The moderately well drained Elco soils upslope from the Lindley soil

Properties and Qualities of the Lindley Soil

Parent material: Pre-Illinoian 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 feature: 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: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Perched seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Potential for frost action: Moderate
Corrosivity: Moderate for steel and concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Lindley—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Lindley—not hydric

Marseilles Series

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

Typical Pedon (OSD)

Marseilles silt loam, 35 to 60 percent slopes, at an elevation of about 669 feet; Bureau County, Illinois; 2,200 feet west and 1,180 feet south of the northeast corner of sec. 14, T. 15 N., R. 8 E.; USGS Wyanet topographic quadrangle; lat. 41 degrees 17 minutes 20 seconds N. and long. 89 degree 32 minutes 13 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 medium granular structure; friable; many very fine and few fine roots; slightly acid; abrupt smooth boundary.

BE—4 to 9 inches; yellowish brown (10YR 5/4) silt loam; moderate medium platy structure parting to weak very fine subangular blocky; friable; many very fine roots; common distinct light gray (10YR 7/2 dry) clay depletions on faces of peds; few fine masses of iron and manganese accumulation; neutral; clear smooth boundary.

Bt1—9 to 15 inches; yellowish brown (10YR 5/4) silty clay loam; moderate very fine and fine subangular blocky structure; friable; many very fine and few fine roots; common distinct light gray (10YR 7/2 dry) silt coatings and common distinct brown (10YR 4/3) clay films on faces of peds; few fine masses of iron and manganese accumulation; slightly acid; clear smooth boundary.

Bt2—15 to 23 inches; brown (10YR 5/3) silty clay loam; strong fine and medium subangular blocky structure; friable; many very fine and few fine roots; few distinct light gray (10YR 7/2 dry) silt coatings and many distinct brown (10YR 4/3) clay films on faces of peds; few fine masses of iron and manganese accumulation; slightly acid; clear smooth boundary.

2Bt3—23 to 36 inches; grayish brown (2.5Y 5/2) silty clay loam; few medium prominent yellowish red (5YR 5/8) redoximorphic concentrations; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common very fine and few medium roots; many prominent brown (10YR 4/3) clay films on faces of peds; few fine masses of iron and manganese accumulation; slightly acid; gradual wavy boundary.

2Cr1—36 to 51 inches; olive gray (5Y 5/2), soft shale; few medium prominent yellowish red (5YR 5/8) redoximorphic concentrations; firm; common very fine and few fine roots; common prominent brown (10YR 4/3) clay films on shale fragments; few fine masses of iron and manganese accumulation; slightly acid; gradual wavy boundary.

2Cr2—51 to 60 inches; olive (5Y 5/3), soft shale; very firm; few very fine roots; few prominent brown (10YR 4/3) clay films on shale fragments; few fine masses of iron and manganese accumulation; neutral.

Range in Characteristics

Depth to residuum: 0 to 30 inches
Depth to paralithic contact: 20 to 40 inches

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

BE or E horizon(s), where present:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam

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

2Bt horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—2 to 4
Texture—clay loam, silt loam, silty clay loam, or silty clay

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

549E2—Marseilles silt loam, 18 to 25 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner surface layer
- Soils with shale residuum at a depth of more than 30 inches
- Soils with slopes of more than 25 percent

Dissimilar soils:
- The well drained Hickory and Lindley soils upslope from the Marseilles soil
- The well drained Fayette, Menfro, and Stookey soils on summits and shoulders

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum weathered from shale
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature (paralithic bedrock): 20 to 40 inches
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Marseilles—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Marseilles—not hydric

549F—Marseilles silt loam, 18 to 35 percent slopes

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner surface layer
- Soils with shale residuum at a depth of more than 30 inches
- Soils with slopes of more than 35 percent

Dissimilar soils:
- The well drained Hickory and Lindley soils upslope from the Marseilles soil
- The well drained Fayette, Menfro, and Stookey soils on summits and shoulders

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum weathered from shale
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature (paralithic bedrock): 20 to 40 inches
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Marseilles—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Marseilles—not hydric

549G—Marseilles silt loam, 35 to 60 percent slopes

Setting

Landform: Ground moraines (fig. 6)
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner surface layer
- Soils with shale residuum at a depth of more than 30 inches
- Soils with slopes of less than 35 percent

Dissimilar soils:
- The well drained Hickory and Lindley soils upslope from the Marseilles soil
- The well drained Fayette, Menfro, and Stookey soils on summits and shoulders

Properties and Qualities of the Marseilles Soil

Parent material: Thin layer of loess over residuum weathered from shale

Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Very slow or slow
Depth to restrictive feature (paralithic bedrock): 20 to 40 inches
Available water capacity: About 5.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: High
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Marseilles—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Marseilles—not hydric

Menfro Series

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

Typical Pedon

Menfro silt loam, 2 to 5 percent slopes, at an elevation of 675 feet; Adams County, Illinois; 310 feet west and 240 feet south of the northeast corner of sec. 5, T. 1 N., R. 8 W.; USGS Mendon, Illinois, topographic quadrangle; lat. 40 degrees 6 minutes 32 seconds N. and long. 91 degrees 20 minutes 29 seconds W., NAD 27:

Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; moderate fine granular structure; friable; common fine and medium roots throughout; few very fine pores; moderately acid; abrupt smooth boundary.

BE—8 to 14 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine and medium subangular blocky structure; friable; few fine and medium roots throughout; common fine pores; few distinct brown (10YR 4/3) clay films in root channels and pores; few distinct light gray (10YR 7/2) clay depletions between peds; moderately acid; clear smooth boundary.

Bt1—14 to 25 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots throughout; common fine pores; common distinct brown (10YR4/3) clay films and few distinct light brownish gray (10YR 6/2) silt coatings on faces of peds; moderately acid; clear smooth boundary.

Bt2—25 to 33 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots throughout; many very fine and fine pores; few distinct dark yellowish brown (10YR 4/4) clay films and few distinct light brownish gray (10YR 6/2) silt coatings on faces of peds; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation throughout; strongly acid; clear smooth boundary.

Bt3—33 to 40 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to weak medium subangular blocky; firm; few fine roots throughout; many very fine and fine pores; common distinct very pale brown (10YR 7/3) silt coatings and common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine and medium prominent strong brown

(7.5YR 5/8) masses of iron accumulation throughout; moderately acid; clear smooth boundary.

BC—40 to 58 inches; yellowish brown (10YR 5/4) silt loam; weak coarse prismatic structure; firm; few very fine roots throughout; common very fine and fine pores; few distinct very pale brown (10YR 7/3) silt coatings on faces of peds and few distinct dark yellowish brown (10YR 4/4) clay films in root channels and pores; common fine and medium prominent strong brown (7.5YR 5/8) masses of iron accumulation throughout; moderately acid; gradual wavy boundary.

C1—58 to 74 inches; yellowish brown (10YR 5/4) silt loam; massive; firm; common very fine and fine pores; few distinct brown (10YR 4/3) clay films in root channels and pores; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation throughout; moderately acid; gradual wavy boundary.

C2—74 to 92 inches; light yellowish brown (10YR 6/4) silt loam; massive; firm; few very fine pores; few fine distinct brownish yellow (10YR 6/6) masses of iron accumulation throughout; moderately acid; gradual wavy boundary.

C3—92 to 95 inches; 75 percent pale brown (10YR 6/3) and 15 percent brown (10YR 5/3) silt loam; massive; firm; few very fine pores; common medium and coarse prominent strong brown (7.5YR 5/8) masses of iron accumulation, common medium prominent black (2.5Y2/1) masses of iron and manganese accumulation, and common medium and coarse faint light brownish gray (10YR 6/2) iron depletions throughout; moderately acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: 30 to 100 inches

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

E horizon(s), where present:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—silt loam

Bt horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam

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

79B—Menfro silt loam, 2 to 5 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner surface soil
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with less clay in the subsoil

Dissimilar soils:
- The somewhat poorly drained Bethalto and Caseyville soils in the less sloping areas

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Menfro—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Menfro—not hydric

79C2—Menfro silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines (fig. 5)
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the subsoil
- Soils with more clay in the surface layer
- Soils with more rock fragments and clay in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Caseyville soils in the less sloping areas

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Menfro—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Menfro—not hydric

79C3—Menfro silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the subsoil
- Soils with less clay in the surface layer
- Soils with more rock fragments and clay in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Caseyville soils in the less sloping areas

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate

Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Menfro—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Menfro—not hydric

79D2—Menfro silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines (fig. 5)
Position on landform: Backslopes

Map Unit Composition

Menfro and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with a redder color in the lower part of the subsoil

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Menfro—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Menfro—not hydric

79D3—Menfro silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

Menfro and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the surface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of 4.0 to 6.0 feet
- Soils with a redder color in the lower part of the subsoil
- Soils with more rock fragments and clay in the lower part of the subsoil

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Menfro—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Menfro—not hydric

79E2—Menfro silt loam, 18 to 25 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines

Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils where carbonates are within a depth of 40 inches
- Soils with less clay in the subsoil
- Soils with more clay in the surface layer
- Soils with slopes of more than 25 percent
- Soils with more sand in the subsoil and underlying material

Dissimilar soils:
- The well drained Goss soils downslope from the Menfro soil

Properties and Qualities of the Menfro Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Menfro—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Menfro—not hydric

M-W—Miscellaneous water

These areas are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year. Typically, this unit includes sewage lagoons, animal waste lagoons, and water treatment facilities.

Navlys Series

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

Typical Pedon (OSD)

Navlys silty clay loam, 5 to 10 percent slopes, severely eroded, at an elevation of 650 feet; Fulton County, Illinois; 1,411 feet south and 255 feet east of the northwest corner

of sec. 11, T. 4 N., R. 2 E.; USGS Ipava topographic quadrangle; lat. 40 degrees 20 minutes 42 seconds N. and long. 90 degrees 15 minutes 19 seconds W., NAD 27:

Ap—0 to 6 inches; 70 percent dark grayish brown (10YR 4/2) and 30 percent yellowish brown (10YR 5/4) silty clay loam, pale brown (10YR 6/3) dry; moderate fine subangular blocky structure parting to weak fine granular; friable; common very fine roots; moderately acid; clear smooth boundary.

Bt1—6 to 15 inches; yellowish brown (10YR 5/4) silty clay loam; strong fine and medium subangular blocky structure; firm; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; moderately acid; gradual smooth boundary.

Bt2—15 to 22 inches; 90 percent yellowish brown (10YR 5/4) and 10 percent light brownish gray (10YR 6/2) silty clay loam; strong medium prismatic structure; firm; common very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation. slightly acid; gradual smooth boundary.

Bt3—22 to 31 inches; yellowish brown (10YR 5/4) and light brownish gray (10YR 6/2) silty clay loam; moderate medium prismatic structure; firm; few very fine roots; few distinct dark grayish brown (10YR 4/2) clay films lining root channels and pores; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and few fine manganese concretions throughout; slightly effervescent; neutral; gradual smooth boundary.

C1—31 to 56 inches; yellowish brown (10YR 5/4) and light brownish gray (10YR 6/2) silt loam; massive; friable; few very fine roots; few distinct dark grayish brown (10YR 4/2) clay films lining root channels and pores; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and few fine manganese concretions throughout; slightly effervescent; slightly alkaline; gradual smooth boundary.

C2—56 to 60 inches; light brownish gray (10YR 6/2) silt loam; massive; friable; common fine distinct light yellowish brown (10YR 6/4) masses of iron accumulation and few fine manganese concretions throughout; slightly effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of a diagnostic horizon: 22 to 40 inches
Depth to carbonates: 22 to 40 inches

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

Bt or BC horizon(s):
Hue—7.5YR, 10YR, or 5YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

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

630B2—Navlys silt loam, 2 to 5 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with carbonates at a depth of more than 40 inches
- Soils with less clay in the subsoil
- Soils with a dark surface layer

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

Properties and Qualities of the Navlys Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Navlys—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Navlys—not hydric

630C2—Navlys silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the lower part of the subsoil
- Soils with carbonates at a depth of more than 40 inches
- Soils with less clay in the subsoil
- Soils with a dark surface layer

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

Properties and Qualities of the Navlys Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 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
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Navlys—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Navlys—not hydric

630C3—Navlys silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the lower part of the subsoil
- Soils with carbonates at a depth of more than 40 inches
- Soils with less clay in the subsoil
- Soils with less clay in the surface layer

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

- The somewhat poorly drained Bunkum and Passport soils downslope from the Navlys soil

Properties and Qualities of the Navlys Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Navlys—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Navlys—not hydric

Orion Series

Taxonomic classification: Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents

Typical Pedon

Orion silt loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 435 feet; Schuyler County, Illinois; 1,107 feet east and 660 feet north of the southwest corner of sec. 18, T. 1 N., R.1 E.; USGS Beardstown topographical quadrangle; lat. 40 degrees 3 minutes 37 seconds N. and long. 90 degrees 26 minutes 57 seconds W.; NAD 27:

Ap—0 to 6 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; friable; common very fine and common fine roots; slightly acid; abrupt smooth boundary.

C1—6 to 19 inches; brown (10YR 4/3) silt loam with a few thin bands that are very dark gray (10YR 3/1); massive; friable; few fine and common very fine roots; few medium faint black (2.5Y 2/1) masses of manganese accumulation; many fine faint dark grayish brown (10YR 4/2) iron depletions; neutral; clear smooth boundary.

C2—19 to 29 inches; brown (10YR 4/3) silt loam with a few thin bands that are very dark grayish brown (10YR 3/2); massive; friable; few very fine roots; few fine faint dark yellowish brown (10YR 4/4) masses of iron accumulation and few fine distinct black (2.5Y 2/1) masses of manganese accumulation throughout; many fine faint dark grayish brown (10YR 4/2) iron depletions; neutral; abrupt smooth boundary.

Ab1—29 to 38 inches; very dark gray (10YR 3/1) silt loam; weak medium subangular blocky structure; friable; few very fine roots; common faint very dark grayish

brown (10YR 3/2) organic coatings on faces of peds; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation, common medium distinct brown (10YR 4/3) masses of iron and manganese accumulation, and few fine faint black (2.5Y 2/1) masses of manganese accumulation throughout; neutral; clear smooth boundary.

Ab2—38 to 54 inches; very dark gray (10YR 3/1) silt loam; weak medium subangular blocky structure; friable; few very fine roots; many faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation and few fine faint black (2.5Y 2/1) masses of manganese accumulation throughout; few fine faint dark gray (10YR 4/1) iron depletions; neutral; clear smooth boundary.

Bgb—54 to 60 inches; grayish brown (10YR 5/2) silt loam; weak coarse prismatic structure; friable; few very fine roots; few faint very dark grayish brown (10YR 3/2) and very dark gray (10YR 3/1) organic coatings on faces of peds; dark yellowish brown (10YR 4/4) masses of iron accumulation and common medium distinct black (2.5Y 2/1) masses of manganese accumulation and manganese concretions throughout; neutral.

Range in Characteristics

Depth to dark buried soil: 20 to 40 inches

Ap or A horizon(s):
- Hue—10YR
- Value—4 or 5
- Chroma—2 or 3
- Texture—mainly silt loam; thin strata of silt, loam, very fine sandy loam, loamy very fine sand, or very fine sand in some pedons

C horizon(s):
- Hue—10YR
- Value—4 or 5
- Chroma—2 or 3
- Texture—mainly silt loam; thin strata of silt, loam, very fine sandy loam, loamy very fine sand, or very fine sand in some pedons

Ab horizon(s):
- Hue—10YR or 2.5Y
- Value—2 or 3
- Chroma—1 or 2
- Texture—mainly silt loam or silty clay loam; strata of coarser textured material in some pedons

Bgb or Cg horizon(s):
- Hue—10YR, 2.5Y, 5Y, 5GY, 5G, 5BG, 5B, or N
- Value—4 to 6
- Chroma—0 or 2
- Texture—mainly silt loam; strata of silt, loam, very fine sandy loam, loamy very fine sand, or very fine sand in some pedons

3415A—Orion silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a buried soil below a depth of 40 inches
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of more than 2.0 feet

Dissimilar soils:
- The well drained Haymond soils in the slightly higher landscape positions
- The well drained Jules soils, which have carbonates at a depth of less than 10 inches and are in landscape positions to those of the Orion soil
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Orion Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Orion—3w
Prime farmland status of the map unit: Prime farmland where protected from flooding or not frequently flooded during the growing season
Hydric soil status: Orion—not hydric

3415L—Orion silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a buried soil below a depth of 40 inches
- Soils with more clay in the subsoil

- Soils with a seasonal high water table at a depth of more than 2.0 feet

Dissimilar soils:
- The well drained Haymond soils in the slightly higher landscape positions
- The well drained Jules soils, which have carbonates at a depth of less than 10 inches and are in landscape positions similar to those of the Orion soil
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Orion Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Orion—4w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Orion—hydric

8415A—Orion silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils with more clay in the buried soil
- Soils with a buried soil at a depth of less than 20 inches or below a depth of 40 inches

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Orion Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Orion—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Orion—not hydric

Passport Series

Taxonomic classification: Fine-loamy, mixed, superactive, mesic Aquic Hapludalfs

Typical Pedon

Passport silt loam, 5 to 10 percent slopes, eroded, at an elevation of 645 feet; Adams County, Illinois; 470 feet west and 2,210 feet south of the northeast corner of sec. 24, T. 1 N., R. 7 W.; USGS Coatsburg, Illinois, topographic quadrangle; lat. 40 degrees 3 minutes 29 seconds N. and long. 91 degrees 08 minutes 58 seconds W., NAD 27:

Ap—0 to 5 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; weak fine granular structure; friable; many fine and medium roots; few fine distinct black (10YR 2/1) masses of manganese accumulation and common fine faint yellowish brown (10YR 5/4) masses of iron accumulation throughout; neutral; abrupt smooth boundary.

Bt1—5 to 13 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium subangular blocky structure; firm; common fine and medium roots; few distinct brown (10YR 4/3) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint pale brown (10YR 6/3) iron depletions throughout; moderately acid; clear smooth boundary.

Bt2—13 to 19 inches; yellowish brown (10YR 5/4) clay loam; weak medium subangular blocky structure; firm; common fine and medium roots; few distinct brown (10YR 4/3) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation, few fine distinct black (10YR 2/1) masses of manganese accumulation, and common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; moderately acid; clear smooth boundary.

Bt3—19 to 30 inches; 80 percent brown (10YR 5/3) and 10 percent grayish brown (10YR 5/2) clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common fine and medium roots; few distinct brown (10YR 4/3) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation, few fine distinct black (10YR 2/1) masses of manganese accumulation, and common fine faint light brownish gray (10YR 6/2) iron depletions throughout; slightly acid; gradual smooth boundary.

Bt4—30 to 45 inches; 80 percent yellowish brown (10YR 5/4) and 10 percent brown (10YR 5/3) clay loam; weak medium prismatic structure parting to moderate

medium subangular blocky; firm; few fine roots; few distinct brown (10YR 4/3) clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout, common medium distinct black (10YR 2/1) masses of manganese accumulation throughout, and common fine distinct light brownish gray (10YR 6/2) iron depletions in cracks; neutral; gradual smooth boundary.

2Btg1—45 to 58 inches; grayish brown (10YR 5/2) clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots; few prominent gray (10YR 5/1) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and common medium distinct black (10YR 2/1) manganese concretions throughout; 2 percent mixed gravel; neutral; clear smooth boundary.

2Btg2—58 to 68 inches; grayish brown (2.5Y 5/2) clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots; few distinct gray (10YR 5/1) clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation between peds, common fine prominent strong brown (7.5YR 4/6) masses of iron accumulation throughout, and few medium prominent black (10YR 2/1) masses of manganese accumulation throughout; 1 percent mixed gravel; neutral; clear smooth boundary.

2Btg3—68 to 78 inches; grayish brown (2.5Y 5/2) clay loam; moderate medium subangular blocky structure; firm; few fine roots; few prominent gray (10YR 5/1) clay films on faces of peds; common medium prominent black (10YR 2/1) masses of manganese accumulation throughout and common medium and coarse distinct yellowish brown (10YR 5/6) masses of iron accumulation between peds; 2 percent mixed gravel and 2 percent mixed cobbles; neutral; clear smooth boundary.

2BCg—78 to 84 inches; grayish brown (2.5Y 5/2) clay loam; moderate medium prismatic structure parting to moderate coarse angular blocky; firm; very few distinct dark gray (10YR 4/1) clay films in root channels and pores and few distinct gray (10YR 5/1) clay films on faces of peds; common medium prominent light olive brown (2.5Y 5/6) masses of iron accumulation between peds and few medium distinct yellowish brown (10YR 5/4 and 5/6) masses of iron accumulation throughout; 1 percent mixed gravel; neutral.

Range in Characteristics

Thickness of the loamy material: 20 to 45 inches
Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: 40 to 80 inches

Ap or A horizon(s):
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam, silty clay loam, or clay loam
Content of rock fragments—less than 1 percent

Bt or Btg horizon(s):
Hue—10YR
Value—4 to 6
Chroma—1 to 6
Texture—silty clay loam, clay loam, silt loam, or loam
Content of rock fragments—0 to 5 percent

2Bt or 2Btg horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6

Chroma—1 to 8
Texture—clay loam, loam, silty clay loam, silty clay, or silt loam
Content of rock fragments—1 to 5 percent

2Btgb, 2C, or 2Cg horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8
Texture—clay loam or loam
Content of rock fragments—1 to 10 percent

652C2—Passport silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet and with less sand in the surface soil and in the upper part of the subsoil
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet and with less sand throughout

Dissimilar soils:
- The well drained Rozetta soils on summits
- The somewhat poorly drained Clarksdale and Keomah soils on summits

Properties and Qualities of the Passport Soil

Parent material: Pedisediment over a paleosol that formed in 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 feature: 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: 1.0 to 2.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: 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: Passport—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Passport—not hydric

652C3—Passport silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with less clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet and with less sand in the surface soil and in the upper part of the subsoil
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet and with less sand throughout

Dissimilar soils:
- The well drained Rozetta soils on summits
- The somewhat poorly drained Clarksdale and Keomah soils on summits

Properties and Qualities of the Passport Soil

Parent material: Pedisediment over a paleosol that formed in till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: 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: Passport—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Passport—not hydric

652D2—Passport silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with more clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with more sand in the lower part of the subsoil

Dissimilar soils:
- The well drained Rozetta soils upslope from the Passport soil
- The well drained Hickory soils downslope from the Passport soil
- The moderately well drained Winfield soils upslope from the Passport soil

Properties and Qualities of the Passport Soil

Parent material: Pedisediment over a paleosol that formed in 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 feature: 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: 1.0 to 2.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Passport—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Passport—not hydric

652D3—Passport silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the surface layer
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 1.0 foot
- Soils with more sand in the lower part of the subsoil

Dissimilar soils:
- The well drained Rozetta soils upslope from the Passport soil
- The moderately well drained Winfield soils upslope from the Passport soil

Properties and Qualities of the Passport Soil

Parent material: Pedisediment over a paleosol that formed in till
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 10.6 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: High for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Passport—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Passport—not hydric

Petrolia Series

Taxonomic classification: Fine-silty, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Petrolia silt loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 445 feet; Pike County, Illinois; 2,100 feet south and 2,400 feet east of the northwest corner of sec. 19, T. 6 S., R. 5 W.; USGS Rockport, Illinois, topographic quadrangle; lat. 39 degrees 31 minutes 48 seconds N. and long. 91 degrees 1 minute 18 seconds W., NAD 27:

A—0 to 11 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak coarse subangular blocky structure; firm; common very fine roots throughout; neutral; abrupt smooth boundary.

Bg1—11 to 18 inches; dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure; firm; common very fine and fine roots throughout; common fine and

medium prominent strong brown (7.5YR 4/6) masses of iron accumulation and common medium faint grayish brown (10YR 5/2) iron depletions throughout; slightly acid; gradual smooth boundary.

Bg2—18 to 34 inches; dark gray (10YR 4/1) silty clay loam; weak medium prismatic structure; firm; common very fine and fine roots throughout; common medium prominent strong brown (7.5YR 4/6) masses of iron accumulation throughout; moderately acid; gradual smooth boundary.

Cg1—34 to 53 inches; gray (10YR 5/1) silt loam; massive; friable; few very fine roots throughout; common medium prominent strong brown (7.5YR 4/6) masses of iron accumulation and faint grayish brown (10YR 5/2) iron depletions; moderately acid; gradual smooth boundary.

Cg2—53 to 80 inches; dark gray (2.5Y 4/1) silt loam; common fine distinct grayish brown (2.5Y 5/2) iron depletions; massive; friable; slightly acid.

Range in Characteristics

Depth to carbonates: More than 60 inches

Ap or A horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 3
Texture—silty clay loam or, less commonly, silt loam

Bg, Btg, and/or BCg horizon(s):
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—silty clay loam

Cg horizon(s):
Hue—10YR, 2.5Y, 5Y, or N
Value—4 to 6
Chroma—0 to 2
Texture—commonly silty clay loam; below a depth of 40 inches, silt loam in some pedons and thin strata of silty clay, silt loam, loam, or fine sandy loam in some pedons

8288A—Petrolia silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

Petrolia and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with more clay in the surface layer
- Soils with more sand in the lower part of the subsoil
- Soils with a darker surface soil
- Soils with more sand in the surface soil and subsoil
- Soils with a seasonal high water table at a depth of more than 1.0 foot

Properties and Qualities of the Petrolia Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Petrolia—3w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Petrolia—hydric

865—Pits, gravel

This unit consists of excavations from which sand and gravel have been or are being removed.

Map Unit Composition

Pits, gravel: 90 percent
Dissimilar components: 10 percent

Minor Components

Dissimilar components:
- The well drained Lamont soils on hillslopes in the surrounding undisturbed areas
- The moderately well drained El Dara soils on hillslopes in the surrounding undisturbed areas
- The well drained Elsah soils on flood plains in the surrounding undisturbed areas
- The somewhat poorly drained Wakeland soil on flood plains in the surrounding undisturbed areas
- Water in the lower areas
- Stockpiles of sand, gravel, and debris

Interpretive Groups

Land capability classification: Pits—8
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Pits—unranked

864—Pits, quarries

This unit consists of an open excavation from which limestone has been removed or is being removed.

Map Unit Composition

Pit, quarries: 90 percent
Dissimilar components: 10 percent

Minor Components

Dissimilar components:
- The well drained Elizabeth, Goss, and Lacrescent soils on backslopes
- Stockpiles of stone and debris

Interpretive Groups

Land capability classification: Pits—none assigned
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Pits—unranked

Raddle Series

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

Typical Pedon

Raddle silt loam, 2 to 5 percent slopes, rarely flooded, at an elevation of 465 feet; Fulton County, Illinois; 570 feet south and 1,890 feet west of the northeast corner of sec. 11, T. 4 N., R. 3 E.; USGS Duncan Mills, Illinois, topographic quadrangle; lat. 40 degrees 20 minutes 54 seconds N. and long. 90 degrees 7 minutes 53 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; friable; few very fine roots; slightly acid; clear smooth boundary.

AB—9 to 13 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; friable; few very fine roots; common distinct grayish brown (10YR 3/2) organic coatings on faces of peds; moderately acid; clear smooth boundary.

Bw1—13 to 26 inches; brown (10YR 4/3) silt loam; moderate medium subangular blocky structure; friable; few very fine roots; few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; few fine distinct black (10YR 2/1) manganese concretions in the matrix; slightly acid; gradual smooth boundary.

Bw2—26 to 39 inches; brown (10YR 4/3) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable; few very fine roots; few distinct dark brown (10YR 3/3) organic coatings on faces of peds; few fine distinct black (10YR 2/1) manganese concretions in the matrix; slightly acid; gradual smooth boundary.

Bw3—39 to 47 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; very few distinct brown (10YR 4/3) coatings on faces of peds; few fine distinct black (10YR 2/1) manganese concretions in the matrix; moderately acid; gradual smooth boundary.

BC—47 to 60 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure; friable; few fine distinct black (10YR 2/1) manganese concretions in the matrix; moderately acid; gradual smooth boundary.

C—60 to 80 inches; 98 percent dark yellowish brown (10YR 4/4) and 2 percent brown (10YR 5/3) silt loam; massive; very friable; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of a diagnostic horizon: 40 to more than 80 inches

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

Bw horizon(s):
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 or 4
Texture—typically silt loam; some thin subhorizons of loam in some pedons

BC or C horizon(s):
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 4
Texture—stratified sandy loam, loam, silt loam, clay loam, or silty clay loam

7430B—Raddle silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform: Alluvial fans

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thicker dark surface soil
- Soils with a lighter colored surface layer
- Soils with less clay in the subsoil

Dissimilar soils:
- The moderately well drained Blyton soils on flood plains downslope from the Raddle soil
- Soils with more than 15 percent rock fragments in the surface layer

Properties and Qualities of the Raddle Soil

Parent material: Silty local alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.9 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
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Rare, November-June

Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Raddle—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Raddle—not hydric

Riley Series

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

Typical Pedon (OSD)

Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 470 feet; Adams County, Illinois; 1,595 feet east and 340 feet south of the northwest corner of sec. 2, T. 3 S., R. 9 W.; USGS Quincy Southwest, Illinois, topographic quadrangle; lat. 39 degrees 50 minutes 52 seconds N. and long. 91 degrees 24 minutes 40 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; moderate fine granular structure; firm; common fine roots throughout; very few distinct very dark gray (10YR 3/1) organic coatings on faces of peds; slightly acid; abrupt smooth boundary.
A—7 to 13 inches; very dark grayish brown (10YR 3/2) silty clay loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; firm; common fine roots throughout; moderately acid; abrupt smooth boundary.
Bw1—13 to 19 inches; dark grayish brown (10YR 4/2) silty clay loam; weak coarse subangular blocky structure; firm; common fine roots throughout and common very fine and fine roots in cracks; very few distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many fine distinct brown (7.5YR 4/3) masses of iron and manganese accumulation throughout; moderately acid; clear smooth boundary.
Bw2—19 to 27 inches; grayish brown (10YR 5/2) loam; moderate coarse subangular blocky structure; firm; common very fine and fine roots in cracks; many fine and medium distinct dark yellowish brown (10YR 3/6) masses of iron and manganese accumulation throughout; moderately acid; clear smooth boundary.
2C1—27 to 36 inches; brown (10YR 4/3) loamy sand; weak coarse subangular blocky structure; friable; few fine faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation throughout; moderately acid; clear smooth boundary.
2C2—36 to 60 inches; brown (10YR 5/3) sand; single grain; loose; neutral; clear smooth boundary.
2C3—60 to 80 inches; 60 percent brown (10YR 5/3) and 40 percent pale brown (10YR 6/3) sand; single grain; loose; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to sandy water-laid sediments: 16 to 40 inches
Depth to the base of a diagnostic horizon: 18 to 40 inches

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

Bw horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture—silty clay loam, clay loam, sandy clay loam, loam, or silt loam

2C horizon(s):
Hue—10YR
Value—4 to 7
Chroma—2 to 4
Texture—loamy sand, sand, or loamy fine sand

8452A—Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner dark surface soil
- Soils with less sand in the lower part of the subsoil
- Soils with slopes of more than 2 percent
- Soils with less clay in the surface soil and subsoil

Dissimilar soils:
- The poorly drained Ambraw soils in depressions

Properties and Qualities of the Riley Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.8 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Riley—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Riley—not hydric

Rozetta Series

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

Typical Pedon (OSD)

Rozetta silt loam, 0 to 2 percent slopes, at an elevation of 890 feet; Stephenson County, Illinois; 150 feet south and 500 feet east of the center of sec. 18, T. 27 N., R. 6 E.; USGS Pearl City quadrangle; lat. 42 degrees 20 minutes 00 seconds N. and long. 89 degrees 51 minutes 19 seconds W., NAD 27:

A—0 to 4 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 6/1) dry; weak medium granular structure; friable; many fine roots throughout; moderately acid; clear wavy boundary.
E—4 to 11 inches; dark grayish brown (10YR 4/2) silt loam; weak medium platy structure; friable; many fine roots throughout; strongly acid; clear smooth boundary.
BE—11 to 14 inches; brown (10YR 4/3) silty clay loam; weak medium subangular blocky structure; firm; many fine roots between peds; few faint brown (10YR 5/3 dry) clay depletions on faces of peds; strongly acid; clear smooth boundary.
Bt1—14 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; many fine roots between peds; many faint brown (10YR 5/3) clay films on faces of peds; strongly acid; clear smooth boundary.
Bt2—21 to 39 inches; brown (10YR 5/3) silty clay loam; moderate medium and coarse subangular blocky structure; firm; common fine roots; many distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common faint pale brown (10YR6/3 dry) silt coatings on faces of peds; common medium faint light yellowish brown (10YR 6/4) masses of iron accumulation and brown (10YR 4/3) masses of iron and manganese accumulation in the matrix; few medium faint grayish brown (10YR 5/2) iron depletions in the matrix; strongly acid; clear smooth boundary.
Bt3—39 to 50 inches; yellowish brown (10YR 5/4) silty clay loam; weak coarse subangular blocky structure; firm; common fine roots; few faint brown (10YR 4/3) clay films on faces of peds; common medium faint pale brown (10YR 6/3) masses of iron accumulation in the matrix; common medium distinct grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.
C—50 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; common medium distinct dark grayish brown (10YR 4/2) iron depletions in the matrix; slightly acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: 42 to 72 inches

Ap or A horizon(s):
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam

E horizon(s), where present:
Hue—10YR
Value—4 to 6
Chroma—2 or 3
Texture—silt loam

Bt horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silty clay loam

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

279B—Rozetta silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas
- The somewhat poorly drained Bunkum and Passport soils in the more sloping areas downslope from the Rozetta soil

Properties and Qualities of the Rozetta soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Low

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

Interpretive Groups

Land capability classification: Rozetta—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Rozetta—not hydric

279C2—Rozetta silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer
- Soils with more clay and sand in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas
- The somewhat poorly drained Bunkum and Passport soils downslope from the Rozetta soil

Properties and Qualities of the Rozetta Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rozetta—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Rozetta—not hydric

279C3—Rozetta silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the surface layer
- Soils with less clay in the subsoil
- Soils with more clay and sand in the lower part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas
- The somewhat poorly drained Bunkum and Passport soils downslope from the Rozetta soil

Properties and Qualities of the Rozetta Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rozetta—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Rozetta—not hydric

9279B—Rozetta silt loam, terrace, 2 to 5 percent slopes

Setting

Landform: Stream terraces
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas

Properties and Qualities of the Rozetta Soil

Parent material: Loess or other silty 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 feature: 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: 1.0 to 3.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rozetta—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Rozetta—not hydric

9279C2—Rozetta silt loam, terrace, 5 to 10 percent slopes, eroded

Setting

Landform: Stream terraces (fig. 5)
Position on landform: Shoulders and risers

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of more than 6.0 feet

- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer

Dissimilar soils:
- The somewhat poorly drained Stronghurst soils in the less sloping areas

Properties and Qualities of the Rozetta Soil

Parent material: Loess or other silty 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 feature: 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: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Rozetta—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Rozetta—not hydric

Sarpy Series

Taxonomic classification: Mixed, mesic Typic Udipsamments

Typical Pedon

Sarpy fine sand, 0 to 2 percent slopes, frequently flooded, at an elevation of 443 feet; Woodford County, Illinois; 700 feet north and 640 feet west of the southeast corner of sec. 22, T. 27 N., R. 4 W.; USGS Spring Bay, Illinois, topographical quadrangle; lat. 40 degrees 46 minutes 46 seconds N. and long. 89 degrees 32 minutes 39 seconds W., NAD 27:

A—0 to 10 inches; brown (10YR 5/3) loamy fine sand, pale brown (10YR 6/3) dry; weak very fine and fine subangular blocky structure; very friable; common very fine and fine roots throughout; strongly effervescent; moderately alkaline; clear smooth boundary.

C1—10 to 19 inches; stratified yellowish brown (10YR 5/4) and brown (10YR 5/3) fine sand; single grain; loose; few very fine and fine roots throughout; strongly effervescent; moderately alkaline; clear smooth boundary.

C2—19 to 60 inches; yellowish brown (10YR 5/4) fine sand; loose; few very fine and fine roots throughout; 10 percent gravel; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of a diagnostic horizon: 4 to 9 inches

Ap or A horizon(s):
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 to 3
Texture—sand, loamy sand, loamy fine sand, fine sand, or fine sandy loam

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

3092A—Sarpy loamy sand, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains and natural levees

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker surface layer
- Soils with more clay in the underlying material

Dissimilar soils:
- The well drained Elsah and Haymond soils in landscape positions similar to those of the Sarpy soil

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: Low
Corrosivity: Low for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: Sarpy—4s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Sarpy—not hydric

3092L—Sarpy loamy fine sand, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains and natural levees

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a darker surface layer
- Soils with more clay in the underlying material

Dissimilar soils:
- The well drained Elsah and Haymond soils in landscape positions similar to those of the Sarpy soil

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: Low
Corrosivity: Low for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: Sarpy—4s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Sarpy—hydric

8092A—Sarpy sand, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains and natural levees

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the underlying material
- Soils with slopes of more than 2 percent
- Soils with a darker colored surface soil

Dissimilar soils:
- The somewhat poorly drained Ceresco soils in the lower landscape positions

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: Low
Corrosivity: Low for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Very high

Interpretive Groups

Land capability classification: Sarpy—4s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Sarpy—not hydric

8789A—Ambraw-Ceresco-Sarpy complex, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Meander scrolls
Position on landform: Ambraw—toeslopes; Ceresco—shoulders; Sarpy—summits

Map Unit Composition

Ambraw and similar soils: 40 percent
Ceresco and similar soils: 25 percent
Sarpy and similar soils: 20 percent
Dissimilar soils: 15 percent

Minor Components

Similar soils:
- Soils with more clay in the surface layer and subsoil
- Soils with a thicker dark surface soil
- Soils that have slopes of more than 2 percent

Dissimilar soils:
- Very poorly drained soils in depressions and sloughs

Properties and Qualities of the Ambraw Soil

Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow or moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Ceresco Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate or moderately rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.6 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: Moderate for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Sarpy Soil

Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest permeability within a depth of 40 inches: Rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 4.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.5 to 1.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: Low
Corrosivity: Low for steel and concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: High

Interpretive Groups

Land capability classification: Ambraw and Ceresco—2w; Sarpy—4s

Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ambraw—hydric; Ceresco and Sarpy—not hydric

Seaton Series

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

Typical Pedon

Seaton silt loam, 2 to 5 percent slopes; at an elevation of 680 feet; Henderson County, Illinois; 660 feet north and 30 feet east of the center of sec. 8, T. 11 N., R. 4 W.; USGS Rozetta topographic quadrangle; lat. 40 degrees 57 minutes 44 seconds N. and long. 90 degrees 52 minutes 24 seconds W., NAD 27:

A—0 to 4 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine granular structure; very friable; slightly acid; clear smooth boundary.
E—4 to 9 inches; brown (10YR 4/3) silt loam; weak thin play structure; friable; slightly acid; clear smooth boundary.
BE—9 to 15 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium subangular blocky structure; friable; few faint distinct dark brown (10YR 3/3) clay films and common distinct light yellowish brown (10YR 6/4) clay depletions on faces of peds; moderately acid; clear smooth boundary.
Bt1—15 to 21 inches; yellowish brown (10YR 5/4) silt loam; moderate fine and medium subangular blocky structure; friable; few distinct dark brown (10YR 3/3) clay films and few distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; moderately acid; clear smooth boundary.
Bt2—21 to 27 inches; brown (7.5YR 5/4) silt loam; moderate fine and medium subangular blocky structure; firm; few distinct dark brown (10YR 3/3) clay films and few distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; strongly acid; clear smooth boundary.
Bt3—27 to 34 inches; yellowish brown (10YR 5/4) silt loam; moderate medium angular blocky structure; firm; common distinct dark brown (10YR 3/3) clay films on faces of peds; strongly acid; gradual smooth boundary.
Bt4—34 to 44 inches; brown (10YR 5/3) silt loam; weak medium and coarse prismatic structure; firm; few distinct dark brown (10YR 3/3) clay films and few distinct light yellowish brown (10YR 6/4) silt coatings on faces of peds; moderately acid; gradual smooth boundary.
BC—44 to 70 inches; brown (10YR 4/3) silt loam; weak very coarse prismatic structure; friable; few faint brown (7.5YR 4/2) clay films on vertical faces of peds; moderately acid; gradual smooth boundary.
C—70 to 95 inches; light brownish gray (10YR 6/2) and brown (10YR 5/3) silt loam; massive; friable; common fine distinct dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation and common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation throughout; massive; friable; slightly acid.

Range in Characteristics

Thickness of loess: More than 80 inches
Thickness of the solum: 42 to more than 60 inches

Ap or A horizon(s):
Hue—10YR
Value—2 to 4
Chroma—2 or 3

Texture—silt loam or silt

E horizon(s), where present:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or silt

Bt horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—3 to 6
Texture—silt loam or silt

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

274F—Seaton silt loam, 18 to 35 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Goss soils downslope from the Seaton soil
- The somewhat excessively drained Hamburg soils downslope from the Seaton soil

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High

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

Interpretive Groups

Land capability classification: Seaton—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Seaton—not hydric

274G—Seaton silt loam, 35 to 60 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 40 inches
- Soils with redder colors in the subsoil
- Soils with more sand in the subsoil and underlying material

Dissimilar soils:
- The well drained Goss soils downslope from the Seaton soil
- The moderately well drained El Dara soils downslope from the Seaton soil
- The somewhat excessively drained Hamburg soils downslope from the Seaton soil

Properties and Qualities of the Seaton Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Seaton—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Seaton—not hydric

Shaffton Series

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

Typical Pedon

Shaffton clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 436 feet; Fulton County, Illinois; 2,164 feet west and 2,097 feet north of the southeast corner of sec. 36, T. 4 N., R. 3 E.; USGS Havana, Illinois, topographic quadrangle; lat. 40 degrees 16 minutes 58 seconds N. and long. 90 degrees 6 minutes 46 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) clay loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; few very fine roots; strongly acid; clear smooth boundary.

A—9 to 12 inches; very dark grayish brown (10YR 3/2) clay loam, grayish brown (10YR 5/2) dry; weak very fine subangular blocky structure; friable; few very fine roots; few fine distinct dark yellowish brown (10YR 3/4) masses of iron and manganese accumulation throughout; strongly acid; clear smooth boundary.

Bw1—12 to 17 inches; dark grayish brown (10YR 4/2) clay loam; moderate fine subangular blocky structure; friable; few very fine roots; many distinct very dark grayish brown (10YR 3/2) organic coatings lining root channels and pores; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; few fine distinct dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine distinct black (10YR 2/1) masses of manganese accumulation along root channels and pores; strongly acid; clear smooth boundary.

Bw2—17 to 27 inches; dark grayish brown (10YR 4/2) clay loam; moderate fine and medium subangular blocky structure; friable; few very fine roots; common distinct very dark grayish brown (10YR 3/2) organic coatings lining root channels and pores; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; few fine distinct dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine faint black (10YR 2/1) masses of manganese accumulation along root channels and pores; strongly acid; clear smooth boundary.

Bw3—27 to 32 inches; grayish brown (10YR 5/2) clay loam; moderate medium subangular blocky structure; friable; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; few fine distinct dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine distinct black (10YR 2/1) masses of manganese accumulation along pores; strongly acid; clear smooth boundary.

Bw4—32 to 36 inches; grayish brown (10YR 5/2) sandy clay loam; weak coarse subangular blocky structure; friable; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; common fine distinct dark brown (7.5YR 3/4) masses of iron and manganese accumulation and few fine distinct black (10YR 2/1) masses of manganese accumulation along pores; strongly acid; clear smooth boundary.

2C1—36 to 51 inches; 60 percent brown (10YR 4/3) and 40 percent grayish brown (10YR 5/2) coarse sandy loam; massive; very friable; common medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation along pores; strongly acid; clear smooth boundary.

2C2—51 to 60 inches; brown (10YR 4/3) loamy coarse sand; single grain; loose; few medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation along pores; moderately acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of a diagnostic horizon: 30 to 50 inches

Ap or A horizon(s):;
Hue—10YR
Value—2 or 3
Chroma—1 to 3
Texture—typically loam; clay loam, silty clay loam, or silt loam in some pedons

Bw horizon(s):
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—1 to 3
Texture—clay loam or sandy clay loam

2C, C, or Cg horizon(s):
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—stratified silty clay loam to coarse sand

8183A—Shaffton clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains (fig. 4)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner dark surface layer
- Soils with more silt and less sand in the lower part of the subsoil
- Soils with slopes of more than 2 percent
- Soils with less clay in the surface layer
- Soils with less clay in the upper part of the subsoil

Dissimilar soils:
- The poorly drained Ambraw soils in depressions

Properties and Qualities of the Shaffton Soil

Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Very rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.5 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Shaffton—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Shaffton—not hydric

Slacwater Series

Taxonomic classification: Fine-silty, mixed, superactive, calcareous, mesic Mollic Fluvaquents

Typical Pedon

Slacwater silt loam, in an area of Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration, at an elevation of 470 feet; Adams County, Illinois; 120 feet east and 50 feet north of the southwest corner of sec. 15, T. 2 S., R. 9 W.; USGS Quincy West, Illinois, topographic quadrangle; lat. 39 degrees 53 minutes 33 seconds N. and long. 91 degrees 26 minutes 3 seconds W., NAD 27:

AC—0 to 12 inches; stratified, 90 percent very dark gray (2.5Y 3/1) and 5 percent grayish brown (2.5Y 5/2) silt loam, light brownish gray (2.5Y 6/2) dry; weak medium platy structure parting to moderate fine granular; friable; few very fine roots; common prominent brown (7.5YR 4/4) masses of iron and manganese accumulation between peds; slightly effervescent; slightly alkaline; clear smooth boundary.

Cg1—12 to 25 inches, stratified, 94 percent grayish brown (2.5Y 5/2) silty clay loam; moderate medium platy structure parting to moderate very fine subangular blocky; friable; few very fine roots; very few distinct black (10YR 2/1) organic coatings in root channels and pores; common prominent brown (7.5YR 4/3) and few prominent brown (7.5YR 4/4) masses of iron and manganese accumulation between peds; slightly effervescent; slightly alkaline; clear smooth boundary.

Cg2—25 to 35 inches; stratified, 94 percent very dark gray (5Y 3/1) and 1 percent grayish brown (2.5Y 5/2) silty clay loam; weak medium platy structure parting to moderate very fine subangular blocky; friable; very few faint black (10YR 2/1) organic coatings in root channels and pores; common prominent brown (7.5YR 4/4) masses of iron and manganese accumulation between peds; slightly effervescent; slightly alkaline; gradual smooth boundary.

Cg3—35 to 64 inches; stratified, 94 percent very dark gray (5Y 3/1) and 1 percent grayish brown (2.5Y 5/2) silty clay loam; moderate medium subangular blocky structure; friable; very few faint black (10YR 2/1) organic coatings in root channels and pores; common prominent brown (7.5YR 4/4) masses of iron and manganese accumulation between peds; slightly effervescent; slightly alkaline; clear smooth boundary.

Cg4—64 to 76 inches; very dark gray (2.5Y 3/1) silty clay loam; moderate medium subangular blocky structure; friable; few prominent brown (7.5YR 4/4) masses of iron and manganese accumulation between peds; slightly effervescent; slightly alkaline; clear smooth boundary.

Cg5—76 to 80 inches; stratified, 64 percent very dark gray (2.5Y 3/1) and 35 percent dark grayish brown (2.5Y 4/2) silty clay loam; massive; very friable; few prominent brown (7.5YR 4/4) masses of iron and manganese accumulation between peds; slightly effervescent; slightly alkaline.

Range in Characteristics

Depth to carbonates: Less than 10 inches

AC, Ap, or A horizon(s):
Hue—10YR or 2.5Y
Value—2 to 4
Chroma—1 to 3
Texture—silt loam or silty clay loam

C or Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—2 to 7
Chroma—1 to 6
Texture—silt loam or silty clay loam

3877L—Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains
Position on landform: Blake—summits; Slacwater—toeslopes

Map Unit Composition

Blake and similar soils: 45 percent
Slacwater and similar soils: 45 percent
Dissimilar soils: 10 percent

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils that are occasionally flooded
- Soils with more sand in the underlying material
- Soils with more sand and less clay throughout

Dissimilar soils:
- Soils that do not have carbonates

Properties and Qualities of the Blake Soil

Parent material: Calcareous silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.6 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High

Corrosivity: High for steel and low for concrete
Surface runoff class: Negligible
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Properties and Qualities of the Slacwater Soil

Parent material: Calcareous alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Blake and Slacwater—5w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Blake and Slacwater—hydric

Stookey Series

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

Typical Pedon

Stookey silt loam, 2 to 5 percent slopes, at an elevation of 595 feet; Adams County, Illinois; 2,100 feet south and 1,125 feet east of the northwest corner of sec. 6, T. 1 N., R. 8 W.; USGS Long Island, Illinois, topographic quadrangle; lat. 40 degrees 6 minutes 17 seconds N. and long. 91 degrees 22 minutes 32.6 seconds W., NAD 27:

Ap—0 to 7 inches; brown (10YR 4/3) silt loam, light yellowish brown (10YR 6/4) dry; moderate thin platy structure parting to weak fine granular; friable; many fine and medium roots; slightly acid; abrupt smooth boundary.

BE—7 to 10 inches; dark yellowish brown (10YR 4/4) silt loam; moderate fine subangular blocky structure; friable; many fine roots; few faint brown (10YR 4/3) clay films lining pores and few distinct dark brown (10YR 3/3) organic coatings on faces of peds; common fine distinct light brownish gray (10YR 6/2) clay depletions between peds; neutral; clear smooth boundary.

Bt1—10 to 18 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to moderate fine and medium subangular blocky; friable; many medium and common coarse roots; few faint dark yellowish brown (10YR 3/4) clay films on faces of peds; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; clear wavy boundary.

Bt2—18 to 27 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable;

common medium roots; common distinct brown (10YR 4/3) clay films on faces of peds and common distinct dark yellowish brown (10YR 3/4) clay films in root channels and pores; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; clear wavy boundary.

Bt3—27 to 34 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine prismatic structure parting to weak medium subangular blocky; friable; few fine roots; few distinct dark yellowish brown (10YR 3/4) clay films lining pores and few distinct brown (10YR 4/3) clay films on faces of peds; common fine faint pale brown (10YR 6/3) iron depletions throughout; slightly acid; clear wavy boundary.

Bt4—34 to 43 inches; yellowish brown (10YR 5/4) silt loam; weak fine prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; few faint dark yellowish brown (10YR 4/4) clay films in root channels and pores; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and few fine faint pale brown (10YR 6/3) iron depletions throughout; moderately acid; clear wavy boundary.

Bt5—43 to 48 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; very friable; few very fine roots; few faint dark yellowish brown (10YR 4/4) clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint pale brown (10YR 6/3) iron depletions throughout; slightly acid; gradual wavy boundary.

BC1—48 to 56 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; very friable; few very fine roots; common distinct dark yellowish brown (10YR 4/4) clay films lining pores; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint pale brown (10YR 6/3) iron depletions throughout; moderately acid; clear wavy boundary.

BC2—56 to 65 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; common fine distinct yellowish brown (10YR 5/6) and common fine faint light yellowish brown (10YR 6/4) masses of iron accumulation, common fine faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation, and common fine distinct black (2.5Y 2/1) masses of manganese accumulation throughout; slightly acid; gradual wavy boundary.

C—65 to 84 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; common fine faint dark yellowish brown (10YR 4/4) masses of iron and manganese accumulation, common fine distinct yellowish brown (10YR 5/6) and common fine faint light yellowish brown (10YR 6/4) masses of iron accumulation, and few fine distinct black (2.5Y 2/1) masses of manganese accumulation throughout; slightly acid.

Range in Characteristics

Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: More than 40 inches

Ap or A horizon(s):
- Hue—10YR
- Value—3 to 5
- Chroma—1 to 3
- Texture—silt loam

E or BE horizon(s):
- Hue—10YR
- Value—4 to 6
- Chroma—2 to 4
- Texture—silt loam

Bt horizon(s):
Hue—5YR, 7.5YR, or 10YR
Value—4 to 6
Chroma—3 to 6
Texture—silt loam

C horizon(s):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silt

216B—Stookey silt loam, 2 to 5 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 6.0 feet

Dissimilar soils:
- The well drained Timula soils downslope from the Stookey soil

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Stookey—not hydric

216C2—Stookey silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Summits and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Timula soils downslope from the Stookey soil

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey—not hydric

216C3—Stookey silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 40 inches
- Soils with a seasonal high water table at a depth of less than 6.0 feet

Dissimilar soils:
- The well drained Timula soils downslope from the Stookey soil

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey—not hydric

216D2—Stookey silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer

Dissimilar soils:
- The somewhat excessively drained Hamburg soils downslope from the Stookey soil
- The well drained Lacrescent soils in the more sloping areas adjacent to bluffs

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey—not hydric

216D3—Stookey silt loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with less clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches

Dissimilar soils:
- The somewhat excessively drained Hamburg soils downslope from the Stookey soil
- The well drained Lacrescent soils in the more sloping areas adjacent to bluffs

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey—not hydric

856E2—Stookey and Timula soils, 18 to 25 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines (fig. 5)
Position on landform: Backslopes

Map Unit Composition

Stookey and similar soils: 50 percent
Timula and similar soils: 30 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 18 inches
- Soils with more sand in the subsoil and underlying material
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Menfro soils on summits and shoulders
- The well drained Goss soils downslope from the Stookey and Timula soils
- The somewhat excessively drained Hamburg soils downslope from the Stookey and Timula soils

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High

Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey and Timula—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey and Timula—not hydric

856F—Stookey and Timula soils, 18 to 35 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

Stookey and similar soils: 50 percent
Timula and similar soils: 30 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 18 inches
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Goss soils downslope from the Stookey and Timula soils
- The somewhat excessively drained Hamburg soils downslope from the Stookey and Timula soils

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained

Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey and Timula—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey and Timula—not hydric

856G—Stookey and Timula soils, 35 to 60 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

Stookey and similar soils: 50 percent
Timula and similar soils: 30 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 18 inches
- Soils with redder colors in the subsoil
- Soils with more sand in the subsoil and underlying material

Dissimilar soils:
- The well drained Goss soils downslope from the Stookey and Timula soils
- The somewhat excessively drained Hamburg soils downslope from the Stookey and Timula soils

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey and Timula—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey and Timula—not hydric

Stronghurst Series

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

Typical Pedon

Stronghurst silt loam, 0 to 2 percent slopes, at an elevation of 680 feet; Bureau County, Illinois; 582 feet south and 78 feet west of the northeast corner of sec. 23, T. 16 N., R. 8 E.; USGS Wyanet topographic quadrangle; lat. 41 degrees 16 minutes 32 seconds N. and long. 89 degrees 31 minutes 47 seconds W., NAD 27:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; few fine roots; common fine prominent black (5YR 2/1) masses of manganese accumulation throughout; neutral; abrupt smooth boundary.

E—8 to 13 inches; brown (10YR 5/3) silt loam; moderate thin and very thin platy structure; friable; few fine roots; common fine distinct yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation and common fine prominent black (5YR 2/1) masses of manganese accumulation throughout; common fine faint light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; clear smooth boundary.

Bt1—13 to 24 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many distinct grayish brown (10YR 5/2) clay films and many distinct light gray (10YR 7/2) silt coatings on faces of peds; common fine prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) masses of iron accumulation and common fine distinct black (10YR 2/1) masses of manganese accumulation throughout; common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; clear smooth boundary.

Bt2—24 to 30 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) masses of iron accumulation and common fine black (10YR 2/1) masses of manganese accumulation throughout; common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; clear smooth boundary.

Bt3—30 to 38 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium prismatic structure; friable; few fine roots; common distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) masses of iron accumulation and common fine black (10YR 2/1) masses of manganese accumulation throughout; common fine distinct light brownish gray (10YR 6/2) iron depletions throughout; strongly acid; clear smooth boundary.

Bt4—38 to 47 inches; yellowish brown (10YR 5/4) silty clay loam; moderate coarse prismatic structure; friable; few fine roots; few distinct grayish brown (10YR 5/2) clay films on faces of peds; common fine prominent yellowish brown (10YR 5/8) masses of iron accumulation and common fine black (10YR 2/1) masses of manganese accumulation throughout; common fine distinct light brownish gray (10YR 6/2 and 2.5Y 6/2) iron depletions throughout; strongly acid; gradual smooth boundary.

C—47 to 60 inches; yellowish brown (10YR 5/6) silt loam; massive; friable; common fine faint strong brown (7.5YR 5/6) masses of iron accumulation and common fine prominent black (10YR 2/1) masses of manganese accumulation throughout; common fine prominent light brownish gray (2.5Y 6/2) iron depletions throughout; moderately acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: More than 42 inches

Ap or A horizon(s):
Value—3 to 6
Chroma—1 or 2
Texture—silt loam

E horizon(s):
Value—4 to 6

Chroma—2 or 3
Texture—silt loam

Bt or Btg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silty clay loam or silt loam

C or Cg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam or silty clay loam

278A—Stronghurst silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The well drained Fayette and Rozetta soils in the more sloping areas
- The poorly drained Rushville soils in shallow depressions

Properties and Qualities of the Stronghurst Soil

Parent material: Loess
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Stronghurst—2w
Prime farmland status of the map unit: Prime farmland where drained

Hydric soil status: Stronghurst—not hydric

9278A—Stronghurst silt loam, terrace, 0 to 2 percent slopes

Setting

Landform: Stream terraces (fig. 5)
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The well drained Rozetta soils in the more sloping areas
- The poorly drained Rushville soils in depressions

Properties and Qualities of the Stronghurst Soil

Parent material: Loess or other silty material
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.0 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
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Stronghurst—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Stronghurst—not hydric

9278B—Stronghurst silt loam, terrace, 2 to 5 percent slopes

Setting

Landform: Stream terraces
Position on landform: Summits

Map Unit Composition

Stronghurst and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a dark surface layer
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet
- Soils with slopes of more than 5 percent

Dissimilar soils:
- The well drained Rozetta soils in landscape positions similar to those of the Stronghurst soil or in more sloping areas

Properties and Qualities of the Stronghurst Soil

Parent material: Loess or other silty material
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.1 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
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Stronghurst—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Stronghurst—not hydric

Sylvan Series

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

Typical Pedon (OSD)

Sylvan silt loam, 15 to 30 percent slopes, at an elevation of 620 feet; Cass County, Illinois; 210 feet south and 2,580 feet west of the northeast corner of sec. 28, T. 18 N., R. 10 W.; USGS Virginia, Illinois, topographic quadrangle; lat. 39 degrees 59 minutes 21 seconds N. and long. 90 degrees 13 minutes 44 seconds W., NAD 27:

A—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure parting to weak fine granular; friable; common very fine roots; few faint very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.

E1—4 to 8 inches; dark brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak medium platy structure parting to weak fine subangular blocky; friable; few very fine and medium roots; many faint dark grayish brown (10YR 4/2) coatings on faces of peds; moderately acid; clear smooth boundary.

E2—8 to 10 inches; dark yellowish brown (10YR 4/4) silt loam, light yellowish brown (10YR 6/4) dry; weak fine and medium subangular blocky structure; friable; few very fine roots; common distinct dark grayish brown (10YR 4/2) coatings on faces of peds; slightly acid; clear smooth boundary.
Bt1—10 to 17 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak fine subangular blocky structure; friable; few very fine roots; common distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
Bt2—17 to 23 inches; yellowish brown (10YR 5/6) silty clay loam; moderate fine angular and subangular blocky structure; friable; few very fine and medium roots; many distinct dark yellowish brown (10YR 4/4) and few distinct brown (10YR 4/3) clay films on faces of peds; slightly acid; clear smooth boundary.
BCt—23 to 27 inches; yellowish brown (10YR 5/6) silt loam; weak fine and medium subangular blocky structure; friable; few very fine roots; few distinct dark yellowish brown (10YR 4/4) clay films lining pores; neutral; clear smooth boundary.
C1—27 to 41 inches; 80 percent yellowish brown (10YR 5/6) and 20 percent light brownish gray (10YR 6/2) silt loam; massive; friable; few very fine roots; the light brownish gray matrix color is a relict feature; few fine and medium snail shells; strongly effervescent; slightly alkaline; clear smooth boundary.
C2—41 to 64 inches; 60 percent light brownish gray (10YR 6/2) and 40 percent yellowish brown (10YR 5/6) silt loam; massive; friable; few very fine roots; the light brownish gray matrix color is a relict feature; common fine and medium snail shells; strongly effervescent; moderately alkaline; clear smooth boundary.
Cg—64 to 80 inches; 55 percent light brownish gray (10YR 6/2) and 45 percent yellowish brown (10YR 5/6) silt loam; massive; friable; common medium prominent irregular reddish yellow (7.5YR 6/8) and few fine prominent irregular strong brown (7.5YR 4/6) masses of iron accumulation lining pores; common fine and medium snail shells; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to the base of a diagnostic horizon: Typically 22 to 35 inches, but ranging to 40 inches in some pedons
Depth to carbonates: 22 to 40 inches
Profile feature: An EB or BE horizon in some pedons

Ap or A horizon(s):
Hue—10YR
Value—4 to 6, 3 in A horizons less than 6 inches thick
Chroma—2 to 4
Texture—silt loam or silty clay loam

E horizon(s), where present:
Hue—10YR
Value—4 or 5 (5 or 6 dry)
Chroma—2 to 4
Texture—silt loam

Bt, BCt, or BC horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silty clay loam or silt loam

C or Cg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 6

Texture—silt loam or silt

19D3—Sylvan silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay and sand in the lower part of the subsoil
- Soils with carbonates at a depth of more than 40 inches
- Soils with less clay in the subsoil
- Soils with less clay in the surface layer

Dissimilar soils:
- The somewhat poorly drained Bunkum and Passport soils downslope from Sylvan soil

Properties and Qualities of the Sylvan Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Sylvan—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Sylvan—not hydric

Tice Series

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

Typical Pedon (OSD)

Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded; at an elevation of about 465 feet; Adams County, Illinois; 1,670 feet north and 990 feet west of the southeast corner of sec. 22, T. 2 S., R. 9 W.; USGS Quincy West topographic quadrangle, lat. 39 degrees 52 minutes 56 seconds N. and long. 91 degrees 25 minutes 7 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure parting to weak medium granular; firm; common very fine roots throughout; neutral; abrupt smooth boundary.

A—9 to 14 inches; very dark grayish brown (10YR 3/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; firm; few very fine roots throughout; few fine faint brown (10YR 4/3) masses of iron and manganese accumulation in the matrix; neutral; clear smooth boundary.

BA—14 to 19 inches; dark grayish brown (10YR 4/2) silty clay loam; weak fine prismatic structure parting to moderate fine subangular blocky; firm; few very fine roots throughout; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; common fine faint brown (7.5YR 4/3) masses of iron and manganese accumulation in the matrix; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; neutral; clear smooth boundary.

Bw—19 to 35 inches; brown (10YR 4/3) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots throughout; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; many medium prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; few fine faint grayish brown (10YR 5/2) iron depletions in the matrix; moderately acid; clear smooth boundary.

Bg1—35 to 44 inches; dark grayish brown (10YR 4/2) silty clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few very fine roots throughout; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; many medium prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; moderately acid; gradual smooth boundary.

Bg2—44 to 61 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak medium prismatic structure; firm; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common medium prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; slightly acid; clear smooth boundary.

Bg3—61 to 80 inches; dark grayish brown (2.5Y 4/2) silty clay loam; weak medium prismatic structure; firm; common distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common medium prominent strong brown (7.5YR 4/6) masses of iron accumulation in the matrix; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of a diagnostic horizon: 30 to more than 80 inches
Profile feature: An AB or BA horizon in some pedons

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

Bw or Bg horizon(s):
Hue—10YR or 2.5Y

Value—4 or 5
Chroma—2 to 4
Texture—silty clay loam or silt loam

BC or BCg horizon(s), where present:
Hue—10YR, 2.5Y, or 5Y
Value—4 or 5
Chroma—1 to 4
Texture—mainly silty clay loam or silt loam; strata of loam, clay loam, or sandy loam in some pedons

Cg or C horizon(s), where present:
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 3
Texture—silty clay loam, clay loam, loam, sandy loam, or silt loam

8284A—Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a thinner dark surface soil
- Soils with more sand throughout

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Tice Soil

Parent material: Alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.4 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
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Tice—2w
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Tice—not hydric

Timewell Series

Taxonomic classification: Fine, smectitic, mesic Aquic Argiudolls

Typical Pedon (OSD)

Timewell silt loam, in an area of Timewell and Ipava soils, 0 to 2 percent slopes, at an elevation of 750 feet; Brown County, Illinois; 271 feet north and 1,808 feet east of the southwest corner of sec. 7, T. 1 S., R. 4 W.; USGS Kellerville, Illinois, topographic quadrangle; lat. 39 degrees 59 minutes 21 seconds N. and long. 90 degrees 54 minutes 28 seconds W., NAD 27:

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

A—8 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium platy structure parting to moderate fine granular; friable; few fine roots; neutral; abrupt smooth boundary.

AE—12 to 18 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; moderate thin platy structure parting to weak fine granular; friable; few fine roots; common fine distinct light gray (10YR 7/1) clay depletions, few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation, and few fine faint black (7.5YR 2/1) masses of manganese accumulation throughout; moderately acid; clear smooth boundary.

Bt1—18 to 22 inches; yellowish brown (10YR 5/4) silty clay loam; moderate fine subangular blocky structure; firm; few fine roots; many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation, common fine prominent black (7.5YR 2/1) masses of iron and manganese accumulation, and few fine distinct grayish brown (10YR 5/2) iron depletions throughout; strongly acid; clear smooth boundary.

Bt2—22 to 29 inches; yellowish brown (10YR 5/4) silty clay; weak medium prismatic structure parting to moderate fine subangular blocky; firm; few fine roots; many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation, few fine distinct grayish brown (10YR 5/2) iron depletions, and common fine prominent black (7.5YR 2/1) masses of manganese accumulation throughout; strongly acid; clear smooth boundary.

Btg1—29 to 40 inches; grayish brown (2.5Y 5/2) silty clay; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; many distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and in pores; common fine distinct yellowish brown (10YR 5/4) and common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation and common fine and medium prominent black (7.5YR 2/1) masses of manganese accumulation throughout; moderately acid; clear smooth boundary.

Btg2—40 to 48 inches; light brownish gray (2.5Y 6/2) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds and common distinct very dark gray (10YR 3/1) organic coatings in root channels and pores; many medium distinct yellowish brown (10YR 5/4) and common

medium prominent yellowish brown (10YR 5/8) masses of iron accumulation and common fine and medium prominent black (7.5YR 2/1) masses of manganese accumulation throughout; moderately acid; clear smooth boundary.

Btg3—48 to 56 inches; light brownish gray (2.5Y 6/2) silty clay loam; weak medium prismatic structure parting to weak medium subangular blocky; friable; few fine roots; common distinct dark gray (10YR 4/1) clay films on faces of peds and few distinct very dark gray (10YR 3/1) organic coatings in root channels and/or pores; few fine prominent yellowish brown (10YR 5/6) and common fine distinct light yellowish brown (10YR 6/4) masses of iron accumulation and few fine prominent black (7.5YR 2/1) masses of manganese accumulation throughout; moderately acid; clear smooth boundary.

BCtg—56 to 67 inches; light brownish gray (2.5Y 6/2) silt loam; weak medium prismatic structure; friable; few fine roots; few distinct dark gray (10YR 4/1) clay films on faces of peds and few distinct very dark gray (10YR 3/1) organic coatings in root channels and pores; many fine prominent yellowish brown (10YR 5/6) and common fine distinct light yellowish brown (10YR 6/4) masses of iron accumulation and few fine prominent black (7.5YR 2/1) masses of manganese accumulation throughout; moderately acid; clear smooth boundary.

Cg—67 to 80 inches; light gray (5Y 7/1) silt loam; massive; friable; very few distinct very dark gray (10YR 3/1) organic coatings in root channels and pores; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and few fine prominent black (7.5YR 2/1) masses of manganese accumulation throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 21 inches
Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: 45 to 70 inches

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

E or AE horizon(s):
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—silt loam

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

C or Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 7
Chroma—1 to 6
Texture—silt loam or silty clay loam

699A—Timewell silt loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a darker subsurface layer
- Soils with a thinner surface layer

Dissimilar soils:
- The poorly drained Virden and Denny soils in depressions

Properties and Qualities of the Timewell Soil

Parent material: Loess
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 feature: 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 4.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: 1.0 to 2.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Timewell—1
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Timewell—not hydric

Timula Series

Taxonomic classification: Coarse-silty, mixed, superactive, mesic Typic Eutrudepts

Typical Pedon

Timula silt loam, 10 to 18 percent slopes, eroded, at an elevation of 585 feet; Adams County, Illinois; 2,500 feet west and 2,240 feet south of the northeast corner of sec. 13, T. 1 N., R. 9 W.; USGS Long Island, Illinois, topographic quadrangle; lat. 40 degrees 4 minutes 35 seconds N. and long. 91 degrees 23 minutes 24 seconds W., NAD 27:

Ap—0 to 5 inches; 90 percent brown (10YR 4/3) and 10 percent yellowish brown (10YR 5/6) silt loam, brownish yellow (10YR 6/6) dry; moderate fine granular structure; friable; common fine roots throughout; neutral; clear smooth boundary.

E—5 to 7 inches; 70 percent yellowish brown (10YR 5/4) and 29 percent light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 7/3) dry; weak thin platy structure parting to weak fine subangular blocky; very friable; few fine roots throughout; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation throughout and few medium prominent black (2.5Y 2/1) manganese concretions lining root channels and pores; the light brownish gray matrix color and masses are relict redoximorphic features; neutral; clear smooth boundary.

Bw1—7 to 10 inches; 75 percent yellowish brown (10YR 5/6) and 24 percent light brownish gray (10YR 6/2) silt loam; weak medium subangular blocky structure; very friable; few very fine and fine roots throughout; few distinct yellowish brown (10YR 5/4) clay films in root channels and pores; few medium distinct yellowish brown (10YR 5/8) masses of iron accumulation and many medium prominent black (2.5Y 2/1) masses of manganese accumulation throughout; the light brownish gray matrix color and masses are relict redoximorphic features; neutral; clear wavy boundary.

Bw2—10 to 17 inches; light brownish gray (10YR 6/2) silt loam; weak fine subangular blocky structure; very friable; few fine roots throughout; few fine prominent black (2.5Y 2/1) iron and manganese concretions and common medium prominent yellowish brown (10YR 5/6) and (10YR 5/8) masses of iron accumulation throughout; the light brownish gray matrix color and masses are relict redoximorphic features; neutral; clear wavy boundary.

BC—17 to 22 inches; 50 percent yellowish brown (10YR 5/6) and 40 percent light brownish gray (10YR 6/2) silt loam; weak coarse subangular blocky structure; very friable; few fine roots throughout; common medium distinct yellowish brown (10YR 5/8) masses of iron accumulation throughout and few fine prominent black (2.5Y 2/1) masses of manganese accumulation lining root channels and pores; the light brownish gray matrix color and masses are relict redoximorphic features; slightly acid; clear wavy boundary.

C1—22 to 39 inches; light brownish gray (10YR 6/2) silt loam; massive; very friable; few very fine roots throughout; few fine and medium prominent yellowish brown (10YR 5/6 and 5/8) masses of iron accumulation, few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation, few fine and medium faint white (10YR 8/1) and medium faint pale yellow (2.5Y 7/3) masses of carbonate, and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; the light brownish gray matrix color and masses are relict redoximorphic features; slightly effervescent; slightly alkaline; clear wavy boundary.

C2—39 to 84 inches; light brownish gray (10YR 6/2) silt loam; massive; very friable; common fine and medium prominent yellowish brown (10YR 5/8) masses of iron accumulation, common fine and medium faint white (10YR 8/1) masses of carbonate, and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; the light brownish gray matrix color and masses are relict redoximorphic features; strongly effervescent; moderately alkaline.

Range in Characteristics

Depth to carbonates: 0 to 36 inches
Depth to the base of a diagnostic horizon: 18 to 36 inches

Ap or A horizon(s):
Hue—10YR
Value—3 or 4
Chroma—2 or 3

Texture—silt loam or silt

E horizon(s), where present:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silt

Bw horizon(s):
Hue—10YR
Value—4 to 6
Chroma—2 to 6
Texture—silt loam or silt

C horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—5 or 6
Chroma—2 to 4
Texture—silt loam or silt

Taxadjunct Features

Timula silt loam, 10 to 18 percent slopes, severely eroded, is outside the range of the series because it has carbonates at the surface and does not have a Bw horizon. These differences, however, do not significantly affect the use or behavior of the soil. The soil is classified as a coarse-silty, mixed, superactive, calcareous, mesic Typic Udorthent.

271C3—Timula silt loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

Timula and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with more clay in the subsoil and with carbonates at a depth of more than 36 inches

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None

Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Timula—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Timula—not hydric

271D3—Timula silt loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with more clay in the subsoil and with carbonates at a depth of more than 36 inches

Dissimilar soils:
- The well drained Fayette and Menfro soils on summits

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.7 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Medium
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Timula—4e
Prime farmland status of the map unit: Not prime farmland

Hydric soil status: Timula—not hydric

856E2—Stookey and Timula soils, 18 to 25 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines (fig. 5)
Position on landform: Backslopes

Map Unit Composition

Stookey and similar soils: 50 percent
Timula and similar soils: 30 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 18 inches
- Soils with more sand in the subsoil and underlying material
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Menfro soils on summits and shoulders
- The well drained Goss soils downslope from the Stookey and Timula soils
- The somewhat excessively drained Hamburg soils downslope from the Stookey and Timula soils

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey and Timula—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey and Timula—not hydric

856F—Stookey and Timula soils, 18 to 35 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

Stookey and similar soils: 50 percent
Timula and similar soils: 30 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 18 inches
- Soils with more clay in the surface layer

Dissimilar soils:
- The well drained Goss soils downslope from the Stookey and Timula soils
- The somewhat excessively drained Hamburg soils downslope from the Stookey and Timula soils

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey and Timula—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey and Timula—not hydric

856G—Stookey and Timula soils, 35 to 60 percent slopes

Setting

Landform: Loess hills and ground moraines
Position on landform: Backslopes

Map Unit Composition

Stookey and similar soils: 50 percent
Timula and similar soils: 30 percent
Dissimilar soils: 20 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with carbonates at a depth of less than 18 inches
- Soils with redder colors in the subsoil
- Soils with more sand in the subsoil and underlying material

Dissimilar soils:
- The well drained Goss soils downslope from the Stookey and Timula soils
- The somewhat excessively drained Hamburg soils downslope from the Stookey and Timula soils

Properties and Qualities of the Stookey Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.7 inches to a depth of 60 inches

Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and moderate for concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Properties and Qualities of the Timula Soil

Parent material: Loess
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 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
Seasonal high water table: More than 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: High
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Stookey and Timula—7e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Stookey and Timula—not hydric

Titus Series

Taxonomic classification: Fine, smectitic, mesic Vertic Endoaquolls

Typical Pedon

Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 470 feet; Adams County, Illinois; 2,650 feet west and 2,150 feet south of the northeast corner of sec. 20, T. 2 N., R. 9 W.; USGS Lima, Illinois, topographic quadrangle; lat. 40 degrees 9 minutes 5 seconds N. and long. 91 degrees 27 minutes 55 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure; very firm; few fine roots; neutral; clear smooth boundary.

A—7 to 13 inches; dark olive gray (5Y 3/2) silty clay loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; very firm; few fine roots; few fine dark prominent yellowish brown (10YR 4/4) masses of iron accumulation throughout; neutral; clear smooth boundary.

Bg1—13 to 25 inches; dark gray (2.5Y 4/1) silty clay; weak fine prismatic structure; very firm; few fine roots; many distinct dark olive gray (5Y 3/2) organo-clay films

on faces of peds; common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

Bg2—25 to 36 inches; dark gray (5Y 4/1) silty clay; weak medium prismatic structure; very firm; few very fine roots; many distinct gray (N 5/0) pressure faces on peds; common fine prominent brown (7.5YR 4/4) and few fine distinct black (10YR 2/1) masses of iron accumulation throughout; neutral; clear smooth boundary.

Bg3—36 to 46 inches; dark gray (5Y 4/1) silty clay; weak medium prismatic structure; very firm; few very fine roots; many distinct gray (N 5/0) pressure faces on peds; common fine prominent brown (7.5YR 4/4) and few fine prominent black (10YR 2/1) masses of iron accumulation throughout; neutral; clear smooth boundary.

Bg4—46 to 55 inches; dark gray (2.5Y 4/1) silty clay; weak fine prismatic structure; very firm; few very fine roots; many distinct gray (N 5/0) pressure faces on peds; few fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

BCg—55 to 68 inches; dark gray (5Y 4/1) silty clay loam; massive; very firm; few fine dark yellowish brown (10YR 4/6) masses of iron accumulation throughout; neutral; clear smooth boundary.

Cg—68 to 80 inches; dark gray (5Y 4/1) silty clay loam; massive; very firm; many fine prominent brown (7.5YR 4/4) and few fine distinct black (10YR 2/1) masses of iron accumulation throughout; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 24 inches
Depth to the base of a diagnostic horizon: 35 to 70 inches

Ap or A horizon(s):
Hue—10YR, 5Y, or N
Value—2 or 3
Chroma—0 to 2
Texture—silty clay loam or silty clay

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

Cg horizon(s):
Hue—10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 or 2
Texture—mainly silty clay loam; strata of silt loam or loam in some pedons
Content of gravel—0 to 15 percent

3404A—Titus silty clay loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

Titus and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with a lighter colored surface layer
- Soils with less clay in the subsoil
- Soils with less clay and more sand in the surface soil and subsoil
- Soils with a lighter colored surface layer that contains less clay

Properties and Qualities of the Titus Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Titus—4w
Prime farmland status of the map unit: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Titus—hydric

3404L—Titus silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

Titus and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with a lighter colored surface layer
- Soils with less clay in the subsoil
- Soils with less clay and more sand in the surface soil and subsoil
- Soils with a lighter colored surface layer that contains less clay

Properties and Qualities of the Titus Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow

Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Medium
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Titus—5w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Titus—hydric

8404A—Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains (fig. 4)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a lighter colored surface layer
- Soils with less clay in the subsoil
- Soils with more sand in the surface soil and subsoil

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

Properties and Qualities of the Titus Soil

Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow or moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: High for steel and low for concrete
Surface runoff class: Medium

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

Interpretive Groups

Land capability classification: Titus—3w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Titus—hydric

Twomile Series

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

Typical Pedon

Twomile silt loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 660 feet; Adams County, Illinois; 977 feet west and 530 feet south of the northeast corner of sec. 27, T. 1 S., R. 8 W.; USGS Quincy East, Illinois, topographic quadrangle; lat. 39 degrees 57 minutes 46 seconds N. and long. 91 degrees 18 minutes 17 seconds W., NAD 27:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; many fine and medium roots; neutral; clear smooth boundary.

A—7 to 10 inches; dark grayish brown (10YR 4/2) silt loam, grayish brown (10YR 5/2) dry; moderate thin platy structure parting to moderate fine granular; friable; common fine and medium roots; few fine distinct brown (10YR 5/3) clay depletions between peds; neutral; clear wavy boundary.

Eg1—10 to 15 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; moderate thin platy structure; friable; common fine roots; common fine prominent dark yellowish brown (10YR 4/6) and yellowish brown (10YR 5/6) masses of iron accumulation throughout and few fine faint light gray (10YR 7/2) clay depletions between peds; neutral; clear wavy boundary.

Eg2—15 to 26 inches; light brownish gray (10YR 6/2) silt loam, light gray (10YR 7/1) dry; moderate medium platy structure; friable; few fine roots; few fine faint light gray (10YR 7/1) clay depletions between peds; many fine and medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation and common fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; clear wavy boundary.

Btg1—26 to 32 inches; light brownish gray (2.5Y 6/2) silt loam; moderate fine prismatic structure parting to weak fine subangular blocky; friable; few very fine roots; common distinct dark gray (2.5Y 4/1) clay films and common prominent light gray (10YR 7/1) silt coatings on faces of peds; many fine and medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation and common fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; clear wavy boundary.

Btg2—32 to 38 inches; light brownish gray (2.5Y 6/2) silt loam; weak fine prismatic structure parting to weak fine subangular blocky; friable; few very fine roots; krotovinas; common distinct dark gray (2.5Y 4/1) clay films on faces of peds and in pores and few prominent light gray (10YR 7/1) silt coatings on faces of peds; many fine and medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation and common fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; very strongly acid; clear wavy boundary.

Btg3—38 to 51 inches; dark grayish brown (10YR 4/2) silt loam; weak fine prismatic structure parting to weak medium subangular blocky; friable; few very fine roots; few distinct dark gray (2.5Y 4/1) clay films on faces of peds and in pores and few

prominent light gray (10YR 7/1) silt coatings on faces of peds; many fine and medium prominent dark yellowish brown (10YR 3/6) masses of iron and manganese accumulation, many fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation, and common fine distinct black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; clear wavy boundary.

Btg4—51 to 58 inches; grayish brown (2.5Y 5/2) silt loam; weak medium subangular blocky structure; friable; few distinct dark gray (2.5Y 4/1) clay films and few prominent light gray (10YR 7/1) silt coatings on faces of peds; many fine and medium prominent dark yellowish brown (10YR 3/6) masses of iron and manganese accumulation, many fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation, and common fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; moderately acid; clear wavy boundary.

BCg—58 to 80 inches; dark gray (2.5Y 4/1) silt loam; weak medium subangular blocky structure; friable; common faint dark gray (2.5Y 4/1) clay films lining pores and many prominent light gray (10YR 7/1) silt coatings on faces of peds; many fine and medium prominent dark yellowish brown (10YR 3/6) masses of iron and manganese accumulation, many fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation, and common fine faint black (2.5Y 2/1) masses of manganese accumulation throughout; strongly acid.

Range in Characteristics

Combined thickness of the A and E horizons: 24 to 36 inches
Depth to a 2B or 2C horizon: More than 40 inches

Ap or A horizon(s):
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—silt loam

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

Btg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—silt loam or silty clay loam

Cg or 2Cg horizon(s), where present:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—1 or 2
Texture—silt loam, loam, silty clay loam, or clay loam

8217A—Twomile silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains (fig. 5)

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a thinner subsurface layer or no subsurface layer
- Soils with a darker surface layer
- Soils with a seasonal high water table at a depth of more than 1.0 foot
- Soils with less clay in the upper part of the underlying material

Dissimilar soils:
- The well drained Drury soils on the higher alluvial fans

Properties and Qualities of the Twomile Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 9.1 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
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Twomile—3w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Twomile—hydric

7815B—Udorthents, silty, undulating, rarely flooded

Setting

Landform: Settling basins on flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with more sand or gravel in the lower part of the underlying material

Dissimilar soils:
- The somewhat poorly drained Orion soils in the slightly lower landscape positions
- The excessively drained Sarpy soils in the slightly higher landscape positions

Properties and Qualities of the Udorthents

Parent material: Silty local alluvium
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 feature: More than 80 inches
Available water capacity: About 12.0 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.2 to 1.0 percent
Shrink-swell potential: Moderate
Perched seasonal high water table: 3.0 to 6.0 feet below the surface
Frequency and most likely period of flooding: Rare, November-June
Potential for frost action: High
Corrosivity: 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: Udorthents—1
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Udorthents—not hydric

Ursa Series

Taxonomic classification: Fine, smectitic, mesic Chromic Vertic Hapludalfs

Typical Pedon (OSD)

Ursa silt loam, 10 to 18 percent slopes, eroded, at an elevation of 665 feet; Brown County, Illinois; 1,000 feet east and 740 feet north of the southwest corner of sec. 6, T. 1 N., R. 4 W.; USGS Clayton, Illinois, topographic quadrangle; lat. 40 degrees 5 minutes 34.3 seconds N. and long. 90 degrees 54 minutes 34.3 seconds W., NAD 27:

Ap—0 to 6 inches; grayish brown (10YR 5/2) silt loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; friable; many fine and medium roots throughout; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation lining root channels and pores; slightly acid; abrupt smooth boundary.

Bt1—6 to 10 inches; yellowish brown (10YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots throughout; common distinct yellowish brown (10YR 5/4) clay films and very pale brown (10YR 7/3) silt coatings on faces of peds; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; strongly acid; clear wavy boundary.

2Bt2—10 to 15 inches; yellowish brown (10YR 5/8) silty clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; few fine roots throughout; many prominent brown (7.5YR 5/4) clay films on faces of peds; common fine faint strong brown (7.5YR 5/8) masses of iron accumulation throughout; 5 percent fine gravel; strongly acid; clear wavy boundary.

2Bt3—15 to 22 inches; yellowish brown (10YR 5/8) clay; weak coarse subangular blocky structure; firm; few fine roots throughout; few prominent brown (7.5YR 4/4) clay films in root channels and pores; common fine faint strong brown (7.5YR 5/8) masses of iron accumulation and few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; 5 percent fine gravel; moderately acid; clear wavy boundary.

2Bt4—22 to 28 inches; yellowish brown (10YR 5/6) clay; weak coarse prismatic structure; very firm; few fine roots throughout; common distinct pale brown (10YR 6/3) and common distinct brown (7.5YR 4/4) clay films on faces of peds; few fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; 5 percent fine gravel; moderately acid; clear smooth boundary.
2Bt5—28 to 35 inches; yellowish brown (10YR 5/6) clay loam; weak coarse prismatic structure; very firm; few fine roots in cracks; common distinct light brownish gray (10YR 6/2) clay films in root channels and pores; common fine faint strong brown (7.5YR 4/6) masses of iron accumulation and common fine prominent black (2.5Y 2/1) masses of manganese accumulation throughout; neutral; clear wavy boundary.
2Btg1—35 to 46 inches; light brownish gray (2.5Y 6/2) clay loam; moderate coarse prismatic structure; very firm; few fine roots in cracks; many faint light brownish gray (10YR 6/2) clay films on faces of peds; few fine and medium prominent yellowish brown (10YR 5/8) masses of iron accumulation and few medium prominent black (2.5Y 2/1) masses of manganese accumulation throughout; 5 percent fine gravel; neutral; clear wavy boundary.
2Btg2—46 to 56 inches; light brownish gray (2.5Y 6/2) clay loam; moderate coarse prismatic structure parting to strong medium subangular blocky; very firm; few very fine roots in cracks; many faint light brownish gray (10YR 6/2) clay films on faces of peds; few fine prominent strong brown (7.5YR 5/8) masses of iron accumulation lining root channels and pores and few fine distinct black (2.5Y 2/1) masses of manganese accumulation on faces of peds and between pores; 1 percent fine rounded quartz pebbles; slightly effervescent on faces of peds; neutral; clear wavy boundary.
2BCt1—56 to 74 inches; light yellowish brown (2.5Y 6/4) clay loam; strong medium and coarse subangular blocky structure; very firm; many distinct light brownish gray (10YR 6/2) clay films on faces of peds; many medium and coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation throughout and common fine to coarse prominent black (2.5Y 2/1) masses of manganese accumulation on faces of peds; 5 percent fine gravel; neutral; clear wavy boundary.
2BCt2—74 to 90 inches; yellowish brown (10YR 5/6) clay loam; strong coarse prismatic structure; very firm; many distinct light brownish gray (2.5Y 6/2) clay films on faces of peds; many medium and coarse prominent black (2.5Y 2/1) masses of manganese accumulation on faces of peds; about 5 percent fine gravel; neutral.

Range in Characteristics

Thickness of loess: Less than 20 inches
Depth to carbonates: More than 60 inches
Depth to the base of a diagnostic horizon: More than 50 inches

Ap or A horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam, loam, silty clay loam, or clay loam

Bt, 2Bt, or 2Btg horizon(s):
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 8

Texture—clay loam, clay, silty clay, or silty clay loam
Content of rock fragments—0 to 10 percent

C or 2C horizon(s), where present:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—4 to 6
Chroma—1 to 6
Texture—clay loam, clay, silty clay, or loam
Content of rock fragments—2 to 10 percent

605D2—Ursa silt loam, 10 to 18 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with less sand and clay in the upper part of the subsoil

Dissimilar soils:
- The somewhat poorly drained Passport soils upslope from the Ursa soil

Properties and Qualities of the Ursa Soil

Parent material: A paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Ursa—4e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ursa—not hydric

605D3—Ursa silty clay loam, 10 to 18 percent slopes, severely eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of more than 6.0 feet

Dissimilar soils:
- The somewhat poorly drained Passport soils upslope from the Ursa soil

Properties and Qualities of the Ursa Soil

Parent material: A paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 7.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Moderate

Interpretive Groups

Land capability classification: Ursa—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ursa—not hydric

605E2—Ursa silt loam, 18 to 25 percent slopes, eroded

Setting

Landform: Ground moraines
Position on landform: Backslopes

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil

Dissimilar soils:
- The well drained Marseilles soils downslope from the Ursa soil

Properties and Qualities of the Ursa Soil

Parent material: A paleosol that formed in till
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Slow
Permeability below a depth of 60 inches: Slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 8.3 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: High
Perched seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: Moderate
Corrosivity: High for steel and moderate for concrete
Surface runoff class: Very high
Susceptibility to water erosion: High
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Ursa—6e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Ursa—not hydric

Vesser Series

Taxonomic classification: Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls

Typical Pedon

Vesser silt loam, 0 to 2 percent slopes, occasionally flooded, at an elevation of 480 feet; Adams County, Illinois; 360 feet west and 220 feet south of the northeast corner of sec. 4, T. 1 N., R. 9 W.; USGS Long Island topographic quadrangle; lat. 40 degrees 6 minutes 37 seconds N. and long. 91 degrees 26 minutes 19 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; friable; neutral; abrupt smooth boundary.

A—8 to 14 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak fine subangular blocky structure parting to weak medium granular; friable; common fine prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; neutral; gradual smooth boundary.

Eg1—14 to 20 inches; dark gray (10YR 4/1) silt loam, gray (10YR 6/1) dry; weak medium platy structure parting to weak very fine subangular blocky; friable; very few distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common medium distinct gray (10YR 5/1) clay depletions between peds and common fine prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; slightly acid; clear smooth boundary.

Eg2—20 to 26 inches; dark gray (10YR 4/1) silt loam, gray (10YR 6/1) dry; weak thick platy structure parting to weak very fine subangular blocky; friable; very few

distinct very dark gray (10YR 3/1) organic coatings on faces of peds; common medium distinct gray (10YR 6/1) clay depletions between peds and common fine prominent brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; slightly acid; gradual smooth boundary.

Btg1—26 to 34 inches; gray (10YR 5/1) silty clay loam; weak medium prismatic structure; friable; very few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and few distinct gray (10YR 6/1) silt coatings in root channels and pores; common medium prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; moderately acid; gradual smooth boundary.

Btg2—34 to 48 inches; gray (10YR 5/1) silty clay loam; weak medium prismatic structure; firm; very few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds and very few distinct light brownish gray (10YR 6/2) silt coatings in root channels and pores; common medium prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; moderately acid; gradual smooth boundary.

Btg3—48 to 58 inches; gray (10YR 5/1) silty clay loam; weak medium prismatic structure; firm; few distinct light brownish gray (10YR 6/2) silt coatings in root channels and pores and very few distinct very dark gray (10YR 3/1) organo-clay films on faces of peds; common medium prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; slightly acid; clear smooth boundary.

BCg—58 to 80 inches; gray (10YR 5/1) silty clay loam; weak coarse prismatic structure; firm; very few distinct dark gray (10YR 4/1) clay films on faces of peds and very few distinct light brownish gray (10YR 6/2) silt coatings in root channels and pores; common medium prominent dark brown (7.5YR 3/4) masses of iron and manganese accumulation throughout; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 10 to 20 inches
Depth to the base of a diagnostic horizon: More than 60 inches

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

E or Eg horizon(s):
Hue—10YR
Value—3 to 5
Chroma—1 or 2
Texture—silt loam

Btg horizon(s):
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 or 2
Texture—silty clay loam or silt loam

8396A—Vesser silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains (fig. 4)

Map Unit Composition

Vesser and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with more clay in the subsoil
- Soils with a thinner dark surface soil
- Soils with a lighter colored surface layer and subsurface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of more than 1.0 foot

Properties and Qualities of the Vesser Soil

Parent material: Alluvium
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.8 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Vesser—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Vesser—hydric

Virden Series

Taxonomic classification: Fine, smectitic, mesic Vertic Argiaquolls

Typical Pedon (OSD)

Virden silty clay loam, 0 to 2 percent slopes, at an elevation of 699 feet; Adams County, Illinois; 140 feet west and 54 feet north of the southeast corner of sec. 3, T. 2 N., R. 6 W.; USGS Bowen topographic quadrangle; lat. 40 degrees 10 minutes 49 seconds N. and long. 91 degrees 4 minutes 0 seconds W., NAD 27:

Ap—0 to 8 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate medium granular structure; firm; slightly alkaline; abrupt smooth boundary.

A—8 to 16 inches; black (10YR 2/1) silty clay loam, dark gray (10YR 4/1) dry; moderate fine granular structure; firm; moderately acid; clear smooth boundary.

Btg1—16 to 23 inches; very dark gray (10YR 3/1) silty clay, grayish brown (10YR 5/2) dry; strong fine angular blocky structure; firm; few faint black (10YR 2/1) organo-clay films on faces of peds; few fine faint black (10YR 2/1) manganese concretions throughout; slightly acid; clear smooth boundary.

Btg2—23 to 34 inches; gray (5Y 5/1) silty clay loam; weak coarse prismatic structure parting to moderate medium angular blocky; firm; few distinct dark gray (10YR

4/1) clay films on faces of peds; many medium prominent brownish yellow (10YR 6/6) masses of iron accumulation and few fine prominent black (10YR 2/1) masses of manganese accumulation throughout; slightly acid; clear smooth boundary.

Btg3—34 to 42 inches; gray (5Y 5/1) silty clay loam; weak and moderate coarse prismatic structure parting to moderate coarse angular blocky; firm; few distinct dark gray (5Y 4/1) clay films on faces of peds; common medium prominent light olive brown (2.5Y 5/6) masses of iron accumulation and few fine prominent black (10YR 2/1) masses of manganese accumulation throughout; neutral; clear smooth boundary.

Btg4—42 to 49 inches; gray (5Y 5/1) silty clay loam; moderate coarse prismatic structure parting to weak coarse angular blocky; firm; very few distinct dark gray (N 4/0) clay films on faces of peds; many medium distinct olive brown (2.5Y 4/4) masses of iron and manganese accumulation throughout; neutral; gradual smooth boundary.

Cg—49 to 60 inches; gray (5Y 5/1) silty clay loam; massive; firm; common medium distinct olive brown (2.5Y 4/4) masses of iron and manganese accumulation throughout; neutral.

Range in Characteristics

Depth to carbonates: More than 50 inches
Depth to the base of a diagnostic horizon: 40 to 60 inches
Thickness of the mollic epipedon: 10 to 24 inches

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

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

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

50A—Virden silty clay loam, 0 to 2 percent slopes

Setting

Landform: Ground moraines
Position on landform: Toeslopes

Map Unit Composition

Virden and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with less clay in the surface layer

- Soils with a dark surface soil more than 24 inches thick
- Soils with a lighter colored subsurface layer
- Soils with a seasonal high water table at a depth of more than 1.0 foot

Properties and Qualities of the Virden Soil

Parent material: Loess
Drainage class: Poorly drained
Slowest permeability within a depth of 40 inches: Moderately slow
Permeability below a depth of 60 inches: Moderately slow
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 3.0 to 6.0 percent
Shrink-swell potential: High
Apparent seasonal high water table: At the surface to 1.0 foot below the surface
Ponding: At the surface to 0.5 foot above the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Virden—2w
Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Virden—hydric

Wakeland Series

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

Typical Pedon

Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, at an elevation of 645 feet; Adams County, Illinois; 1,240 feet east and 840 feet north of the southwest corner of sec. 5, T. 1 S., R. 6 W.; USGS Camp Point, Illinois, topographic quadrangle; lat. 40 degrees 0 minutes 28 seconds N. and long. 91 degrees 7 minutes 11 seconds W., NAD 27:

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, very pale brown (10YR 7/3) dry; weak fine granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.

A—6 to 10 inches; brown (10YR 5/3) silt loam, very pale brown (10YR 7/3) dry; weak fine granular structure; friable; few fine roots; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation, common fine distinct black (10YR 2/1) masses of manganese accumulation, and common fine faint grayish brown (10YR 5/2) iron depletions throughout; moderately acid; abrupt smooth boundary.

Cg1—10 to 21 inches; stratified, 88 percent dark grayish brown (10YR 4/2) and 2 percent light yellowish brown (10YR 6/4) silt loam; weak fine granular structure; friable; few very fine roots; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions throughout; slightly acid; gradual smooth boundary.

Cg2—21 to 35 inches; stratified, 88 percent dark grayish brown (10YR 4/2) and 2 percent grayish brown (10YR 5/2) silt loam; weak very fine granular structure; friable; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions throughout; slightly acid; gradual smooth boundary.
Cg3—35 to 50 inches; dark gray (10YR 4/1) silt loam; massive; friable; common fine and medium prominent yellowish brown (10YR 5/6) and few fine distinct yellowish brown (10YR 5/4) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions throughout; moderately acid; gradual smooth boundary.
Cg4—50 to 65 inches; dark gray (10YR 4/1) silt loam; massive; friable; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions throughout; moderately acid; gradual smooth boundary.
Cg5—65 to 80 inches; dark gray (10YR 4/1) silt loam; massive; friable; common fine and medium distinct yellowish brown (10YR 5/4) and few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation and common fine faint gray (10YR 5/1) iron depletions throughout; slightly acid.

Range in Characteristics

Ap or A horizon(s):
Hue—10YR
Value—3 to 5
Chroma—1 to 4
Texture—silt loam

Cg or C horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 7
Chroma—1 or 6
Texture—silt loam or loam

3333A—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are more acid in the underlying material
- Soils with a buried soil at a depth of 20 to 40 inches
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet

Dissimilar soils:
- The well drained Haymond soils in the slightly higher landscape positions
- The well drained Elsah soils in areas closer to stream channels
- The poorly drained Birds soils in depressions

Properties and Qualities of the Wakeland Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Wakeland—2w
Prime farmland status of the map unit: Prime farmland where drained and either protected from flooding or not frequently flooded during the growing season
Hydric soil status: Wakeland—not hydric

3333L—Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are more acid in the underlying material
- Soils with a buried soil at a depth of 20 to 40 inches
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet
- Soils with more clay in the underlying material

Dissimilar soils:
- The well drained Haymond soils in the slightly higher landscape positions
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Wakeland Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low

Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Frequency and most likely period of flooding: Frequent, November-June
Potential for frost action: High
Corrosivity: 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: Wakeland—3w
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Wakeland—hydric

8333A—Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils that are more acid in the underlying material
- Soils with a buried soil at a depth of less than 40 inches
- Soils with a seasonal high water table at a depth of more than 2.0 feet
- Soils with a darker surface soil
- Soils with more clay in the underlying material

Dissimilar soils:
- The poorly drained Beaucoup soils in depressions

Properties and Qualities of the Wakeland Soil

Parent material: Silty alluvium
Drainage class: Somewhat poorly drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.1 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 3.0 percent
Shrink-swell potential: Low
Apparent seasonal high water table: 0.5 foot to 2.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: High
Corrosivity: 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: Wakeland—2w

Prime farmland status of the map unit: Prime farmland where drained
Hydric soil status: Wakeland—not hydric

Wakenda Series

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

Typical Pedon

Wakenda silt loam, 2 to 5 percent slopes, at an elevation of 690 feet; Adams County, Illinois; 1,070 feet south and 600 feet east of the northwest corner of sec. 21, T. 1 N., R. 8 W.; USGS Mendon, Illinois, topographic quadrangle; lat. 40 degrees 3 minutes 51 seconds N. and long. 91 degrees 20 minutes 9 seconds W., NAD 27:

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium platy structure parting to moderate fine granular; friable; neutral; clear smooth boundary.

A—7 to 12 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak medium platy and moderate medium granular structure; friable; neutral; clear smooth boundary.

AB—12 to 16 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; moderate fine subangular blocky structure; friable; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.

Bt1—16 to 21 inches; brown (10YR 4/3) silty clay loam; moderate fine subangular blocky structure; friable; common distinct dark brown (10YR 3/3) organo-clay films on faces of peds and few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores; moderately acid; clear smooth boundary.

Bt2—21 to 30 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; many distinct brown (10YR 4/3) clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—30 to 40 inches; yellowish brown (10YR 5/4) silty clay loam; moderate medium subangular blocky structure; firm; many distinct brown (10YR 4/3) clay films on faces of peds; few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation throughout; moderately acid; clear smooth boundary.

Bt4—40 to 53 inches; yellowish brown (10YR 5/4) silty clay loam; moderate coarse subangular blocky structure; friable; common distinct brown (10YR 4/3) clay films on faces of peds; few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation throughout, few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation throughout, and few fine distinct light brownish gray (10YR 6/2) iron depletions lining root channels and pores; moderately acid; gradual smooth boundary.

Bt5—53 to 62 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; few distinct brown (10YR 4/3) clay films on faces of peds; few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation throughout, few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation throughout, and few fine distinct light brownish gray (10YR 6/2) iron depletions lining root channels and pores; moderately acid; gradual smooth boundary.

BC—62 to 76 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; few distinct brown (10YR 4/3) clay films in root channels and/or pores; few fine faint brown (7.5YR 4/4) masses of iron and manganese accumulation throughout, few fine prominent yellowish brown (10YR 5/8) masses of iron accumulation throughout, few fine distinct black (10YR 2/1) masses of

manganese accumulation throughout, and few fine distinct light brownish gray (10YR 6/2) iron depletions lining root channels and pores; slightly acid; clear smooth boundary.

C—76 to 80 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few brown (10YR 4/3) clay films in root channels and pores; common fine distinct strong brown (7.5YR 5/6) masses of iron accumulation throughout, few fine distinct black (10YR 2/1) masses of manganese accumulation throughout, and common fine distinct light brownish gray (10YR 6/2) iron depletions lining root channels and pores; slightly acid.

Range in Characteristics

Thickness of the mollic epipedon: 12 to 24 inches
Depth to the base of a diagnostic horizon: More than 40 inches

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

Bt horizon(s):
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam or silty clay loam

C horizon(s):
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silty clay loam

441B—Wakenda silt loam, 2 to 5 percent slopes

Setting

Landform: Ground moraines
Position on landform: Summits and shoulders

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of 2.0 to 3.5 feet
- Soils with a thinner surface layer

Dissimilar soils:
- The somewhat poorly drained Ipava and Timewell soils in the less sloping areas

Properties and Qualities of the Wakenda Soil

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

Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Apparent seasonal high water table: 4.0 to 6.0 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: Moderate for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Low
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Wakenda—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Wakenda—not hydric

W—Water

This map unit includes streams, lakes, ponds, and estuaries. Areas of the unit are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year. Gravel pits and other areas that are not defined as miscellaneous water (M-W) and that contain water most of the time are mapped as water (W).

Winfield Series

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

Typical Pedon

Winfield silt loam, 2 to 5 percent slopes, at an elevation of 810 feet; Pike County, Illinois; 3,300 feet west and 330 feet north of the southeast corner of sec. 15, T. 5 S., R. 4 W.; USGS Pittsfield, Illinois, topographic quadrangle; lat. 39 degrees 37 minutes 17 seconds N. and long. 90 degrees 50 minutes and 56 seconds W., NAD 27:

Ap—0 to 8 inches; brown (10YR 4/3) silt loam, pale brown (10YR 6/3) dry; weak fine and medium subangular blocky structure; friable; common fine roots throughout; neutral; clear smooth boundary.

BE—8 to 13 inches; brown (10YR 4/3) silt loam; moderate fine and medium subangular blocky structure; friable; few fine roots throughout; neutral; clear smooth boundary.

Bt1—13 to 21 inches; dark yellowish brown (10YR 4/4) silty clay loam; moderate fine and medium subangular blocky structure; firm; few very fine roots throughout; few distinct brown (10YR 4/3) clay films and common distinct light gray (10YR 7/2) silt coatings on faces of peds; moderately acid; gradual smooth boundary.

Bt2—21 to 33 inches; dark yellowish brown (10YR 4/4) silty clay loam; weak medium prismatic structure; firm; few very fine roots throughout; few distinct brown (10YR 4/3) clay films on faces of peds; few fine prominent black (2.5Y 2/1) masses of manganese accumulation and few fine faint brown (10YR 5/3) iron depletions throughout; strongly acid; gradual smooth boundary.

Bt3—33 to 44 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; few very fine roots throughout; few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine prominent black (2.5Y 2/1)

manganese concretions and common medium faint brown (10YR 5/3) iron depletions throughout; strongly acid; gradual smooth boundary.

Bt4—44 to 55 inches; yellowish brown (10YR 5/4) silt loam; weak coarse subangular blocky structure; friable; very few distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; few fine prominent black (2.5Y 2/1) manganese concretions and common medium distinct light brownish gray (2.5Y 6/2) iron depletions throughout; moderately acid; gradual smooth boundary.

C—55 to 60 inches; yellowish brown (10YR 5/4) silt loam; massive; friable; few fine prominent black (2.5Y 2/1) manganese concretions and few medium distinct light brownish gray (2.5Y 6/2) iron depletions throughout; moderately acid.

Range in Characteristics

Depth to the base of a diagnostic horizon: 25 to 65 inches

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

E horizon(s), where present:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam or silty clay loam

Bt or Btg horizon(s):
Hue—7.5YR, 10YR, or 2.5Y
Value—4 to 6
Chroma—1 to 6
Texture—silt loam or silty clay loam

C or Cg horizon(s):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—silt loam

477B—Winfield silt loam, 2 to 5 percent slopes

Setting

Landform: Loess hills and ground moraines (fig. 6)
Position on landform: Summits and shoulders

Map Unit Composition

Winfield and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with more sand in the subsoil and with a seasonal high water table at a depth of less than 2.0 feet
- Soils with a seasonal high water table at a depth of less than 2.0 feet

Properties and Qualities of the Winfield Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.3 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
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Potential for frost action: High
Corrosivity: 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: Winfield—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Winfield—not hydric

477C2—Winfield silt loam, 5 to 10 percent slopes, eroded

Setting

Landform: Loess hills and ground moraines (fig. 6)
Position on landform: Shoulders and backslopes

Map Unit Composition

Winfield and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with a darker and thicker surface layer
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with more clay in the surface layer
- Soils with a seasonal high water table at a depth of less than 2.0 feet
- Soils with a seasonal high water table at a depth of less than 2.0 feet and with more sand in the subsoil
- Soils with more sand and clay in the lower part of the subsoil

Properties and Qualities of the Winfield Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 12.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 1.0 to 2.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None

Accelerated erosion: The surface layer has been thinned by erosion.
Potential for frost action: High
Corrosivity: 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: Winfield—3e
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Winfield—not hydric

477C3—Winfield silty clay loam, 5 to 10 percent slopes, severely eroded

Setting

Landform: Loess hills and ground moraines
Position on landform: Shoulders and backslopes

Map Unit Composition

Winfield and similar soils: 100 percent

Minor Components

Similar soils:
- Soils with a seasonal high water table at a depth of more than 6.0 feet
- Soils with carbonates at a depth of less than 40 inches
- Soils with less clay in the surface layer
- Soils with less clay in the subsoil
- Soils with a seasonal high water table at a depth of less than 2.0 feet
- Soils with a seasonal high water table at a depth of less than 2.0 feet and with more sand in the subsoil
- Soils with more sand and clay in the lower part of the subsoil

Properties and Qualities of the Winfield Soil

Parent material: Loess
Drainage class: Moderately well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 11.9 inches to a depth of 60 inches
Content of organic matter in the surface layer: 0.0 to 1.0 percent
Shrink-swell potential: Moderate
Apparent seasonal high water table: 2.0 to 3.5 feet below the surface
Flooding: None
Accelerated erosion: The surface layer is mostly subsoil material.
Potential for frost action: High
Corrosivity: 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: Winfield—4e

Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Winfield—not hydric

Worthen Series

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

Typical Pedon (OSD)

Worthen silt loam, 2 to 5 percent slopes, rarely flooded, at an elevation of 465 feet; Scott County, Illinois; 160 feet south and 640 feet west of the northeast corner of sec. 26, T. 13 N., R. 13 W.; USGS Bedford topographic quadrangle; lat. 39 degrees 32 minutes 59 seconds N. and long. 90 degrees 30 minutes 28 seconds W., NAD 27:

Ap—0 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak fine granular structure; friable; common very fine and fine roots; neutral; abrupt smooth boundary.
A—9 to 20 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak medium granular structure; friable; few very fine and fine roots; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; slightly acid; clear smooth boundary.
AB—20 to 29 inches; dark brown (10YR 3/3) silt loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; friable; few very fine and fine roots; common distinct very dark grayish brown (10YR 3/2) organic coatings on faces of peds; neutral; clear smooth boundary.
Bw1—29 to 41 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; few very fine and fine roots; common distinct dark brown (10YR 3/3) organic coatings on faces of peds, few distinct very dark grayish brown (10YR 3/2) organic coatings in root channels and pores, and few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; neutral; clear smooth boundary.
Bw2—41 to 64 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure; friable; few very fine and fine roots; few distinct dark brown (10YR 3/3) organic coatings in root channels and pores and few distinct very pale brown (10YR 7/3) silt coatings on faces of peds; neutral; gradual smooth boundary.
C—64 to 80 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 36 inches
Depth to carbonates: More than 50 inches
Depth to the base of a diagnostic horizon: 30 to 80 inches

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

Bw horizon(s):
Hue—7.5YR or 10YR
Value—3 or 5
Chroma—2 to 6
Texture—silt loam

C horizon(s):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Texture—silt loam

7037B—Worthen silt loam, 2 to 5 percent slopes, rarely flooded

Setting

Landform: Alluvial fans

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with a thinner dark surface soil
- Soils with a lighter colored surface layer
- Soils with more sand in the lower part of the subsoil
- Soils with a seasonal high water table at a depth of less than 6.0 feet

Dissimilar soils:
- The somewhat poorly drained Lawson soils in the lower landscape positions

Properties and Qualities of the Worthen Soil

Parent material: Silty local alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderate
Permeability below a depth of 60 inches: Moderate
Depth to restrictive feature: More than 80 inches
Available water capacity: About 13.2 inches to a depth of 60 inches
Content of organic matter in the surface layer: 2.0 to 4.0 percent
Shrink-swell potential: Low
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Rare, November-June
Potential for frost action: High
Corrosivity: Low for steel and concrete
Surface runoff class: Low
Susceptibility to water erosion: Moderate
Susceptibility to wind erosion: Low

Interpretive Groups

Land capability classification: Worthen—2e
Prime farmland status of the map unit: Prime farmland in all areas
Hydric soil status: Worthen—not hydric

Zumbro Series

Taxonomic classification: Sandy, mixed, mesic Entic Hapludolls

Typical Pedon

Zumbro sandy loam, 1 to 6 percent slopes, occasionally flooded, at an elevation of 465 feet; Adams County, Illinois; 1,700 feet west and 230 feet south of the northeast corner of sec. 8, T. 1 N., R. 9 W.; USGS Long Island, Illinois, topographic quadrangle; lat. 40 degrees 5 minutes 46 seconds N. and long. 91 degrees 27 minutes 45 seconds W., NAD 27:

Ap—0 to 11 inches; very dark brown (10YR 2/2) sandy loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; very friable; many very fine and fine roots; neutral; abrupt smooth boundary.
A1—11 to 19 inches; black (10YR 2/1) loamy sand, very dark grayish brown (10YR 3/2) dry; weak fine granular structure; very friable; common very fine roots; slightly acid; clear smooth boundary.
A2—19 to 24 inches; very dark brown (10YR 2/2) loamy sand, dark brown (10YR 3/3) dry; weak fine granular structure; very friable; common very fine roots; slightly acid; clear smooth boundary.
A3—24 to 33 inches; very dark grayish brown (10YR 3/2) loamy sand, grayish brown (10YR 5/2) dry; single grain; loose; common very fine roots; 1 percent gravel; slightly acid; clear smooth boundary.
Bw—33 to 42 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; few very fine roots; 2 percent gravel; neutral; clear smooth boundary.
C—42 to 80 inches; yellowish brown (10YR 5/4) sand; single grain; loose; 1 percent mixed gravel; neutral.

Range in Characteristics

Thickness of the mollic epipedon: 24 to 50 inches
Depth to carbonates: More than 20 inches
Depth to the base of a diagnostic horizon: 26 to 60 inches

Ap or A horizon(s):
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam
Content of rock fragments—0 to 15 percent

Bw horizon(s):
Hue—10YR
Value—2 to 4
Chroma—2 to 4
Texture—sand, fine sand, loamy sand, or loamy fine sand
Content of rock fragments—0 to 15 percent

C horizon(s):
Hue—10YR
Value—4 to 6
Chroma—2 to 5
Texture—sand, fine sand, or coarse sand

8349B—Zumbro sandy loam, 1 to 6 percent slopes, occasionally flooded

Setting

Landform: Flood plains

Map Unit Composition

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

Minor Components

Similar soils:
- Soils with less sand and more clay in the surface soil and in the upper part of the subsoil
- Soils with a thinner dark surface soil
- Soils with slopes of less than 1 percent
- Soils with a lighter colored surface soil

Dissimilar soils:
- The somewhat poorly drained Ceresco soils downslope from the Zumbro soil

Properties and Qualities of the Zumbro Soil

Parent material: Sandy alluvium
Drainage class: Well drained
Slowest permeability within a depth of 40 inches: Moderately rapid
Permeability below a depth of 60 inches: Rapid
Depth to restrictive feature: More than 80 inches
Available water capacity: 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
Seasonal high water table: More than 6.0 feet below the surface
Frequency and most likely period of flooding: Occasional, November-June
Potential for frost action: Low
Corrosivity: Low 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: Zumbro—4s
Prime farmland status of the map unit: Not prime farmland
Hydric soil status: Zumbro—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 rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; 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, slightly limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact

on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and for hay and pasture is suggested in this section. 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 can obtain specific information from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

A total of 282,194 acres in Pike County is used as cropland, 75,766 acres is used as pasture or hayland, and 153 acres is used for orchards. The major row crops are corn and soybeans, and the major small grain crop is wheat. A total of 1,123 acres in the county is irrigated (USDA, 1997).

The soils in Pike County have good potential for sustained crop production, especially if the latest crop production technology is applied. This soil survey can be used as a guide for applying the latest technology.

Management Considerations on Cropland

The management concerns affecting the use of the soils in Pike County for crops and pasture are shown in the table 6. The main concerns in managing cropland are crusting, flooding, ponding, poor tilth, water erosion, and wetness. Excess lime, excessive permeability, high pH, a limited available water capacity, and wind erosion are additional management concerns.

Crusting occurs when flowing water or raindrops break down soil structural units, moving clay downward and leaving a concentration of sand grains and silt particles on the surface. Crusts can reduce the rate of water infiltration, increase the runoff rate, and restrict seedling emergence and oxygen diffusion to seedlings.

Crusting can be minimized by increasing soil aggregate stability through the addition of organic matter to the surface and by maintaining a cover of plants or crop residue, which reduces the impact of raindrops.

Flooding occurs in unprotected areas along the major rivers and their tributaries. Levees or diversions reduce the extent of the crop damage caused by floodwater. Surface drainage ditches help to remove floodwater where suitable outlets are available. Management of drainage systems in conformance with regulations influencing wetlands may require special permits and extra planning. Selecting crop varieties that are adapted to shorter growing seasons and wetter conditions reduces the extent of flood damage.

Ponding occurs on soils when the seasonal high water table is above the surface. Land grading helps to control ponding. Surface ditches and surface inlet tile also can help to remove the excess water if suitable outlets are available. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning.

Poor tilth can occur in soils when part of the subsoil is incorporated into the plow layer because of erosion. Incorporation of subsoil material decreases the amount of organic matter and increases the content of clay in the surface soil. Intensive rainfall often causes surface crusting. Poor tilth also occurs in poorly drained soils with a high content of clay, regardless of the content of organic matter, and in soils that have been excessively tilled.

Poor tilth decreases the rate of water infiltration and increases the runoff rate and the susceptibility to erosion on the more sloping soils. Soils with poor tilth generally have a surface layer that is sticky when wet and hard and cloddy when dry. They can be tilled only within a narrow range of moisture content. As a result, seedbed preparation is difficult.

Returning crop residue to the soil, regularly adding other organic material, minimizing tillage, and applying conservation tillage systems during periods of near optimal soil moisture conditions improve tilth.

Water erosion can occur when the surface soil is not protected against the impact of raindrops, which can reduce the stability of soil aggregates. This reduced stability decreases the rate of water infiltration and increases the surface runoff rate. Soils with long or steep slopes are more susceptible to water erosion than other soils.

Erosion, primarily sheet and rill erosion, removes the surface soil, which commonly has more biological activity and organic matter than any other part of the soil. Soil productivity decreases as the content of organic matter and level of natural fertility are lowered. Poor tilth and crusting occur as the subsoil, which is generally higher in content of clay than the surface soil, is incorporated through tillage into the plow layer.

Excessive runoff decreases the quality of surface water through sedimentation and contamination by pesticides.

Erosion can be controlled by a conservation tillage system that leaves crop residue on the surface after planting or by a cropping system that includes grasses and legumes in the cropping sequence. Contour farming and/or terraces in combination with a conservation tillage system can help to control erosion on soils with long, uniform slopes.

Wetness occurs in soils when the seasonal high water table is at or near the surface. Subsurface tile drains can lower the seasonal high water table if suitable outlets are available. In soils with a high content of clay and restricted permeability, a subsurface drainage system may not be practical. In these soils surface ditches can reduce the wetness. Management of drainage in conformance with regulations influencing wetlands may require special permits and extra planning.

Excess lime occurs in soils that contain a high content of calcium carbonate at or near the surface. The lime affects the availability of many plant nutrients and influences the effectiveness of herbicides. Frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Crops may respond well to additions of phosphate fertilizer on these soils. Applications of herbicide should be adjusted as the level of alkalinity increases. Incorporating green manure crops, manure, or crop residue into the soil, applying a system of conservation tillage, and using conservation cropping systems also help to overcome this limitation.

Excessive permeability can occur in soils that have a high content of sand and many of the larger diameter pores. The capacity of the soils to retain moisture for plant use is limited. Deep leaching of nutrients and pesticides is possible. It increases the risk of ground-water pollution.

Irrigation can supply the moisture needed for crops. Frequent applications of a small amount of fertilizer are needed. One application of a large amount can result in excessive loss of plant nutrients through leaching.

High pH, or a pH of more than 8.3, affects the availability of many plant nutrients and influences the effectiveness of herbicides. Frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Crops may respond well to additions of phosphate fertilizer on the soils with a high pH. Applications of herbicide should be adjusted as the level of alkalinity increases. Incorporating green manure crops, manure, or crop residue into the soil, applying a system of conservation tillage, and using conservation cropping systems help to overcome this limitation.

Limited available water capacity can occur in soils that have a high content of sand, a low content of clay, and a low content of organic matter. Reducing the evaporation and runoff rates and increasing the rate of water infiltration can conserve soil moisture. Measures that conserve soil moisture include applying conservation tillage and conservation cropping systems, establishing field windbreaks, and leaving crop residue on the surface.

Wind erosion can occur when the surface soil is not protected. This erosion can be controlled by applying a system of conservation tillage that leaves crop residue on the surface after planting, by using tillage systems that leave the surface rough, by establishing field windbreaks, and by regularly adding organic material to the soil.

Explanation of Criteria

Crusting.—In the surface layer, the average content of organic matter is 2.5 percent or less and the content of clay is between 20 and 35 percent.

Excess lime.—The upper limit of the calcium carbonate equivalent is 15 percent or more within a depth of 40 inches.

Excessive permeability.—The lower limit of the permeability rate is 6.0 or more inches per hour within the soil profile.

Flooding.—The soil is occasionally flooded or frequently flooded.

High pH.—The pH is more than 8.3 within a depth of 40 inches.

Limited available water capacity.—The available water capacity is less than 6 inches in the upper 60 inches of the soil.

Ponding.—The seasonal high water table is above the surface.

Poor tilth.—The content of clay in the surface layer is 27 percent or more.

Water erosion.—The Kw factor multiplied by the slope is more than 0.8, and the slope is 3 percent or more.

Wetness.—The water table is within a depth of 1.5 feet at some time during the growing season in normal years.

Wind erosion.—The wind erodibility group (WEG) is 1 or 2.

Management Considerations on Pasture

The management concerns affecting the use of the soils in the county for pasture are shown in the table 6. The main management concerns are an equipment limitation, low fertility, low pH, poor tilth, water erosion, and wetness. Additional management concerns are excess lime, excessive permeability, flooding, frost heave, high pH, a limited available water capacity, ponding, and wind erosion.

An *equipment limitation* occurs on soils with slopes of more than 18 percent. This limitation can cause rapid wear of equipment. It can also hinder fertilization, harvest, pasture renovation, and seedbed preparation. It cannot be easily overcome.

Low fertility occurs in soils with a low content of organic matter and a low cation-exchange capacity. The capacity of the soil to retain nutrients for plant use is limited. Frequent applications of small amounts of fertilizer help to prevent excessive loss of plant nutrients through leaching. When used as part of a seeding mixture, legumes can provide nitrogen to the grass varieties. Timely deferment of grazing helps to maintain the surface cover and the content of organic matter, a source of nutrients in the soil.

Low pH, or a pH of 5.5 or less, can decrease the solubility and availability of plant nutrients. Selecting adapted forage and hay varieties and applying lime according to the results of soil tests help to overcome this limitation.

Poor tilth can occur in soils when part of the subsoil is incorporated into the plow layer because of erosion. Incorporation of subsoil material decreases the amount of organic matter and increases the content of clay in the surface soil. Intensive rainfall often causes surface crusting. Poor tilth also occurs in poorly drained soils with a high

content of clay, regardless of the content of organic matter, and in soils that have been excessively tilled.

Poor tilth decreases the rate of water infiltration and increases the runoff rate and the susceptibility to erosion on the more sloping soils. Soils with poor tilth generally have a surface layer that is sticky when wet and hard and cloddy when dry. They can be tilled only within a narrow range of moisture content. As a result, seedbed preparation is difficult.

When pastures are established or renovated, minimizing tillage and applying conservation tillage operations during periods when soil moisture conditions are optimal or nearly optimal can improve tilth.

Water erosion can occur in overgrazed areas or during periods of pasture establishment and renovation when the surface soil is not protected against the impact of raindrops, which can cause poor tilth. Deterioration of tilth decreases the rate of water infiltration and increases the surface runoff rate. Soils with long or steep slopes are more susceptible to water erosion than other soils.

Erosion can be controlled by deferred grazing, which helps to prevent overgrazing and thus also helps to prevent surface compaction and excessive runoff and erosion. Tilling on the contour, using a no-till system of seeding when a seedbed is prepared or the pasture is renovated, and selecting adapted forage and hay varieties also help to control erosion.

Wetness occurs in soils when the seasonal high water table is at or near the surface. Subsurface tile drains can help to lower the seasonal high water table if suitable outlets are available. Management of drainage in conformance with regulations may require special permits and extra planning. Selecting forage and hay varieties adapted to wet conditions improves forage production. Restricted use during wet periods helps to keep the pasture in good condition.

Excess lime occurs in soils that contain a high content of calcium carbonate at or near the surface. The lime affects the availability of many plant nutrients and influences the effectiveness of herbicides. Frequent applications of a small amount of fertilizer are needed to correct nutrient imbalances. Selecting suitable forage and hay varieties helps to overcome this limitation.

Excessive permeability can occur in soils that have a high content of sand and many of the larger diameter pores. The capacity of the soils to retain moisture for plant use is limited. Deep leaching of nutrients and pesticides is possible. It increases the risk of ground-water pollution.

Irrigation can supply the moisture needed for plant growth. Frequent applications of a small amount of fertilizer are needed. One application of a large amount can result in excessive loss of plant nutrients through leaching.

Flooding occurs in unprotected areas along the major rivers and their tributaries. Surface drainage ditches help to remove floodwater where suitable outlets are available. Management of drainage in conformance with regulations may require special permits and extra planning. Selecting forage and hay varieties adapted to shorter growing seasons and wetter conditions reduces the extent of flood damage. Restricted use during wet periods helps to keep the pasture in good condition.

Frost heave occurs when ice lenses or bands that drive an ice wedge between two layers develop near the surface layer of a soil. The ice wedges heave the overlying soil layer upward, snapping the roots. Soils with a low content of sand have small pores that hold water and enable ice lenses to form. Selecting adapted forage and hay varieties helps to reduce the effects of frost heave. Timely deferment of grazing helps to maintain a protective cover that insulates the soil, thereby reducing the effects of frost heave.

High pH, or a pH of more than 8.3, affects the availability of many plant nutrients. Frequent applications of a small amount of fertilizer are needed to correct nutrient

imbalances. Selecting adapted forage and hay varieties helps to overcome this limitation.

Limited available water capacity can occur in soils that have a high content of sand, a low content of clay, and a low content of organic matter. Reducing the evaporation and runoff rates and increasing the rate of water infiltration can conserve soil moisture. Measures that conserve soil moisture include applying conservation tillage and conservation cropping systems, establishing field windbreaks, and leaving crop residue on the surface.

Ponding occurs on soils when the seasonal high water table is above the surface. Land grading helps to control ponding. Surface ditches and surface inlet tile also can help to remove the excess water if suitable outlets are available. Management of drainage in conformance with regulations may require special permits and extra planning. Selecting forage and hay varieties adapted to wet conditions improves forage production. Restricted use during wet periods helps to keep the pasture in good condition.

Wind erosion can occur in overgrazed areas or during periods of pasture establishment and renovation, when the surface of the soil is not protected. This erosion can be controlled by applying a system of conservation tillage that leaves crop residue on the surface after planting, by using tillage systems that leave the surface rough, by establishing field windbreaks, and by regularly adding organic material to the soil.

Explanation of Criteria

Equipment limitation.—The slope is more than 18 percent.

Excess lime.—The upper limit of the calcium carbonate equivalent is 15 percent or more within a depth of 40 inches.

Excessive permeability.—The lower limit of the permeability rate is 6.0 or more inches per hour within the soil profile.

Flooding.—The soil is occasionally flooded or frequently flooded.

Frost heave.—The potential for frost action is moderate or high, and the soil is poorly drained or very poorly drained.

High pH.—The pH is more than 8.3 within a depth of 40 inches.

Limited available water capacity.—The available water capacity is less than 6 inches in the upper 60 inches of the soil.

Low fertility.—The average content of organic matter in the surface layer is less than 1 percent, or the cation-exchange capacity, expressed in terms of milliequivalents per 100 grams of soil, is 7 or less.

Low pH.—The pH is 5.5 or less within a depth of 40 inches.

Ponding.—The seasonal high water table is above the surface.

Poor tilth.—The content of clay in the surface layer is 27 percent or more.

Water erosion.—The Kw factor multiplied by the slope is more than 1.0, and the slope is 3 percent or more.

Wetness.—The seasonal high water table is within a depth of 1.5 feet.

Wind erosion.—The wind erodibility group (WEG) is 1 or 2.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 7. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and

results of field trials and demonstrations also are considered (Fehrenbacher and others., 1978).

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 7 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Pasture and Hay Yields

Under good management, proper grazing is essential for the production of high-quality forage, stand survival, and erosion control. Proper grazing helps the 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 given in animal unit months (AUM), or the amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

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

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops, including corn, small grain, and hay. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for woodland or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961). Only class and subclass are used in this survey.

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

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

The capability classification of map units in this survey area is given in the section "Soil Series and Detailed Soil Map Units" and in table 7.

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.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. 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 264,220 acres in Pike County, or more than 48 percent of the county, meets the requirements for prime farmland.

The map units in the county that are considered prime farmland are listed in table 8. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding and wetness, 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

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 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 made up mainly of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up mainly of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform. Table 9 indicates the hydric and nonhydric soils identified in the names of the detailed map units in the county. The table also identifies the included soils that are considered hydric. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

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. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil.

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

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

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

Table 10 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in table 10 are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

Forestland

Bob Church, District Forester, Illinois Department of Natural Resources, helped prepare this section.

Settlers began clearing forestland in Pike County in the early 1800s, and the practice has continued to some extent to the present (Bretthauer and Edgington, 2002). At the time of early settlement, 364,200 acres, or about 67 percent of the county, was forested. Since then, the acreage of forestland has declined steadily. In 1985, it was 92,500 acres. Since 1985, it has increased to 115,000 acres, or about 21 percent of the county (Iverson and others, 1989). This increase can be attributed to intensive tree planting under the Conservation Reserve Program and changing agricultural practices. In many areas small agricultural fields and pasture have been abandoned and are reverting to forest. The deciduous hardwood forests are in areas that are too steep for agriculture and in areas along creeks and rivers where periodic flooding occurs.

Several upland forest groups in the county are differentiated by slope position, aspect, and soil type. Generally speaking, the best upland sites for tree growth are north and east aspects and areas of deep, well drained soils in the lower slope positions.

Most of the forestland in the county is on the more sloping uplands, where the oak-hickory forest group is dominant. This group makes up roughly 60 percent of the forestland in the county. The most common upland forest soils are Hickory, Fayette, Menfro, Winfield, Rozetta, Seaton, Stookey, Keomah, Baylis, and Clarksdale soils. The most common trees on these soils are red oak, white oak, American elm, black oak, shagbark hickory, white ash, black cherry, and black walnut. Soils on dry, eroded sites include Goss and Hamburg soils. The most common trees on the drier, shallower soils on the upper south and west aspects are black oak, post oak, chinquapin oak, blackjack oak, shagbark hickory, American elm, and white ash.

The next two important forest groups in Pike County are the elm-ash-cottonwood group and the maple-beech-birch group. These groups account for most of the remaining forestland.

The most common trees in the elm-ash-cottonwood group are American elm, green ash, cottonwood, sycamore, silver maple, and box elder, which are common on bottom-land soils, such as Lawson, Beaucoup, Tice, Titus, Orion, and Coffeen soils. The better drained bottom-land soils, such as Haymond and Blyton soils, can support such trees black walnut, pecan, bitternut hickory, bur oak, pin oak, swamp white oak, hackberry, and American elm.

The maple-beech-birch group is on the north- and east-facing, mid to lower slopes in the county. The soils on these sites are deep and are somewhat poorly drained to well drained. The most common trees on these sites are sugar maple, basswood, black walnut, black cherry, red elm, bitternut hickory, and American elm. The most common soils are those of the Hickory, Seaton, Stookey, Keomah, Fayette, Menfro, Winfield, and Rozetta series.

Proper forest management activities can greatly increase timber production, enhance wildlife habitat, increase recreational opportunities, and decrease the hazard of erosion. At present, nearly 10 percent (11,350 acres) of the forestland in the county is covered under a forest management plan. Forest management needs for the future include increased tree planting on highly erodible sites, timber stand improvement, protection from livestock grazing, and proper harvesting methods. All of these activities should be carried out under the supervision of a qualified forester.

According to a recent Forest Service survey, the forested acreage in Pike County has increased not only in size but also in terms of timber quality and size class. The county is producing more of the larger, higher quality sawlogs and veneer trees than it was in 1985. As a result, the activity of the forest products industry has increased. More than 40 licensed timber buyers currently buy timber in Pike County. Six sawmills are operating within the county. Three of these are full-time commercial mills that produce grade lumber, blocking, and lumber for pallets. The other three mills are small, part-time operations that do custom sawing or sell to local markets (Bretthauer, and Edgington, 2002).

The increase in the acreage of forestland has fostered a new fee hunting industry in Pike County. More forestland has created more habitat for woodland game animals and birds, especially white-tailed deer and turkey. Pike County is now known nationwide as the place to hunt for trophy bucks. Many landowners lease their land for hunting to individuals, corporations, or outfitters.

The forest management needs in the county can be divided into four main categories—tree planting, timber stand improvement, protection, and harvesting (Illinois Conservation Needs Committee, 1970). The planting or interplanting of seedlings is needed on approximately 29,000 acres to bring tree stocking levels up to the potential for the forested sites. Growth rates and species quality can be improved

on 25,000 acres through thinning and weeding. Minimizing or eliminating livestock grazing can reduce the hazard of erosion on about 40,000 acres of forestland. The harvesting of mature, defective, lower quality, or diseased trees is needed on an estimated 43,500 acres. These practices can enhance noncommercial timber resources and increase the economic value of the commercial woodland.

The tables in this section (table 11 and tables 12a through 12d) 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 forest management.

Forest Productivity

In table 11, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Suggested trees to plant are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forest Management

In tables 12a through 12d, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

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

Rating class terms for seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance; and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

Pike County has many areas of scenic and historic interest. These areas are used for picnicking, sightseeing, camping, hiking, fishing, and boating. Several river access areas are available for public use. The Mississippi and Illinois Rivers offer opportunities for fishing, hunting, boating, and waterskiing.

The soils of the survey area are rated in tables 13a and 13b 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 13a and 13b 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

Tim Krumwiede, Wildlife Habitat Biologist, Illinois Department of Natural Resources, helped prepare this section.

Pike County has a relative abundance of forested areas where native plant species continue to thrive. The value of the dominantly small row-cropped fields to wildlife is enhanced by close association with woodland and with active or idle pasture. This interspersion of food and cover types provides plant diversity and contributes to the abundance of wildlife in the county. The major species of wildlife are rabbits, squirrels, deer, turkeys, raccoons, quail, red fox, coyote, and migratory waterfowl. The Illinois and Mississippi Rivers provide good opportunities for sport and commercial fishing. The most common game fish are bass, bluegill, catfish, sauger, and walleye. Carp, buffalo, drum, and suckers are the most common commercial species. Wetlands adjacent to the major rivers provide resting and feeding areas for migratory ducks and geese in the spring and fall.

Farm economics and USDA programs are the driving forces behind rural land use in Illinois. The amount of productive farmland and the livestock industry limit the amount of available wildlife habitat and ultimately the wildlife population. Declining populations of people, changes in land ownership, and the marginal productivity of some of the soils has resulted in less intensive agricultural use during recent years. This trend is partially responsible for increasing numbers of high-profile wildlife, such as white-tailed deer and turkey. The population of many other wildlife species has also increased.

Most people recognize the intrinsic value of wildlife. The wildlife habitat in Pike County provides opportunities hunting, bird-watching, and other recreational activities. Landowners have begun to capitalize on the rich wildlife resources in the McKee Creek watershed. Many landowners have sold hunting rights. Not since the days of market hunting has wildlife had the economic value that it has today in west-central Illinois.

Good management can improve the habitat for wildlife. Keeping crop residue on the surface during fall and winter not only helps to control erosion but also greatly improves wildlife habitat in cropped areas. Deferring the mowing of grassed waterways, roadsides, and fence rows until early August, after the nesting season, can significantly increase the annual production of songbirds, quail, rabbits, and other kinds of wildlife that nest on the ground. Measures that exclude livestock from woodland, wetland, and streambanks can markedly improve 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 14, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or

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

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

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, soybeans, wheat, and oats.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are bromegrass, timothy, orchardgrass, clover, 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, indiangrass, goldenrod, beggarweed, ragweed, and foxtail.

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, cherry, cottonwood, apple, hawthorn, hickory, blackberry, elderberry, maple, green ash, and willow. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are American plum, hazelnut, dogwood, and arrowwood.

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, cedar, fir, 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, 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 waterfowl feeding areas, wildlife watering developments, marshes, and beaver ponds and other wildlife ponds.

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

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife

attracted to these areas include ring-necked pheasant, bobwhite quail, meadowlark, field sparrow, cottontail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, owls, tree squirrels, raccoon, woodcock, and white-tailed deer.

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 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 15a and 15b 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 16a and 16b 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 17a and 17b give information about the soils as potential sources of gravel, sand, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 17a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

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

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

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

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

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

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

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Tables 18a, 18b, and 18c 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; grassed waterways and surface drains; terraces and diversions; drainage; and sprinkler 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).

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 table 18a, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

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

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

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

Grassed waterways and surface drains are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Sprinkler 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. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Waste Management

Soil properties are important when organic waste is applied as fertilizer and wastewater is applied in irrigated areas. They also are important when the soil is used as a medium for the treatment and disposal of the organic waste and wastewater. Unfavorable soil properties can result in environmental damage.

The use of organic waste and wastewater as production resources results in energy and resource conservation and minimizes the problems associated with waste disposal. If disposal is the goal, applying a maximum amount of the organic waste or the wastewater to a minimal area holds costs to a minimum and environmental damage is the main hazard. If reuse is the goal, a minimum amount should be applied to a maximum area and environmental damage is unlikely.

Interpretations developed for waste management may include ratings for manure, food-processing waste, municipal sewage sludge, use of wastewater for irrigation, and treatment of wastewater by slow rate, overland flow, and rapid infiltration processes.

Specific information regarding waste management is available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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 19 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. 7). “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.

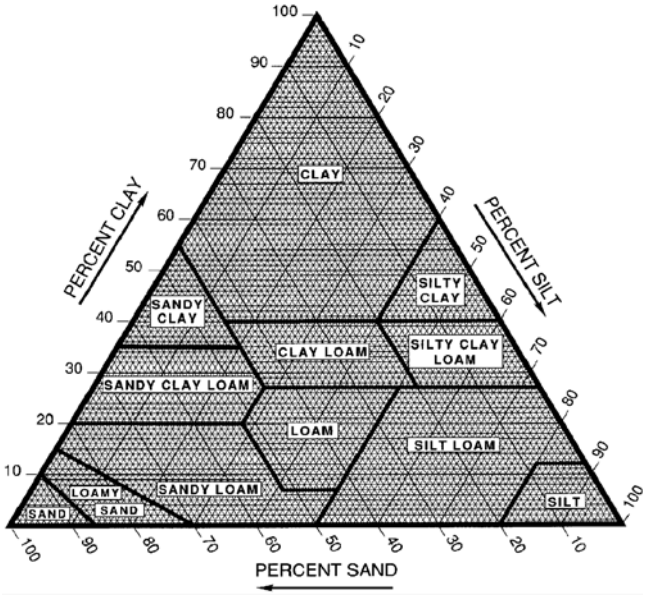


Figure 7.—Percentages of clay, silt, and sand in the basic USDA soil texture classes.

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

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

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

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

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

Physical Properties

Table 20 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 20, 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 table 20, 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 table 20, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In table 20, 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 table 20 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 table 20 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 20, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

Erosion factors are shown in table 20 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. 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 21 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 22 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

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

The four hydrologic soil groups are:

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

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

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

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

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

The *months* in table 22 indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 22 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 22 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is

nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

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

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

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

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

Soil Features

Table 23 gives estimates of soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal till. Compact glacial till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms

an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on the 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 shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bottomland. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Depression. A relatively sunken, low area surrounded by higher ground. Unlike an open depression, a closed depression has no natural outlet for surface water.

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 relatively small, linear depression that at some time moves concentrated water and either has no defined channel or has a small defined channel.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

End moraine. A ridgelike accumulation produced at the outer margin of an actively flowing glacier at any given time.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

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. The normal flood plain of a stream, subject to frequent or occasional flooding.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest habitat type. An association of dominant tree and ground flora species in a climax community.

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.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground moraine. An extensive, fairly even layer of till having an uneven or undulating surface; a deposit of rock and mineral debris dragged along in, on, or beneath a glacier.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

High-chroma zones. Zones having a chroma of 3 or more. Typical color in areas of iron concentrations.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

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 rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Irrigation. Application of water to soils to assist in production of crops. The most common method of irrigation in Pike County is
sprinkler irrigation, in which water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Iron concentrations. High-chroma zones having a high content of iron and manganese oxide because of chemical oxidation and accumulation, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic concentration.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Krotovinas. Irregular, tubular streaks in a soil horizon that are created when tunnels made by a burrowing animal are filled with material from another horizon.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lamella. A thin (commonly less than 1 centimeter thick), discontinuous or continuous, generally horizontal layer of fine material (especially clay and iron oxides) that has been pedogenically concentrated (illuviated within a coarser textured eluviated layer several centimeters to several decimeters thick).

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

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. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low strength. The soil is not strong enough to support loads.

Low-chroma zones. Zones having chroma of 2 or less. Typical color in areas of iron depletions.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

MAP. Mean annual precipitation, expressed in inches.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Rise. A slight increase in elevation of the land surface, typically with a broad summit and gently sloping sides.

Riser. The relatively short, steeply sloping area below a terrace tread that grades to a lower terrace tread or a base level.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop. Exposures of bare bedrock other than rock-lined pits.
Root zone. The part of the soil that can be penetrated by plant roots.
Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.
Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
Sandstone. Sedimentary rock containing dominantly sand-sized particles.
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.
Sawtimber. Hardwood trees more than 11 inches and conifers more than 9 inches in diameter at breast height.
Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.
Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.
Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
Shale. Sedimentary rock formed by the hardening of a clay deposit.
Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.
Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.
Silica. A combination of silicon and oxygen. The mineral form is called quartz.
Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.
Siltstone. Sedimentary rock made up of dominantly silt-sized particles.
Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.
Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.
Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the

steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods 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.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Steam terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It is originally formed near the level of the stream and consists of the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.
Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.
Substratum. The part of the soil below the solum.
Subsurface layer. 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. On an undulating ground moraine, a shallow depression resulting from uneven glacial deposition.
Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.
Terminal moraine. A belt of thick glacial drift that generally marks the termination of important glacial advances.
Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.
Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."
Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.
Till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.
Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.
Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
Tread. The relatively flat terrace surface that was cut or built by stream or wave action.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1961-1990 at Griggsville, Illinois)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average daily	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-----	33.7	16.0	24.9	65	-15	2	1.58	0.52	2.45	4	6.2
February----	38.8	20.2	29.5	70	-9	5	1.53	.86	2.12	4	6.8
March-------	50.8	30.8	40.8	82	5	46	3.25	1.81	4.52	6	4.7
April-------	65.1	43.2	54.1	87	23	193	3.76	1.82	5.44	7	.7
May---------	74.6	52.8	63.7	91	34	431	4.23	2.50	5.78	6	.0
June--------	83.0	61.7	72.3	95	46	670	3.74	2.14	5.15	6	.0
July--------	87.2	65.7	76.5	99	50	819	4.37	1.54	6.71	6	.0
August------	85.0	62.9	73.9	99	47	742	3.34	1.75	4.74	5	.0
September---	78.4	55.6	67.0	95	35	513	3.88	1.85	5.64	5	.0
October-----	67.2	44.6	55.9	88	25	225	3.16	1.54	4.56	5	.0
November----	52.4	33.7	43.0	77	10	51	2.97	1.41	4.33	5	1.9
December----	38.6	21.9	30.2	68	-8	7	2.65	1.34	3.79	5	5.5
Yearly:											
Average---	62.9	42.4	52.6	---	---	---	---	---	---	---	---
Extreme---	104	-21	---	101	-16	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,704	38.46	30.76	45.19	64	25.8

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1961-1989 at Griggsville, 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-----	April 12	April 21	April 29
2 years in 10 later than-----	April 6	April 16	April 24
5 years in 10 later than-----	March 27	April 6	April 14
First freezing temperature in fall:			
1 year in 10 earlier than---	Oct. 27	Oct. 14	Oct. 1
2 years in 10 earlier than---	Nov. 1	Oct. 19	Oct. 7
5 years in 10 earlier than---	Nov. 11	Oct. 29	Oct. 17

Table 3.--Growing Season

(Recorded in the period 1961-1989 at Griggsville, 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	205	187	163
8 years in 10	213	193	171
5 years in 10	227	205	185
2 years in 10	242	216	199
1 year in 10	250	223	207

Table 4.--Classification of the Soils

Soil name	Family or higher taxonomic class
Ambraw	Fine-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls
Baylis	Fine-silty, mixed, superactive, mesic Typic Paleudalfs
Beaucoup	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Bethalto	Fine-silty, mixed, superactive, mesic Udollic Endoaqualfs
Blake	Fine-silty, mixed, superactive, calcareous, mesic Aquic Udifluvents
Blyton	Coarse-silty, mixed, superactive, nonacid, mesic Oxyaquic Udifluvents
Bunkum	Fine-silty, mixed, superactive, mesic Aquic Hapludalfs
*Caseyville	Fine-silty, mixed, superactive, mesic Aquic Hapludalfs
Ceresco	Coarse-loamy, mixed, superactive, mesic Fluvaquentic Hapludolls
Clarksdale	Fine, smectitic, mesic Udollic Endoaqualfs
Coffeen	Coarse-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Darwin	Fine, smectitic, mesic Fluvaquentic Vertic Endoaquolls
Downsouth	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Dozaville	Fine-silty, mixed, superactive, mesic Fluventic Hapludolls
Drury	Fine-silty, mixed, superactive, mesic Dystric Eutrudepts
Dupo	Coarse-silty over clayey, mixed over smectitic, superactive, nonacid, mesic Aquic Udifluvents
El Dara	Fine-loamy, mixed, active, mesic Oxyaquic Hapludalfs
Elco	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Elizabeth	Loamy-skeletal, mixed, superactive, mesic Lithic Hapludolls
Elsah	Loamy-skeletal, mixed, superactive, nonacid, mesic Typic Udifluvents
Fayette	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Gorham	Fine-silty, mixed, superactive, mesic Fluvaquentic Endoaquolls
Goss	Clayey-skeletal, mixed, active, mesic Typic Paleudalfs
Hamburg	Coarse-silty, mixed, superactive, calcareous, mesic Typic Udorthents
Haymond	Coarse-silty, mixed, superactive, mesic Dystric Fluventic Eutrudepts
Hickory	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Ipava	Fine, smectitic, mesic Aquic Argiudolls
Jules	Coarse-silty, mixed, superactive, calcareous, mesic Typic Udifluvents
Kendall	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Keomah	Fine, smectitic, mesic Aeric Endoaqualfs
*Keswick	Fine, smectitic, mesic Oxyaquic Vertic Hapludalfs
Lacrescent	Loamy-skeletal, mixed, superactive, mesic Typic Hapludolls
Lamont	Coarse-loamy, mixed, superactive, mesic Typic Hapludalfs
Lawson	Fine-silty, mixed, superactive, mesic Aquic Cumulic Hapludolls
Lindley	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Marseilles	Fine-silty, mixed, active, mesic Typic Hapludalfs
Menfro	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Navlys	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Orion	Coarse-silty, mixed, superactive, nonacid, mesic Aquic Udifluvents
Passport	Fine-loamy, mixed, superactive, mesic Aquic Hapludalfs
Petrolia	Fine-silty, mixed, superactive, nonacid, mesic Fluvaquentic Endoaquepts
Raddle	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Riley	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Fluvaquentic Hapludolls
Rozetta	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Sarpy	Mixed, mesic Typic Udipsamments
Seaton	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Shaffton	Fine-loamy, mixed, superactive, mesic Fluvaquentic Hapludolls
Slacwater	Fine-silty, mixed, superactive, calcareous, mesic Mollic Fluvaquents
Stookey	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Stronghurst	Fine-silty, mixed, superactive, mesic Aeric Endoaqualfs
Sylvan	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Tice	Fine-silty, mixed, superactive, mesic Fluvaquentic Hapludolls
Timewell	Fine, smectitic, mesic Aquic Argiudolls
Timula	Coarse-silty, mixed, superactive, mesic Typic Eutrudepts
*Timula	Coarse-silty, mixed, superactive, calcareous, mesic Typic Udorthents
Titus	Fine, smectitic, mesic Vertic Endoaquolls
Twomile	Fine-silty, mixed, active, mesic Typic Albaqualfs
Udorthents	Fine-silty, mixed, active, nonacid, mesic Aquic Udorthents
Ursa	Fine, smectitic, mesic Chromic Vertic Hapludalfs
Vesser	Fine-silty, mixed, superactive, mesic Argiaquic Argialbolls
Virden	Fine, smectitic, mesic Vertic Argiaquolls

See footnote at end of table.

Table 4.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Wakeland	Coarse-silty, mixed, superactive, nonacid, mesic Aeric Fluvaquents
Wakenda	Fine-silty, mixed, superactive, mesic Typic Argiudolls
Winfield	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Worthen	Fine-silty, mixed, superactive, mesic Cumulic Hapludolls
Zumbro	Sandy, mixed, mesic Entic Hapludolls

* An asterisk indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series. The Caseyville and Keswick soils in this survey area are taxadjuncts in all map units. Thus, the taxonomic classification of the taxadjuncts is given in the table. The Timula soil in at least one map unit in the survey area is not a taxadjunct, and the the Timula soil in at least one map unit is a taxadjunct. Hence, the Timula series appears twice in the table, once with the series classification and once with the taxadjunct classification.

Table 5.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
8D2	Hickory silt loam, 10 to 18 percent slopes, eroded	935	0.2
8D3	Hickory clay loam, 10 to 18 percent slopes, severely eroded	222	*
8E2	Hickory loam, 18 to 25 percent slopes, eroded	5,295	1.0
8F	Hickory silt loam, 18 to 35 percent slopes	211	*
8G	Hickory silt loam, 35 to 60 percent slopes	2,111	0.4
17A	Keomah silt loam, 0 to 2 percent slopes	1,608	0.3
17B	Keomah silt loam, 2 to 5 percent slopes	1,837	0.3
19D3	Sylvan silty clay loam, 10 to 18 percent slopes, severely eroded	1,418	0.3
30F	Hamburg silt loam, 18 to 35 percent slopes	216	*
30G	Hamburg silt loam, 35 to 60 percent slopes	762	0.1
43A	Ipava silt loam, 0 to 2 percent slopes	4,096	0.8
43B	Ipava silt loam, 2 to 5 percent slopes	955	0.2
50A	Virden silty clay loam, 0 to 2 percent slopes	1,179	0.2
75C	Drury silt loam, 5 to 10 percent slopes	1,043	0.2
75C2	Drury silt loam, 5 to 10 percent slopes, eroded	7	*
79B	Menfro silt loam, 2 to 5 percent slopes	9,717	1.8
79C2	Menfro silt loam, 5 to 10 percent slopes, eroded	24,272	4.5
79C3	Menfro silty clay loam, 5 to 10 percent slopes, severely eroded	2,414	0.4
79D2	Menfro silt loam, 10 to 18 percent slopes, eroded	24,943	4.6
79D3	Menfro silty clay loam, 10 to 18 percent slopes, severely eroded	10,671	2.0
79E2	Menfro silt loam, 18 to 25 percent slopes, eroded	13,847	2.5
90A	Bethalto silt loam, 0 to 2 percent slopes	4,251	0.8
119D2	Elco silt loam, 10 to 18 percent slopes, eroded	2,471	0.5
119D3	Elco silty clay loam, 10 to 18 percent slopes, severely eroded	575	0.1
119E2	Elco silt loam, 18 to 25 percent slopes, eroded	1,441	0.3
175F	Lamont sandy loam, 18 to 35 percent slopes	1,277	0.2
175G	Lamont sandy loam, 35 to 60 percent slopes	800	0.1
216B	Stookey silt loam, 2 to 5 percent slopes	2,286	0.4
216C2	Stookey silt loam, 5 to 10 percent slopes, eroded	6,703	1.2
216C3	Stookey silt loam, 5 to 10 percent slopes, severely eroded	835	0.2
216D2	Stookey silt loam, 10 to 18 percent slopes, eroded	3,706	0.7
216D3	Stookey silt loam, 10 to 18 percent slopes, severely eroded	813	0.1
257A	Clarksdale silt loam, 0 to 2 percent slopes	945	0.2
257B	Clarksdale silt loam, 2 to 5 percent slopes	1,281	0.2
264D3	El Dara sandy loam, 10 to 18 percent slopes, severely eroded	663	0.1
264E2	El Dara sandy loam, 18 to 25 percent slopes, eroded	636	0.1
264G	El Dara fine sandy loam, 35 to 60 percent slopes	204	*
267A	Caseyville silt loam, 0 to 2 percent slopes	2,371	0.4
267B	Caseyville silt loam, 2 to 5 percent slopes	9,059	1.7
271C3	Timula silt loam, 5 to 10 percent slopes, severely eroded	2,373	0.4
271D3	Timula silt loam, 10 to 18 percent slopes, severely eroded	1,120	0.2
274F	Seaton silt loam, 18 to 35 percent slopes	11	*
274G	Seaton silt loam, 35 to 60 percent slopes	33	*
278A	Stronghurst silt loam, 0 to 2 percent slopes	12	*
279B	Rozetta silt loam, 2 to 5 percent slopes	196	*
279C2	Rozetta silt loam, 5 to 10 percent slopes, eroded	450	*
279C3	Rozetta silty clay loam, 5 to 10 percent slopes, severely eroded	171	*
280B	Fayette silt loam, 2 to 5 percent slopes	18	*
280C2	Fayette silt loam, 5 to 10 percent slopes, eroded	22	*
280C3	Fayette silty clay loam, 5 to 10 percent slopes, severely eroded	30	*
280D2	Fayette silt loam, 10 to 18 percent slopes, eroded	35	*
280D3	Fayette silty clay loam, 10 to 18 percent slopes, severely eroded	45	*
283B	Downsouth silt loam, 2 to 5 percent slopes	18,940	3.5
283C2	Downsouth silt loam, 5 to 10 percent slopes, eroded	4,969	0.9
403G	Elizabeth very channery silt loam, 35 to 60 percent slopes	2,437	0.4
441B	Wakenda silt loam, 2 to 5 percent slopes	4,984	0.9
472D2	Baylis silt loam, 10 to 18 percent slopes, eroded	2,054	0.4
472E2	Baylis silt loam, 18 to 25 percent slopes, eroded	10,195	1.9
477B	Winfield silt loam, 2 to 5 percent slopes	34,666	6.4
477C2	Winfield silt loam, 5 to 10 percent slopes, eroded	43,253	8.0
477C3	Winfield silty clay loam, 5 to 10 percent slopes, severely eroded	5,359	1.0
515C2	Bunkum silt loam, 5 to 10 percent slopes, eroded	1,514	0.3

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
515C3	Bunkum silty clay loam, 5 to 10 percent slopes, severely eroded	366	*
515D2	Bunkum silt loam, 10 to 18 percent slopes, eroded	647	0.1
515D3	Bunkum silty clay loam, 10 to 18 percent slopes, severely eroded	542	*
549E2	Marseilles silt loam, 18 to 25 percent slopes, eroded	910	0.2
549F	Marseilles silt loam, 18 to 35 percent slopes	128	*
549G	Marseilles silt loam, 35 to 60 percent slopes	1,260	0.2
559F	Lindley loam, 18 to 35 percent slopes	77	*
559G	Lindley loam, 35 to 60 percent slopes	156	*
605D2	Ursa silt loam, 10 to 18 percent slopes, eroded	154	*
605D3	Ursa silty clay loam, 10 to 18 percent slopes, severely eroded	162	*
605E2	Ursa silt loam, 18 to 25 percent slopes, eroded	205	*
606F	Goss gravelly silt loam, 18 to 35 percent slopes	9,884	1.8
606G	Goss gravelly silt loam, 35 to 60 percent slopes	11,976	2.2
630B2	Navlys silt loam, 2 to 5 percent slopes, eroded	1,644	0.3
630C2	Navlys silt loam, 5 to 10 percent slopes, eroded	1,245	0.2
630C3	Navlys silty clay loam, 5 to 10 percent slopes, severely eroded	2,555	0.5
651D2	Keswick loam, 10 to 18 percent slopes, eroded	2,961	0.5
651D3	Keswick clay loam, 10 to 18 percent slopes, severely eroded	723	0.1
651E2	Keswick loam, 18 to 25 percent slopes, eroded	1,611	0.3
652C2	Passport silt loam, 5 to 10 percent slopes, eroded	683	0.1
652C3	Passport silty clay loam, 5 to 10 percent slopes, severely eroded	236	*
652D2	Passport silt loam, 10 to 18 percent slopes, eroded	305	*
652D3	Passport silty clay loam, 10 to 18 percent slopes, severely eroded	304	*
699A	Timewell silt loam, 0 to 2 percent slopes	931	0.2
785G	Lacrescent channery silt loam, 35 to 60 percent slopes	611	0.1
835G	Earthen Dam	6	*
856E2	Stookey and Timula soils, 18 to 25 percent slopes, eroded	16,173	3.0
856F	Stookey and Timula soils, 18 to 35 percent slopes	339	*
856G	Stookey and Timula soils, 35 to 60 percent slopes	9,688	1.8
864	Pits, quarries	387	*
865	Pits, gravel	154	*
1070A	Beaucoup silty clay loam, undrained, 0 to 2 percent slopes, occasionally flooded	3,944	0.7
3028A	Jules silt loam, 0 to 2 percent slopes, frequently flooded	1,147	0.2
3070A	Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded	751	0.1
3070L	Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	2,949	0.5
3071L	Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration	82	*
3092A	Sarpy loamy sand, 0 to 2 percent slopes, frequently flooded	377	*
3092L	Sarpy loamy fine sand, 0 to 2 percent slopes, frequently flooded, long duration	448	*
3302L	Ambraw clay loam, 0 to 2 percent slopes, frequently flooded, long duration	1,048	0.2
3331A	Haymond silt loam, 0 to 2 percent slopes, frequently flooded	7,300	1.3
3331L	Haymond silt loam, 0 to 2 percent slopes, frequently flooded, long duration	142	*
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded	21,995	4.0
3333L	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration	1,523	0.3
3404A	Titus silty clay loam, 0 to 2 percent slopes, frequently flooded	243	*
3404L	Titus silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	1,573	0.3
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded	4,852	0.9
3415L	Orion silt loam, 0 to 2 percent slopes, frequently flooded, long duration	337	*
3428A	Coffeen silt loam, 0 to 2 percent slopes, frequently flooded	1,465	0.3
3428L	Coffeen silt loam, 0 to 2 percent slopes, frequently flooded, long duration	325	*
3475A	Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded	9,054	1.7
3475L	Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded, long duration	79	*
3877L	Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration	58	*
7037B	Worthen silt loam, 2 to 5 percent slopes, rarely flooded	1,282	0.2
7075B	Drury silt loam, 2 to 5 percent slopes, rarely flooded	3,075	0.6
7242A	Kendall silt loam, 0 to 2 percent slopes, rarely flooded	19	*
7430B	Raddle silt loam, 2 to 5 percent slopes, rarely flooded	3,869	0.7
7815B	Udorthents, silty, undulating, rarely flooded	947	0.2
8070A	Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded	21,241	3.9
8071A	Darwin silty clay, 0 to 2 percent slopes, occasionally flooded	5,995	1.1
8092A	Sarpy sand, 0 to 2 percent slopes, occasionally flooded	804	0.1
8162A	Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded	678	0.1
8180A	Dupo silt loam, 0 to 2 percent slopes, occasionally flooded	894	0.2

See footnote at end of table.

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
8183A	Shaffton clay loam, 0 to 2 percent slopes, occasionally flooded	5,761	1.1
8217A	Twomile silt loam, 0 to 2 percent slopes, occasionally flooded	5,267	1.0
8284A	Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded	3,130	0.6
8288A	Petrolia silt loam, 0 to 2 percent slopes, occasionally flooded	2,482	0.5
8302A	Ambraw clay loam, 0 to 2 percent slopes, occasionally flooded	8,886	1.6
8331A	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded	2,919	0.5
8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded	8,657	1.6
8349B	Zumbro sandy loam, 1 to 6 percent slopes, occasionally flooded	1,579	0.3
8395A	Ceresco loam, 0 to 2 percent slopes, occasionally flooded	2,958	0.5
8396A	Vesser silt loam, 0 to 2 percent slopes, occasionally flooded	5,733	1.1
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	11,157	2.1
8415A	Orion silt loam, 0 to 2 percent slopes, occasionally flooded	5,175	1.0
8428A	Coffeen silt loam, 0 to 2 percent slopes, occasionally flooded	13,087	2.4
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	1,393	0.3
8452A	Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded	757	0.1
8634A	Blyton silt loam, 0 to 2 percent slopes, occasionally flooded	97	*
8674A	Dozaville silt loam, 0 to 2 percent slopes, occasionally flooded	643	0.1
8789A	Ambraw-Ceresco-Sarpy complex, 0 to 2 percent slopes, occasionally flooded	2,700	0.5
9278A	Stronghurst silt loam, terrace, 0 to 2 percent slopes	107	*
9278B	Stronghurst silt loam, terrace, 2 to 5 percent slopes	568	0.1
9279B	Rozetta silt loam, terrace, 2 to 5 percent slopes	607	0.1
9279C2	Rozetta silt loam, terrace, 5 to 10 percent slopes, eroded	708	0.1
M-W	Miscellaneous water	68	*
W	Water	13,034	2.4
	Total	543,955	100.0

* Less than 0.1 percent.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture

(See text for a description of the limitations and hazards listed in this table. Miscellaneous areas are excluded from this table. Dashes indicate that the soil is generally unsuited to crops or pasture.)

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
8D2:		
Hickory	Crusting, water erosion	Low pH, water erosion
8D3:		
Hickory	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
8E2:		
Hickory	---	Equipment limitation, low pH, water erosion
8F:		
Hickory	---	Equipment limitation, low pH, water erosion
8G:		
Hickory	---	---
17A:		
Keomah	Wetness, crusting	Wetness, low pH
17B:		
Keomah	Wetness, crusting, water erosion	Wetness, low pH, water erosion
19D3:		
Sylvan	Poor tilth, high pH, crusting, water erosion	Poor tilth, high pH, water erosion, low fertility
30F:		
Hamburg	---	---
30G:		
Hamburg	---	---
43A:		
Ipava	Wetness	NA*
43B:		
Ipava	Wetness, water erosion	NA*
50A:		
Virden	Ponding, poor tilth	NA*
75C:		
Drury	Crusting, water erosion	Water erosion
75C2:		
Drury	Crusting, water erosion	Water erosion
79B:		
Monfro	Crusting, water erosion	Low pH, water erosion
79C2:		
Monfro	Crusting, water erosion	Low pH, water erosion

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
79C3:		
Monfro	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
79D2:		
Monfro	Crusting, water erosion	Low pH, water erosion
79D3:		
Monfro	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
79E2:		
Monfro	---	Equipment limitation, low pH, water erosion
90A:		
Bethalto	Wetness	Wetness, low pH
119D2:		
Elco	Crusting, water erosion	Low pH, water erosion
119D3:		
Elco	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
119E2:		
Elco	---	Equipment limitation, low pH, water erosion
175F:		
Lamont	---	---
175G:		
Lamont	---	---
216B:		
Stookey	Crusting, water erosion	Low pH, water erosion
216C2:		
Stookey	Crusting, water erosion	Low pH, water erosion
216C3:		
Stookey	Crusting, water erosion	Low pH, water erosion, low fertility
216D2:		
Stookey	Crusting, water erosion	Low pH, water erosion
216D3:		
Stookey	Crusting, water erosion	Low pH, water erosion, low fertility
257A:		
Clarksdale	Wetness, crusting	Wetness, low pH
257B:		
Clarksdale	Wetness, crusting, water erosion	Wetness, low pH, water erosion

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
264D3:		
El Dara	---	Low pH, water erosion, low fertility
264E2:		
El Dara	---	Equipment limitation, low pH, water erosion
264G:		
El Dara	---	---
267A:		
Caseyville	Wetness, crusting	Wetness, low pH
267B:		
Caseyville	Wetness, crusting, water erosion	Wetness, low pH, water erosion
271C3:		
Timula	High pH, water erosion	High pH, water erosion, low fertility
271D3:		
Timula	High pH, water erosion	High pH, water erosion, low fertility
274F:		
Seaton	---	Equipment limitation, low pH, water erosion
274G:		
Seaton	---	---
278A:		
Stronghurst	Wetness, crusting	Wetness, low pH
279B:		
Rozetta	Crusting, water erosion	Low pH, water erosion
279C2:		
Rozetta	Crusting, water erosion	Low pH, water erosion
279C3:		
Rozetta	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
280B:		
Fayette	Crusting, water erosion	Low pH, water erosion
280C2:		
Fayette	Crusting, water erosion	Low pH, water erosion
280C3:		
Fayette	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
280D2:		
Fayette	Crusting, water erosion	Low pH, water erosion

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
280D3:		
Fayette	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
283B:		
Downsouth	Crusting, water erosion	Low pH, water erosion
283C2:		
Downsouth	Crusting, water erosion	Low pH, water erosion
403G:		
Elizabeth	---	---
441B:		
Wakenda	Water erosion	NA*
472D2:		
Baylis	---	Low pH, water erosion
472E2:		
Baylis	---	---
477B:		
Winfield	Crusting, water erosion	Low pH, water erosion
477C2:		
Winfield	Crusting, water erosion	Low pH, water erosion
477C3:		
Winfield	Poor tilth, crusting, water erosion	Poor tilth, low pH, water erosion, low fertility
515C2:		
Bunkum	Wetness, crusting, water erosion	Wetness, low pH, water erosion
515C3:		
Bunkum	Wetness, poor tilth, crusting, water erosion	Wetness, poor tilth, low pH, water erosion, low fertility
515D2:		
Bunkum	Wetness, crusting, water erosion	Wetness, low pH, water erosion
515D3:		
Bunkum	Wetness, poor tilth, crusting, water erosion	Wetness, poor tilth, low pH, water erosion, low fertility
549E2:		
Marseilles	---	---
549F:		
Marseilles	---	---
549G:		
Marseilles	---	---
559F:		
Lindley	---	Equipment limitation, low pH, water erosion

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
559G:		
Lindley	---	---
605D2:		
Ursa	Crusting, water erosion	Low pH, water erosion
605D3:		
Ursa	---	Poor tilth, low pH, water erosion, low fertility
605E2:		
Ursa	---	Equipment limitation, low pH, water erosion
606F:		
Goss	---	---
606G:		
Goss	---	---
630B2:		
Navlys	High pH, crusting, water erosion	High pH, water erosion
630C2:		
Navlys	High pH, crusting, water erosion	High pH, water erosion
630C3:		
Navlys	Poor tilth, high pH, crusting, water erosion	Poor tilth, high pH, water erosion, low fertility
651D2:		
Keswick	Crusting, water erosion	Low pH, water erosion
651D3:		
Keswick	---	Poor tilth, low pH, water erosion, low fertility
651E2:		
Keswick	---	Equipment limitation, low pH, water erosion
652C2:		
Passport	Wetness, crusting, water erosion	Wetness, low pH, water erosion
652C3:		
Passport	Wetness, poor tilth, crusting, water erosion	Wetness, poor tilth, low pH, water erosion, low fertility
652D2:		
Passport	Wetness, crusting, water erosion	Wetness, low pH, water erosion
652D3:		
Passport	---	Wetness, poor tilth, low pH, water erosion, low fertility
699A:		
Timewell	Wetness	NA*

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
785G:		
Lacrescent	---	---
856E2:		
Stookey	---	Equipment limitation, low pH, water erosion
Timula	---	Equipment limitation, high pH, water erosion
856F:		
Stookey	---	Equipment limitation, low pH, water erosion
Timula	---	Equipment limitation, high pH, water erosion
856G:		
Stookey	---	---
Timula	---	---
1070A:		
Beaucoup	---	NA*
3028A:		
Jules	Flooding, excess lime	Flooding, excess lime
3070A:		
Beaucoup	Flooding, ponding, poor tilth	NA*
3070L:		
Beaucoup	---	NA*
3071L:		
Darwin	---	NA*
3092A:		
Sarpy	Flooding, wind erosion, limited available water capacity, excessive permeability	Flooding, wind erosion, limited available water capacity, low fertility, excessive permeability
3092L:		
Sarpy	Flooding, excess lime, wind erosion, limited available water capacity, excessive permeability	Flooding, wind erosion, limited available water capacity, low fertility, excess lime, excessive permeability
3302L:		
Ambraw	---	NA*
3331A:		
Haymond	Flooding	Flooding
3331L:		
Haymond	---	NA*
3333A:		
Wakeland	Flooding, wetness	Flooding, wetness

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
3333L:		
Wakeland	---	NA*
3404A:		
Titus	Flooding, ponding, poor tilth	NA*
3404L:		
Titus	---	NA*
3415A:		
Orion	Flooding, wetness	Flooding, wetness
3415L:		
Orion	---	NA*
3428A:		
Coffeen	Flooding, wetness, crusting	Flooding, wetness
3428L:		
Coffeen	---	NA*
3475A:		
Elsah	Flooding, limited available water capacity	Flooding, limited available water capacity
3475L:		
Elsah	---	NA*
3877L:		
Blake	---	NA*
Slacwater	---	NA*
7037B:		
Worthen	Water erosion	Water erosion
7075B:		
Drury	Crusting, water erosion	Water erosion
7242A:		
Kendall	Wetness, crusting	Wetness, low pH
7430B:		
Raddle	Water erosion	Water erosion
7815B:		
Udorthents	Crusting, water erosion	NA*
8070A:		
Beaucoup	Flooding, ponding, poor tilth	NA*
8071A:		
Darwin	Flooding, ponding, poor tilth	NA*
8092A:		
Sarpy	Flooding, wind erosion, limited available water capacity, excessive permeability	Flooding, wind erosion, limited available water capacity, low fertility, excessive permeability

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
8162A: Gorham	Flooding, ponding, poor tilth	NA*
8180A: Dupo	Flooding, wetness	NA*
8183A: Shaffton	Flooding, wetness, poor tilth, crusting, excessive permeability	NA*
8217A: Twomile	Flooding, wetness	Flooding, wetness, low pH, frost heave
8284A: Tice	Flooding, wetness, poor tilth,	NA*
8288A: Petrolia	Flooding, ponding, crusting	NA*
8302A: Ambraw	Flooding, wetness, poor tilth, crusting	NA*
8331A: Haymond	Flooding	NA*
8333A: Wakeland	Flooding, wetness	NA*
8349B: Zumbro	Flooding, limited available water capacity, excessive permeability	Flooding, limited available water capacity, excessive permeability
8395A: Ceresco	Flooding, wetness	NA*
8396A: Vesser	Flooding, wetness	NA*
8404A: Titus	Flooding, ponding, poor tilth	NA*
8415A: Orion	Flooding, wetness	NA*
8428A: Coffeen	Flooding, wetness, crusting	NA*
8451A: Lawson	Flooding, wetness	NA*
8452A: Riley	Flooding, wetness, poor tilth, excessive permeability	NA*
8634A: Blyton	Flooding	NA*

See footnote at end of table.

Table 6.--Limitations and Hazards Affecting Cropland and Pasture--Continued

Soil name and map symbol	Limitations and hazard affecting cropland	Limitations and hazards affecting pasture
8674A:		
Dozaville	Flooding	NA*
8789A:		
Ambraw	Flooding, ponding	Flooding, ponding, low pH, frost heave
Ceresco	Flooding, wetness	Flooding, wetness
Sarpy	Flooding, wind erosion, limited available water capacity, excessive permeability	Flooding, wind erosion, limited available water capacity, low fertility, excessive permeability
9278A:		
Stronghurst	Wetness, crusting	Wetness, low pH
9278B:		
Stronghurst	Wetness, crusting, water erosion	Wetness, low pH, water erosion
9279B:		
Rozetta	Crusting, water erosion	Low pH, water erosion
9279C2:		
Rozetta	Crusting, water erosion	Low pH, water erosion

* Pasture is not a major use.

Table 7.--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	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
8D2:						
Hickory	3e	72.0	23.0	26.0	2.70	4.50
8D3:						
Hickory	4e	65.0	21.0	23.0	2.40	4.00
8E2:						
Hickory	6e	---	---	---	2.30	3.80
8F:						
Hickory	6e	---	---	---	2.20	3.70
8G:						
Hickory	7e	---	---	---	---	---
17A:						
Keomah	2w	129.0	39.0	52.0	5.10	8.50
17B:						
Keomah	2e	128.0	39.0	51.0	5.00	8.30
19D3:						
Sylvan	4e	91.0	28.0	43.0	4.00	6.70
30F:						
Hamburg	7e	---	---	---	---	---
30G:						
Hamburg	7e	---	---	---	---	---
43A:						
Ipava	1	163.0	52.0	66.0	---	---
43B:						
Ipava	2e	161.0	51.0	65.0	---	---
50A:						
Virden	2w	138.0	46.0	---	---	---
75C:						
Drury	3e	122.0	39.0	55.0	4.80	8.00
75C2:						
Drury	3e	118.0	38.0	54.0	4.70	7.80
79B:						
Menfro	2e	128.0	39.0	52.0	5.10	8.50
79C2:						
Menfro	3e	121.0	37.0	50.0	4.90	8.20
79C3:						
Menfro	4e	112.0	34.0	45.0	4.50	7.50
79D2:						
Menfro	3e	116.0	35.0	48.0	4.60	7.70

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
79D3:						
Menfro	4e	107.0	32.0	44.0	4.20	7.00
79E2:						
Menfro	6e	---	---	---	4.10	6.80
90A:						
Bethalto	1	149.0	44.0	60.0	5.60	9.40
119D2:						
Elco	3e	100.0	33.0	42.0	3.90	6.50
119D3:						
Elco	4e	91.0	30.0	38.0	3.60	5.90
119E2:						
Elco	6e	---	---	---	3.40	5.60
175F:						
Lamont	7e	---	---	---	---	---
175G:						
Lamont	7e	---	---	---	---	---
216B:						
Stookey	2e	117.0	35.0	49.0	4.80	8.00
216C2:						
Stookey	3e	111.0	33.0	46.0	4.50	7.50
216C3:						
Stookey	4e	103.0	30.0	43.0	4.20	7.00
216D2:						
Stookey	3e	105.0	31.0	44.0	4.30	7.20
216D3:						
Stookey	4e	96.0	28.0	40.0	3.90	6.50
257A:						
Clarksdale	1	140.0	43.0	57.0	5.30	8.90
257B:						
Clarksdale	2e	139.0	43.0	56.0	5.20	8.70
264D3:						
El Dara	6e	---	---	---	2.80	4.70
264E2:						
El Dara	6e	---	---	---	2.70	4.50
264G:						
El Dara	7e	---	---	---	---	---
267A:						
Caseyville	2w	138.0	42.0	55.0	5.30	8.90
267B:						
Caseyville	2e	137.0	42.0	54.0	5.20	8.70
271C3:						
Timula	4e	90.0	30.0	40.0	4.20	7.00

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
271D3:						
Timula	4e	83.0	28.0	37.0	4.20	7.00
274F:						
Seaton	6e	---	---	---	2.60	4.50
274G:						
Seaton	7e	---	---	---	---	---
278A:						
Stronghurst	2w	138.0	42.0	55.0	5.30	8.90
279B:						
Rozetta	2e	130.0	40.0	53.0	5.10	8.50
279C2:						
Rozetta	3e	123.0	38.0	51.0	4.90	8.10
279C3:						
Rozetta	4e	114.0	35.0	47.0	4.50	7.50
280B:						
Fayette	2e	128.0	39.0	52.0	5.10	8.50
280C2:						
Fayette	3e	121.0	37.0	50.0	4.90	8.20
280C3:						
Fayette	4e	112.0	34.0	46.0	4.50	7.50
280D2:						
Fayette	3e	115.0	35.0	47.0	4.60	7.70
280D3:						
Fayette	4e	104.0	32.0	43.0	4.20	7.00
283B:						
Downsouth	2e	147.0	43.0	58.0	5.50	9.20
283C2:						
Downsouth	3e	139.0	40.0	55.0	5.30	8.90
403G:						
Elizabeth	7s	---	---	---	---	---
441B:						
Wakenda	2e	153.0	46.0	61.0	---	---
472D2:						
Baylis	6e	---	---	---	3.10	5.20
472E2:						
Baylis	7e	---	---	---	---	---
477B:						
Winfield	2e	130.0	40.0	53.0	5.10	8.60
477C2:						
Winfield	3e	122.0	38.0	51.0	4.90	8.20
477C3:						
Winfield	4e	113.0	35.0	47.0	4.50	7.60

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
515C2:						
Bunkum	3e	93.0	35.0	44.0	4.00	6.70
515C3:						
Bunkum	4e	86.0	32.0	41.0	3.70	6.10
515D2:						
Bunkum	3e	85.0	32.0	40.0	3.80	6.30
515D3:						
Bunkum	4e	82.0	31.0	39.0	3.60	5.90
549E2:						
Marseilles	7e	---	---	---	---	---
549F:						
Marseilles	7e	---	---	---	---	---
549G:						
Marseilles	7e	---	---	---	---	---
559F:						
Lindley	6e	---	---	---	2.40	4.00
559G:						
Lindley	7e	---	---	---	---	---
605D2:						
Ursa	4e	53.0	15.0	18.0	2.00	3.30
605D3:						
Ursa	6e	---	---	---	1.70	2.80
605E2:						
Ursa	6e	---	---	---	1.80	3.00
606F:						
Goss	7e	---	---	---	---	---
606G:						
Goss	7e	---	---	---	---	---
630B2:						
Navlys	2e	114.0	35.0	52.0	5.00	8.30
630C2:						
Navlys	3e	108.0	34.0	51.0	4.90	8.20
630C3:						
Navlys	4e	100.0	31.0	47.0	4.50	7.50
651D2:						
Keswick	4e	53.0	15.0	18.0	2.00	3.30
651D3:						
Keswick	6e	---	---	---	1.30	2.20
651E2:						
Keswick	6e	---	---	---	1.40	2.40
652C2:						
Passport	3e	78.0	25.0	31.0	2.90	4.80

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
652C3:						
Passport	4e	65.0	21.0	26.0	2.40	4.00
652D2:						
Passport	4e	74.0	24.0	29.0	2.70	4.50
652D3:						
Passport	6e	---	---	---	2.50	4.20
699A:						
Timewell	1	143.0	46.0	57.0	---	---
785G:						
Lacrescent	7e	---	---	---	---	---
835G:						
Earthen Dam.						
856E2:						
Stookey and Timula	6e	---	---	---	3.50	5.80
856F:						
Stookey and Timula	6e	---	---	---	3.30	5.50
856G:						
Stookey-and Timula	7e	---	---	---	---	---
864:						
Pits, quarries.						
865:						
Pits, gravel	8	---	---	---	---	---
1070A:						
Beaucoup	5w	---	---	---	---	---
3028A:						
Jules	2w	90.0	29.0	---	3.60	5.90
3070A:						
Beaucoup	3w	124.0	41.0	---	---	---
3070L:						
Beaucoup	4w	---	---	---	---	---
3071L:						
Darwin	5w	---	---	---	---	---
3092A:						
Sarpy	4s	64.0	23.0	---	2.70	4.50
3092L:						
Sarpy	4s	50.0	18.0	---	2.10	3.50
3302L:						
Ambraw	4w	---	---	---	---	---
3331A:						
Haymond	2w	126.0	41.0	---	4.80	8.00
3331L:						
Haymond	2w	---	---	---	---	---

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
3333A:						
Wakeland	2w	122.0	41.0	---	4.70	7.80
3333L:						
Wakeland	3w	---	---	---	---	---
3404A:						
Titus	4w	113.0	38.0	---	---	---
3404L:						
Titus	5w	---	---	---	---	---
3415A:						
Orion	3w	122.0	39.0	---	4.20	7.00
3415L:						
Orion	4w	---	---	---	---	---
3428A:						
Coffeen	2w	137.0	42.0	---	5.20	8.70
3428L:						
Coffeen	3w	---	---	---	---	---
3475A:						
Elsah	2s	102.0	35.0	---	4.10	6.80
3475L:						
Elsah	2s	---	---	---	---	---
3877L:						
Blake-Slacwater	5w	---	---	---	---	---
7037B:						
Worthen	2e	149.0	46.0	61.0	5.80	9.70
7075B:						
Drury	2e	125.0	40.0	56.0	4.90	8.20
7242A:						
Kendall	2w	135.0	41.0	55.0	5.20	8.70
7430B:						
Raddle	2e	148.0	45.0	58.0	5.70	9.50
7815B:						
Udorthents	1	88.0	23.0	---	---	---
8070A:						
Beaucoup	2w	138.0	46.0	---	---	---
8071A:						
Darwin	3w	99.0	35.0	---	---	---
8092A:						
Sarpy	4s	71.0	26.0	34.0	3.00	5.00
8162A:						
Gorham	2w	141.0	46.0	---	---	---
8180A:						
Dupo	3w	132.0	43.0	55.0	---	---

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
8183A:						
Shaffton	2w	124.0	41.0	48.0	---	---
8217A:						
Twomile	3w	86.0	30.0	---	3.20	5.30
8284A:						
Tice	2w	153.0	47.0	61.0	---	---
8288A:						
Petrolia	3w	132.0	43.0	---	---	---
8302A:						
Ambraw	2w	132.0	43.0	---	---	---
8331A:						
Haymond	2w	140.0	45.0	60.0	---	---
8333A:						
Wakeland	2w	135.0	45.0	57.0	---	---
8349B:						
Zumbro	4s	85.0	28.0	37.0	3.50	5.80
8395A:						
Ceresco	2w	124.0	42.0	50.0	---	---
8396A:						
Vesser	2w	134.0	42.0	---	---	---
8404A:						
Titus	3w	125.0	42.0	---	---	---
8415A:						
Orion	2w	135.0	43.0	52.0	---	---
8428A:						
Coffeen	2w	152.0	47.0	57.0	---	---
8451A:						
Lawson	2w	161.0	48.0	62.0	---	---
8452A:						
Riley	2w	122.0	41.0	55.0	---	---
8634A:						
Blyton	2w	134.0	44.0	55.0	---	---
8674A:						
Dozaville	2w	149.0	45.0	59.0	---	---
8789A		111.0	38.0	---	3.90	6.50
Ambraw	2w					
Ceresco	2w					
Sarpy	4s					
9278A:						
Stronghurst	2w	138.0	42.0	55.0	5.30	8.90
9278B:						
Stronghurst	2e	137.0	42.0	54.0	5.20	8.70

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

Map symbol and soil name	Land capability	Corn	Soybeans	Winter wheat	Grass-legume hay	Grass-legume pasture
		Bu	*Bu*	*Bu*	*Tons*	*AUM*
9279B:						
Rozetta	2e	130.0	40.0	53.0	5.10	8.50
9279C2:						
Rozetta	3e	123.0	38.0	51.0	4.90	8.20
M-W:						
Miscellaneous water.						
W:						
Water.						

Table 8.--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
17A	Keomah silt loam, 0 to 2 percent slopes (where drained)
17B	Keomah silt loam, 2 to 5 percent slopes
43A	Ipava silt loam, 0 to 2 percent slopes
43B	Ipava silt loam, 2 to 5 percent slopes
50A	Virden silty clay loam, 0 to 2 percent slopes (where drained)
79B	Menfro silt loam, 2 to 5 percent slopes
90A	Bethalto silt loam, 0 to 2 percent slopes (where drained)
216B	Stookey silt loam, 2 to 5 percent slopes
257A	Clarksdale silt loam, 0 to 2 percent slopes (where drained)
257B	Clarksdale silt loam, 2 to 5 percent slopes
267A	Caseyville silt loam, 0 to 2 percent slopes
267B	Caseyville silt loam, 2 to 5 percent slopes
278A	Stronghurst silt loam, 0 to 2 percent slopes (where drained)
279B	Rozetta silt loam, 2 to 5 percent slopes
280B	Fayette silt loam, 2 to 5 percent slopes
283B	Downsouth silt loam, 2 to 5 percent slopes
441B	Wakenda silt loam, 2 to 5 percent slopes
477B	Winfield silt loam, 2 to 5 percent slopes
630B2	Navlys silt loam, 2 to 5 percent slopes, eroded
699A	Timewell silt loam, 0 to 2 percent slopes
3028A	Jules silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3070A	Beaucoup 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)
3331A	Haymond silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3333A	Wakeland silt loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3404A	Titus silty clay loam, 0 to 2 percent slopes, frequently flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
3415A	Orion silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3428A	Coffeen silt loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
3475A	Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded (where protected from flooding or not frequently flooded during the growing season)
7037B	Worthen silt loam, 2 to 5 percent slopes, rarely flooded
7075B	Drury silt loam, 2 to 5 percent slopes, rarely flooded
7242A	Kendall silt loam, 0 to 2 percent slopes, rarely flooded (where drained)
7430B	Raddle silt loam, 2 to 5 percent slopes, rarely flooded
8070A	Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8071A	Darwin silty clay, 0 to 2 percent slopes, occasionally flooded (where drained)
8162A	Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8180A	Dupo silt loam, 0 to 2 percent slopes, occasionally flooded
8183A	Shaffton clay loam, 0 to 2 percent slopes, occasionally flooded
8217A	Twomile silt loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8284A	Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded
8288A	Petrolia silt loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8302A	Ambraw clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8331A	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded
8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8395A	Ceresco loam, 0 to 2 percent slopes, occasionally flooded
8396A	Vesser silt loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8404A	Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded (where drained)
8415A	Orion silt loam, 0 to 2 percent slopes, occasionally flooded
8428A	Coffeen silt loam, 0 to 2 percent slopes, occasionally flooded
8451A	Lawson silt loam, 0 to 2 percent slopes, occasionally flooded
8452A	Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded
8634A	Blyton silt loam, 0 to 2 percent slopes, occasionally flooded

Table 8.--Prime Farmland--Continued

Map symbol	Soil name
8674A	Dozaville silt loam, 0 to 2 percent slopes, occasionally flooded
9278A	Stronghurst silt loam, terrace, 0 to 2 percent slopes (where drained)
9278B	Stronghurst silt loam, terrace, 2 to 5 percent slopes
9279B	Rozetta silt loam, terrace, 2 to 5 percent slopes

Table 9.--Hydric Soils

Map symbol and map unit name	Component	Hydric	Local landform
17A:			
Keomah silt loam, 0 to 2 percent slopes	Keomah	No	Ground moraines
	Rushville	Yes	Depressions
43A:			
Ipava silt loam, 0 to 2 percent slopes	Ipava	No	Ground moraines
	Virden	Yes	Depressions
50A:			
Virden silty clay loam, 0 to 2 percent slopes	Virden	Yes	Ground moraines
90A:			
Bethalto silt loam, 0 to 2 percent slopes	Bethalto	No	Ground moraines
	Virden	Yes	Depressions
257A:			
Clarksdale silt loam, 0 to 2 percent slopes	Clarksdale	No	Ground moraines
	Virden	Yes	Depressions
267A:			
Caseyville silt loam, 0 to 2 percent slopes	Caseyville	No	Ground moraines
	Rushville	Yes	Depressions
278A:			
Stronghurst silt loam, 0 to 2 percent slopes	Stronghurst	No	Ground moraines
	Rushville	Yes	Depressions
699A:			
Timewell silt loam, 0 to 2 percent slopes	Timewell	No	Ground moraines
	Virden	Yes	Depressions
	Denny	Yes	Depressions
1070A:			
Beaucoup silty clay loam, 0 to 2 percent slopes, undrained, occasionally flooded	Beaucoup, undrained	Yes	Flood plains
3028A:			
Jules silt loam, 0 to 2 percent slopes, frequently flooded	Jules	No	Flood plains
	Birds	Yes	Depressions
3070A:			
Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded	Beaucoup	Yes	Flood plains
3070L:			
Beaucoup silty clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Beaucoup	Yes	Flood plains
3071L:			
Darwin silty clay, 0 to 2 percent slopes, frequently flooded, long duration	Darwin	Yes	Flood plains
3092L:			
Sarpy loamy fine sand, 0 to 2 percent slopes, frequently flooded, long duration	Sarpy	Yes	Flood plains

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric	Local landform
3302L:			
Ambraw clay loam, 0 to 2 percent slopes, frequently flooded, long duration	Ambraw	Yes	Flood plains
3331A:			
Haymond silt loam, 0 to 2 percent slopes, frequently flooded	Haymond	No	Flood plains
	Birds	Yes	Depressions
	Twomile	Yes	Flood plains
3331L:			
Haymond silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Haymond	Yes	Flood plains
	Beaucoup	Yes	Depressions
3333A:			
Wakeland silt loam, 0 to 2 percent slopes, frequently flooded	Wakeland	No	Flood plains
	Birds	Yes	Depressions
3333L:			
Wakeland silt loam, 0 to 2 percent slopes, frequently flooded, long duration	Wakeland	Yes	Flood plains
	Beaucoup	Yes	Depressions
3404A:			
Titus silty clay loam, 0 to 2 percent slopes, frequently flooded	Titus	Yes	Flood plains
3404L:			
Titus silty clay loam, 0 to 2 percent slopes, frequently flooded long duration	Titus	Yes	Flood plains
3415A:			
Orion silt loam, 0 to 2 percent slopes, frequently flooded	Orion	No	Flood plains
	Beaucoup	Yes	Depressions
3415L:			
Orion silt loam, 0 to 2 percent slopes, frequently flooded long duration	Orion	Yes	Flood plains
	Beaucoup	Yes	Depressions
3428A:			
Coffeen silt loam, 0 to 2 percent slopes, frequently flooded	Coffeen	No	Flood plains
	Beaucoup	Yes	Depressions
3428L:			
Coffeen silt loam, 0 to 2 percent slopes, frequently flooded long duration	Coffeen	Yes	Flood plains
	Beaucoup	Yes	Depressions
3475A:			
Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded	Elsah	No	Flood plains
	Birds	Yes	Depressions
3475L:			
Elsah gravelly loam, 0 to 2 percent slopes, frequently flooded long duration	Elsah	Yes	Flood plains
	Beaucoup	Yes	Depressions
3877L:			
Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration	Blake	Yes	Flood plains
	Slacwater	Yes	Flood plains

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric	Local landform
7242A:			
Kendall silt loam, 0 to 2 percent slopes, rarely flooded	Kendall	No	Flood-plain steps
	Vesser	Yes	Flood plains
8070A:			
Beaucoup silty clay loam, 0 to 2 percent slopes, occasionally flooded	Beaucoup	Yes	Flood plains
8071A:			
Darwin silty clay, 0 to 2 percent slopes, occasionally flooded	Darwin	Yes	Flood plains
8162A:			
Gorham silty clay loam, 0 to 2 percent slopes, occasionally flooded	Gorham	Yes	Flood plains
8180A:			
Dupo silt loam, 0 to 2 percent slopes, occasionally flooded	Dupo	No	Flood plains
	Darwin	Yes	Depressions
	Titus	Yes	Depressions
8183A:			
Shaffton clay loam, 0 to 2 percent slopes, occasionally flooded	Shaffton	No	Flood plains
	Ambraw	Yes	Depressions
8217A:			
Twomile silt loam, 0 to 2 percent slopes, occasionally flooded	Twomile	Yes	Flood plains
8284A:			
Tice silty clay loam, 0 to 2 percent slopes, occasionally flooded	Tice	No	Flood plains
	Beaucoup	Yes	Depressions
8288A:			
Petrolia silt loam, 0 to 2 percent slopes, occasionally flooded	Petrolia	Yes	Flood plains
8302A:			
Ambraw clay loam, 0 to 2 percent slopes, occasionally flooded	Ambraw	Yes	Flood plains
8331A:			
Haymond silt loam, 0 to 2 percent slopes, occasionally flooded	Haymond	No	Flood plains
	Beaucoup	Yes	Depressions
8333A:			
Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded	Wakeland	No	Flood plains
	Beaucoup	Yes	Depressions
8395A:			
Ceresco loam, 0 to 2 percent slopes, occasionally flooded	Ceresco	No	Flood plains
	Ambraw	Yes	Depressions
8396A:			
Vesser silt loam, 0 to 2 percent slopes, occasionally flooded	Vesser	Yes	Flood plains
8404A:			
Titus silty clay loam, 0 to 2 percent slopes, occasionally flooded	Titus	Yes	Flood plains

Table 9.--Hydric Soils--Continued

Map symbol and map unit name	Component	Hydric	Local landform
8415A:			
Orion silt loam, 0 to 2 percent slopes, occasionally flooded	Orion	No	Flood plains
	Beaucoup	Yes	Depressions
8428A:			
Coffeen silt loam, 0 to 2 percent slopes, occasionally flooded	Coffeen	No	Flood plains
	Beaucoup	Yes	Depressions
8451A:			
Lawson silt loam, 0 to 2 percent slopes, occasionally flooded	Lawson	No	Flood plains
	Beaucoup	Yes	Depressions
8452A:			
Riley silty clay loam, 0 to 2 percent slopes, occasionally flooded	Riley	No	Flood plains
	Ambraw	Yes	Depressions
8634A:			
Blyton silt loam, 0 to 2 percent slopes, occasionally flooded	Blyton	No	Flood plains
	Beaucoup	Yes	Depressions
8789A:			
Ambraw-Ceresco-Sarpy complex, 0 to 2 percent slopes, occasionally flooded	Ambraw	Yes	Meander scrolls
	Ceresco	No	Meander scrolls
	Sarpy	No	Meander scrolls
9278A:			
Stronghurst silt loam, terrace, 0 to 2 percent slopes	Stronghurst	No	Stream terraces
	Rushville	Yes	Depressions

Table 10.--Windbreaks and Environmental Plantings

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8D2, 8D3, 8E2, 8F, 8G:					
Hickory	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
17A, 17B:					
Keomah	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
19D3:					
Sylvan	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
30F, 30G:					
Hamburg	American hazelnut, coralberry, mapleleaf viburnum, redosier dogwood	Common serviceberry, downy arrowwood, eastern redcedar, southern arrowwood	Austrian pine, blue spruce, bur oak, chinkapin oak, common hackberry, green ash	Eastern cottonwood	Carolina poplar
43A, 43B:					
Ipava	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
50A:					
Virden	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
75C, 75C2:					
Drury	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
79B, 79C2, 79C3, 79D2, 79D3, 79E2:					
Menfro	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
90A:					
Bethalto	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
119D2, 119D3, 119E2:					
Elco	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
175F, 175G:					
Lamont	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, blackgum, blue spruce, bur oak, eastern redcedar, green ash, pecan	Norway spruce, common hackberry, pin oak, tuliptree	Carolina poplar, eastern white pine
216B, 216C2, 216C3, 216D2, 216D3:					
Stookey	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
257A, 257B:					
Clarksdale	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
264D3, 264E2, 264G:					
El Dara	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
267A, 267B:					
Caseyville	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
271C3, 271D3: Timula	American hazelnut, common winterberry, gray dogwood, redosier dogwood	Blackhaw, common chokecherry, common pawpaw, nannyberry, roughleaf dogwood, silky dogwood	American sycamore, arborvitae, blue spruce, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash	Carolina poplar, eastern cottonwood	---
274F, 274G: Seaton	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
278A: Stronghurst	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
279B, 279C2, 279C3: Rozetta	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
280B, 280C2, 280C3, 280D2, 280D3: 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 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
283B, 283C2:					
Downsouth	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
403G:					
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	---	---
441B:					
Wakenda	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
472D2, 472E2:					
Baylis	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	---
477B, 477C2, 477C3:					
Winfield	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
515C2, 515C3, 515D2, 515D3:					
Bunkum	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
549E2, 549F, 549G:					
Marseilles	American cranberrybush, American hazelnut, black chokeberry, common chokecherry, common elderberry, common juniper, coralberry, mapleleaf viburnum, silky dogwood	American plum, bur oak, chinkapin oak, common serviceberry, eastern redcedar, nannyberry, prairie crabapple, roughleaf dogwood, smooth sumac	Black oak, common hackberry, eastern white pine, green ash	Carolina poplar	---
559F, 549G:					
Lindley	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, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
605D2, 605D3, 605E2:					
Ursa	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash	Norway spruce	Carolina poplar
606F, 606G:					
Goss	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	---	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
630B2, 630C2, 630C3:					
Navlys	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
651D2, 651D3, 651E2:					
Keswick	American cranberrybush, American hazelnut, black chokeberry, common juniper, coralberry, gray dogwood, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, Washington hawthorn, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, staghorn sumac	Virginia pine, arborvitae, black oak, blackgum, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash	Norway spruce	Carolina poplar
652C2, 652C3, 652D2, 652D3:					
Passport	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
699A:					
Timewell	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
785G:					
Lacrescent	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	---	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
835G: Earthen Dam.					
856E2, 856F, 856G: Stookey	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, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
Timula	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
864: Pits, quarries.					
865: Pits, gravel.					
1070A: Beaucoup	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3028A: Jules	Common winterberry, gray dogwood, redosier dogwood, silky dogwood	Blackhaw, common pawpaw, common serviceberry, downy arrowwood, roughleaf dogwood, southern arrowwood	Austrian pine, arborvitae, bur oak, common hackberry, eastern redcedar, green ash, green hawthorn, nannyberry	Carolina poplar, eastern cottonwood	---

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3070A, 3070L:					
Beaucoup	American cranberrybush, black chokeberry, buttonbush, common elderberry, common ninebark, common winterberry, gray dogwood, highbush blueberry, northern spicebush, redosier dogwood, silky dogwood	Cockspur hawthorn, hazel alder, nannyberry, roughleaf dogwood	Arborvitae, blackgum, common hackberry, green hawthorn, northern white-cedar, shingle oak	Green ash, red maple, river birch, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3071L:					
Darwin	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
3092A, 3092L:					
Sarpy	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
3302L:					
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

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3331A, 3331L: Haymond	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
3333A, 3333L: Wakeland	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
3404A, 3040L: 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
3415A, 3415L: Orion	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
3428A, 3428L:					
Coffeen	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
3475A, 3475L:					
Elsah	Common winterberry, gray dogwood, redosier dogwood, silky dogwood	Blackhaw, common pawpaw, common serviceberry, downy arrowwood, roughleaf dogwood, southern arrowwood	Austrian pine, arborvitae, bur oak, common hackberry, eastern redcedar, green ash, green hawthorn, nannyberry	Carolina poplar, eastern cottonwood	---
3877L:					
Blake	Common winterberry, gray dogwood, redosier dogwood, silky dogwood	Blackhaw, common pawpaw, common serviceberry, downy arrowwood, roughleaf dogwood, southern arrowwood	Austrian pine, arborvitae, bur oak, common hackberry, eastern redcedar, green ash, green hawthorn, nannyberry	Carolina poplar, eastern cottonwood	---
Slacwater	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	---
7037B:					
Worthen	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
7075B:					
Drury	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
7242A:					
Kendall	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
7430B:					
Raddle	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
7815B:					
Udorthents	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
8070A:					
Beaucoup	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8071A:					
Darwin	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
8092A:					
Sarpy	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
8162A:					
Gorham	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
8180A:					
Dupo	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 10.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8183A:					
Shaffton	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
8217A:					
Twomile	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
8284A:					
Tice	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
8288A:					
Petrolia	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8302A:					
Ambraw	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
8331A:					
Haymond	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
8333A:					
Wakeland	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
8349B:					
Zumbro	American hazelnut, common elderberry, common winterberry, coralberry, mapleleaf viburnum, silky dogwood	American plum, American witchhazel, alternateleaf dogwood, blackhaw, common chokecherry, common serviceberry, nannyberry, prairie crabapple, roughleaf dogwood, southern arrowwood, staghorn sumac	Washington hawthorn, blue spruce, common hackberry, eastern redcedar, green ash, red maple	Carolina poplar	Eastern white pine

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8395A:					
Ceresco	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
8396A:					
Vesser	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
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
8415A:					
Orion	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8428A:					
Coffeen	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
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
8452A:					
Riley	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
8634A:					
Blyton	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
8674A:					
Dozaville	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
8789A:					
Ambraw	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
Ceresco	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
Sarpy	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
9278A:					
Stronghurst	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak
9278B:					
Stronghurst	American cranberrybush, Canada yew, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, northern spicebush, redosier dogwood, silky dogwood	Blackhaw, cockspur hawthorn, common pawpaw, common serviceberry, prairie crabapple, roughleaf dogwood, rusty blackhaw, southern arrowwood, witchhazel	Austrian pine, Douglas fir, arborvitae, blue spruce, common persimmon, eastern redcedar, green hawthorn, nannyberry, pecan, shingle oak	Norway spruce, blackgum, common hackberry, green ash, red maple, swamp white oak, sweetgum	Carolina poplar, eastern cottonwood, pin oak

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

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
9279B:					
Rozetta	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
9279C2:					
Rozetta	American hazelnut, black chokeberry, common elderberry, common juniper, common ninebark, common winterberry, coralberry, mapleleaf viburnum, redosier dogwood, silky dogwood	American plum, American witchhazel, blackhaw, common chokecherry, common serviceberry, prairie crabapple, roughleaf dogwood, smooth sumac, southern arrowwood	Washington hawthorn, arborvitae, blue spruce, common persimmon, eastern redcedar, nannyberry, pecan, white oak	Douglas fir, Norway spruce, black walnut, blackgum, common hackberry, green ash, northern red oak, pin oak, tuliptree	Carolina poplar, eastern cottonwood, eastern white pine
M-W:					
Miscellaneous water.					
W:					
Water.					

Table 11.--Forestland Productivity

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
8D2, 8D3, 8E2, 8F, 8G:				
Hickory	Bitternut hickory	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	---	---	
	Green ash	---	---	
	Northern red oak	85	72	
	White oak	85	72	
17A, 17B:				
Keomah	Northern red oak	70	57	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	White oak	65	43	
19D3:				
Sylvan	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	White oak	80	57	
30F, 30G:				
Hamburg	Black oak	---	---	Austrian pine, blue spruce, bur oak, chinkapin oak, common hackberry, eastern cottonwood, green ash
	Bur oak	---	---	
	Eastern redcedar	---	---	
	Post oak	---	---	
	White oak	45	29	
43A, 43B:				
Ipava	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
50A:				
Virden	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
75C, 75C2:				
Drury	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	
	White oak	85	72	
79B, 79C2, 79C3, 79D2, 79D3, 79E2:				
Menfro	Northern red oak	81	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	73	57	
	White ash	70	72	
	White oak	59	43	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
90A:				
Bethalto	White oak	70	57	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Northern red oak	---	---	
	Green ash	---	---	
119D2, 119D3, 119E2:				
Elco	Black walnut	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	85	72	
	White oak	85	72	
175F, 175G:				
Lamont	White oak	55	43	Bur oak, eastern white pine, pecan, pin oak, tuliptree
	Northern red oak	55	43	
216B, 216C2, 216C3, 216D2, 216D3:				
Stookey	Black oak	73	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	White ash	70	72	
	White oak	59	43	
257A, 257B:				
Clarksdale	White oak	80	57	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Northern red oak	80	57	
264D3, 264E2, 264G:				
El Dara	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	---	---	
267A, 267B:				
Caseyville	White oak	75	57	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
271C3, 271D3:				
Timula	Bur oak	---	---	Bur oak, chinkapin oak, common hackberry, eastern cottonwood, eastern redcedar, green ash
	Green ash	---	---	
	Northern red oak	---	---	
	White oak	70	57	
274F, 274G:				
Seaton	Black walnut	---	---	Eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	80	57	
	White oak	90	72	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
278A:				
Stronghurst	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
279B, 279C2, 279C3:				
Rozetta	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	---	---	
280B, 280C2, 280C3, 280D2, 280D3:				
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	
	White oak	80	57	
283B, 283C2:				
Downsouth	White oak	70	57	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	---	---	
403G:				
Elizabeth	Black oak	60	43	Bur oak, chinkapin oak, eastern redcedar, green ash, honeylocust
	Bur oak	60	43	
	Eastern redcedar	---	---	
	Northern red oak	---	---	
	Shagbark hickory	---	---	
441B:				
Wakenda	---	---	---	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
472D2, 472E2:				
Baylis	White oak	80	57	Black oak, common hackberry, eastern white pine, green ash
	Northern red oak	80	57	
	Black walnut	---	---	
477B, 477C2, 477C3:				
Winfield	White oak	65	43	Black walnut, eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Black oak	65	43	
	Northern red oak	60	43	
515C2, 515C3, 515D2, 515D3:				
Bunkum	White oak	75	57	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
549E2, 549F, 549G:				
Marseilles	Black oak	---	---	Black oak, common hackberry, eastern white pine, green ash
	Northern red oak	66	43	
	White ash	---	---	
	White oak	66	29	
559F, 559G:				
Lindley	Black oak	63	43	Eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	61	43	
	White oak	56	43	
559G:				
Lindley	Black oak	63	43	Eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Northern red oak	61	43	
	White oak	56	43	
605D2, 605D3, 605E2:				
Ursa	White oak	70	57	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash
	Northern red oak	70	57	
	Black oak	70	57	
	Green ash	---	---	
606F, 606G:				
Goss	White oak	54	43	Bur oak, chinkapin oak, eastern redcedar, green ash, honeylocust
630B2, 630C2, 630C3:				
Navlys	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	
	White oak	80	57	
651D2, 651D3, 651E2:				
Keswick	White oak	55	43	Black oak, bur oak, chinkapin oak, common hackberry, eastern redcedar, green ash
	Northern red oak	55	43	
652C2, 652C3, 652D2, 653D3:				
Passport	White oak	70	57	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Bur oak	70	57	
	Northern red oak	70	57	
	Green ash	---	---	
699A:				
Timewell	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
785G:				
Lacrescent	American basswood	62	57	Bur oak, chinkapin oak, eastern redcedar, green ash, honeylocust
	Northern red oak	59	43	
	White oak	55	43	
835G:				
Earthen Dam.				

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
856E2, 856F, 856G:				
Stookey	Black oak	73	57	Eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	White ash	70	72	
	Sugar maple	68	43	
	White oak	59	43	
Timula	White oak	70	57	Eastern cottonwood, eastern white pine, green ash, northern red oak, pecan, pin oak, tuliptree, white oak
	Bur oak	---	---	
	Northern red oak	---	---	
	Green ash	---	---	
864: Pits, quarries.				
864: Pits, gravel.				
1070A:				
Beaucoup	Eastern cottonwood	100	129	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Pin oak	90	72	
	American sycamore	---	---	
3028A:				
Jules	Bur oak	80	57	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash
	Silver maple	---	---	
	Sugar maple	---	---	
	Eastern cottonwood	---	---	
	Black cherry	---	---	
	Swamp white oak	---	---	
3070A, 3070L:				
Beaucoup	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Pin oak	90	72	
	Eastern cottonwood	100	129	
3071L:				
Darwin	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Eastern cottonwood	---	---	
	Green ash	---	---	
	Pin oak	80	57	
	Swamp white oak	---	---	
3092A, 3092L:				
Sarpy	Eastern cottonwood	95	114	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Silver maple	90	43	
3302L:				
Ambraw	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Pin oak	90	72	
	Eastern cottonwood	100	129	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
3331A, 3331L:				
Haymond	Green ash	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Black walnut	---	---	
3333A, 3333L:				
Wakeland	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Swamp white oak	---	---	
3404A, 3404L:				
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	
3415A, 3415L:				
Orion	White ash	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Silver maple	80	29	
3428A, 3428L:				
Coffeen	Eastern cottonwood	100	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Pin oak	90	72	
3475A, 3475L:				
Elsah	Eastern cottonwood	95	114	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash
	American sycamore	---	---	
3877L:				
Blake	Eastern cottonwood	115	172	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash
	American sycamore	---	---	
	Silver maple	---	---	
Slacwater	Eastern cottonwood	110	157	Bur oak, common hackberry, eastern cottonwood, eastern redcedar, green ash
7037B:				
Worthen	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
7075B:				
Drury	White oak	85	72	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Northern red oak	85	72	
	Green ash	---	---	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
7242A:				
Kendall	Black walnut	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Northern red oak	80	57	
	White oak	80	57	
7430B:				
Raddle	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
7815B:				
Udorthents	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
8070A:				
Beaucoup	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Pin oak	90	72	
	Eastern cottonwood	100	129	
8071A:				
Darwin	American sycamore	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
	Eastern cottonwood	---	---	
	Green ash	---	---	
	Pin oak	80	57	
	Swamp white oak	---	---	
8092A:				
Sarpy	Eastern cottonwood	95	114	Common hackberry, eastern redcedar, eastern white pine, green ash, red pine, shortleaf pine
	Silver maple	90	43	
8162A:				
Gorham	Eastern cottonwood	100	129	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Pin oak	90	72	
	American sycamore	---	---	
8180A:				
Dupo	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
8183A:				
Shaffton	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
8217A:				
Twomile	Pin oak	80	57	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum
8284A:				
Tice	Pin oak	96	72	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Eastern cottonwood	---	---	
	Green ash	---	---	
	White ash	---	---	
8288A:				
Petrolia	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Eastern cottonwood	100	129	
	Pin oak	90	72	
8302A:				
Ambraw	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Eastern cottonwood	100	129	
	Pin oak	90	72	
8331A:				
Haymond	Black walnut	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
8333A:				
Wakeland	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Swamp white oak	---	---	
8349B:				
Zumbro	---	---	---	Common hackberry, eastern redcedar, eastern white pine, green ash, red pine, shortleaf pine
8395A:				
Ceresco	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Northern red oak	76	57	
	White ash	---	---	
8396A:				
Vesser	---	---	---	Common hackberry, eastern cottonwood, green ash, pin oak, river birch, swamp white oak, sweetgum

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
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	
8415A:				
Orion	White ash	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Silver maple	80	29	
8428A:				
Coffeen	Eastern cottonwood	100	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Pin oak	90	72	
8451A:				
Lawson	Silver maple	70	29	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	White ash	---	---	
8452A:				
Riley	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
8634A:				
Blyton	Pin oak	90	72	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Black walnut	---	---	
	Green ash	---	---	
8674A:				
Dozaville	---	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
8789A:				
Ambraw	American sycamore	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Eastern cottonwood	100	129	
	Pin oak	90	72	
Ceresco	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Northern red oak	76	57	
	White ash	---	---	

Table 11.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Suggested trees to plant
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
8789A:				
Sarpy	Eastern cottonwood	95	114	Common hackberry, eastern redcedar, eastern white pine, green ash, red pine, shortleaf pine
9278A:				
Stronghurst	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
9278B:				
Stronghurst	Bur oak	---	---	Common hackberry, common persimmon, eastern cottonwood, green ash, pecan, pin oak, swamp white oak
	Green ash	---	---	
	Northern red oak	70	57	
	White oak	70	57	
9279B:				
Rozetta	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	---	---	
9279C2:				
Rozetta	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	---	---	
M-W:				
Miscellaneous water.				
W:				
Water.				

Table 12a.--Forestland Management

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

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
8E2, 8F:						
Hickory	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
8G:						
Hickory	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
17A, 17B:						
Keomah	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
19D3:						
Sylvan	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
30F:						
Hamburg	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
30G:						
Hamburg	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
43A, 43B:						
Ipava	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
50A:						
Virden	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Wetness	1.00		
			Low strength	0.50		
75C, 75C2:						
Drury	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		

Table 12a.--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
79B:						
Menfro	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
79C2, 79C3:						
Menfro	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
79D2, 79D3:						
Menfro	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
79E2:						
Menfro	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
90A:						
Bethalto	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
119D2, 119D3:						
Elco	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
119E2:						
Elco	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
175F:						
Lamont	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
175G:						
Lamont	Severe		Poorly suited		Moderate	
	Slope	1.00	Slope	1.00	Low strength	0.50
216B:						
Stookey	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
216C2, 216C3:						
Stookey	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
216D2, 216D3:						
Stookey	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		

Table 12a.--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
257A, 257B:						
Clarksdale	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
264D3:						
El Dara	Slight		Poorly suited		Moderate	
			Slope	1.00	Low strength	0.50
264E2:						
El Dara	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
264G:						
El Dara	Severe		Poorly suited		Moderate	
	Slope	1.00	Slope	1.00	Low strength	0.50
267A, 267B:						
Caseyville	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
271C3:						
Timula	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
271D3:						
Timula	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
274F:						
Seaton	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
274G:						
Seaton	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
278A:						
Stronghurst	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
279B:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
279C2, 279C3:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
280B:						
Fayette	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 12a.--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
280C2, 280C3:						
Fayette	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
280D2, 280D3:						
Fayette	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
283B:						
Downsouth	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
283C2:						
Downsouth	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
403G:						
Elizabeth	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
441B:						
Wakenda	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
472D2:						
Baylis	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
472E2:						
Baylis	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
477B:						
Winfield	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
477C2, 477C3:						
Winfield	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
515C2, 515C3:						
Bunkum	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
			Wetness	0.50		
515D2, 515D3:						
Bunkum	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
			Wetness	0.50		

Table 12a.--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
549E2, 549F:						
Marseilles	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
549G:						
Marseilles	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
559F:						
Lindley	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
559G:						
Lindley	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
605D2, 605D3:						
Ursa	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
605E2:						
Ursa	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
606F:						
Goss	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Stickiness/slope	0.50	Low strength	0.50		
606G:						
Goss	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
			Low strength	0.50		
630B2:						
Navlys	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
630C2, 630C3:						
Navlys	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
651D2, 651D3:						
Keswick	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
651E2:						
Keswick	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 12a.--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
652C2, 652C3:						
Passport	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
			Wetness	0.50		
652D2, 652D3:						
Passport	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
			Wetness	0.50		
699A:						
Timewell	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
785G:						
Lacrescent	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
			Low strength	0.50		
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2, 856F:						
Stookey	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Timula	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
856G:						
Stookey	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
Timula	Severe		Poorly suited		Severe	
	Slope	1.00	Slope	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Wetness	1.00	Flooding	1.00	Wetness	0.50
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		

Table 12a.--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
3028A:						
Jules	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
3070A, 3070L:						
Beaucoup	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		
3071L:						
Darwin	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
	Stickiness/slope	0.50	Wetness	1.00		
			Low strength	0.50		
			Stickiness	0.50		
3092A, 3092L:						
Sarpy	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
3302L:						
Ambraw	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		
3331A, 3331L:						
Haymond	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
3333A, 3333L:						
Wakeland	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	0.50		
			Low strength	0.50		
3404A, 3404L:						
Titus	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
3415A, 3415L:						
Orion	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		

Table 12a.--Forestland Management--Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3428A, 3428L:						
Coffeen	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
3475A, 3475L:						
Elsah	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
3877L:						
Blake	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		
Slacwater	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		
7037B:						
Worthen	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
7075B:						
Drury	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
7242A:						
Kendall	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
7430B:						
Raddle	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
7815B:						
Udorthents	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
8070A:						
Beaucoup	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		
8071A:						
Darwin	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
	Stickiness/slope	0.50	Wetness	1.00		
			Low strength	0.50		
			Stickiness	0.50		

Table 12a.--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
8092A:						
Sarpy	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
8162A:						
Gorham	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		
8180A:						
Dupo	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		
8183A:						
Shaffton	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		
8217A:						
Twomile	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		
8284A:						
Tice	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		
8288A:						
Petrolia	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		
8302A:						
Ambraw	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		
8331A:						
Haymond	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
8333A:						
Wakeland	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	0.50		
			Low strength	0.50		

Table 12a.--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
8349B:						
Zumbro	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
8395A:						
Ceresco	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		
8396A:						
Vesser	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		
8404A:						
Titus	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	0.50	Flooding	1.00		
			Wetness	1.00		
			Low strength	0.50		
8415A:						
Orion	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
8428A:						
Coffeen	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
8451A:						
Lawson	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
8452A:						
Riley	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
8634A:						
Blyton	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
8674A:						
Dozaville	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		

Table 12a.--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
8789A:						
Ambraw	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		
Ceresco	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		
Sarpy	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
9278A:						
Stronghurst	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
9278B:						
Stronghurst	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
9279B:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
9279C2:						
Rozetta	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Slope	0.50		
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 12b.--Forestland Management

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

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
8E2, 8F:						
Hickory	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
8G:						
Hickory	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
17A:						
Keomah	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
17B:						
Keomah	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Wetness	0.50
					Low strength	0.50
19D3:						
Sylvan	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
30F:						
Hamburg	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
30G:						
Hamburg	Very severe		Severe		Poorly suited	
	Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
43A:						
Ipava	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
43B:						
Ipava	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Wetness	0.50
50A:						
Virden	Slight		Slight		Poorly suited	
					Ponding	1.00
					Wetness	1.00
					Low strength	0.50

Table 12b.--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
75C, 75C2:						
Drury	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
79B:						
Menfro	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
79C2, 79C3:						
Menfro	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
79D2, 79D3:						
Menfro	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
79E2:						
Menfro	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
90A:						
Bethalto	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
119D2, 119D3:						
Elco	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
119E2:						
Elco	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
175F:						
Lamont	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
175G:						
Lamont	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
216B:						
Stookey	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
216C2, 216C3:						
Stookey	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
216D2, 216D3:						
Stookey	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50

Table 12b.--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
257A:						
Clarksdale	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
257B:						
Clarksdale	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Wetness	0.50
					Low strength	0.50
264D3:						
El Dara	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
264E2:						
El Dara	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
264G:						
El Dara	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
267A:						
Caseyville	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
267B:						
Caseyville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Wetness	0.50
271C3:						
Timula	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
271D3:						
Timula	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
274F:						
Seaton	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
274G:						
Seaton	Very severe		Severe		Poorly suited	
	Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
278A:						
Stronghurst	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
279B:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50

Table 12b.--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
279C2, 279C3:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
280B:						
Fayette	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
280C2, 280C3:						
Fayette	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
280D2, 280D3:						
Fayette	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
283B:						
Downsouth	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
283C2:						
Downsouth	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
403G:						
Elizabeth	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
441B:						
Wakenda	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
472D2, 472E2:						
Baylis	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
477B:						
Winfield	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
477C2, 477C3:						
Winfield	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
515C2, 515C3:						
Bunkum	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
					Wetness	0.50

Table 12b.--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
515D2, 515D3:						
Bunkum	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
					Wetness	0.50
549E2, 549F:						
Marseilles	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
549G:						
Marseilles	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
559F:						
Lindley	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
559G:						
Lindley	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
605D2, 605D3:						
Ursa	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
605E2:						
Ursa	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
606F:						
Goss	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
606G:						
Goss	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
630B2:						
Navlys	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
630C2, 630C3:						
Navlys	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
651D2, 651D3:						
Keswick	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50

Table 12b.--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
651E2:						
Keswick	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
652C2, 652C3:						
Passport	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
					Wetness	0.50
652D2, 652D3:						
Passport	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
					Wetness	0.50
699A:						
Timewell	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
785G:						
Lacrescent	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2:						
Stookey	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Timula	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
856F:						
Stookey	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Timula	Severe		Severe		Poorly suited	
	Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
856G:						
Stookey	Very severe		Severe		Poorly suited	
	Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Timula	Very severe		Severe		Poorly suited	
	Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
864:						
Pits, quarries	Not rated		Not rated		Not rated	

Table 12b.--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
865:						
Pits, gavel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
3028A:						
Jules	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
3070A, 3070L:						
Beaucoup	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
3071L:						
Darwin	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
					Stickiness	0.50
3092A, 3092L:						
Sarpy	Slight		Slight		Poorly suited	
					Flooding	1.00
3302L:						
Ambraw	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
3331A, 3331L:						
Haymond	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
3333A, 3333L:						
Wakeland	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	0.50
					Low strength	0.50
3404A, 3404L:						
Titus	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50

Table 12b.--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
3415A, 3415L:						
Orion	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
3428A, 3428L:						
Coffeen	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
3475A, 3475L:						
Elsah	Slight		Slight		Poorly suited	
					Flooding	1.00
3877L:						
Blake	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
Slacwater	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
7037B:						
Worthen	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
7075B:						
Drury	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
7242A:						
Kendall	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
7430B:						
Raddle	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
7815B:						
Udorthents	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
8070A:						
Beaucoup	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50

Table 12b.--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
8071A:						
Darwin	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
					Stickiness	0.50
8092A:						
Sarpy	Slight		Slight		Poorly suited	
					Flooding	1.00
					Sandiness	0.50
8162A:						
Gorham	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8180A:						
Dupo	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8183A:						
Shaffton	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8217A:						
Twomile	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8284A:						
Tice	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8288A:						
Petrolia	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8302A:						
Ambraw	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8331A:						
Haymond	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50

Table 12b.--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
8333A:						
Wakeland	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	0.50
					Low strength	0.50
8349B:						
Zumbro	Slight		Slight		Poorly suited	
					Flooding	1.00
8395A:						
Ceresco	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8396A:						
Vesser	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	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
8415A:						
Orion	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8428A:						
Coffeen	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8451A:						
Lawson	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8452A:						
Riley	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
8634A:						
Blyton	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50

Table 12b.--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
8674A:						
Dozaville	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
8789A:						
Ambraw	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
Ceresco	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
Sarpy	Slight		Slight		Poorly suited	
					Flooding	1.00
9278A:						
Stronghurst	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
9278B:						
Stronghurst	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Wetness	0.50
					Low strength	0.50
9279B:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
9279C2:						
Rozetta	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
					Slope	0.50
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 12c.--Forestland Management

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

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Moderately suited Stickiness	0.50	Moderately suited Slope Stickiness	0.50 0.50	Moderately suited Low strength	0.50
8E2:						
Hickory	Moderately suited Stickiness	0.50	Poorly suited Slope Stickiness	0.75 0.50	Moderately suited Low strength Slope	0.50 0.50
8F:						
Hickory	Moderately suited Stickiness	0.50	Unsuited Slope Stickiness	1.00 0.50	Moderately suited Low strength Slope	0.50 0.50
8G:						
Hickory	Moderately suited Slope Stickiness	0.50 0.50	Unsuited Slope Stickiness	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50
17A:						
Keomah	Well suited		Well suited		Moderately suited Low strength	0.50
17B:						
Keomah	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
19D3:						
Sylvan	Moderately suited Stickiness	0.50	Moderately suited Slope Stickiness	0.50 0.50	Moderately suited Low strength	0.50
30F:						
Hamburg	Well suited		Unsuited Slope	1.00	Moderately suited Low strength Slope	0.50 0.50
30G:						
Hamburg	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope Low strength	1.00 0.50
43A, 43B:						
Ipava	Well suited		Well suited		Moderately suited Low strength	0.50
50A:						
Virden	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
75C, 75C2:						
Drury	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79B:						
Menfro	Well suited		Well suited		Moderately suited	
					Low strength	0.50
79C2, 79C3, 79D2, 79D3:						
Menfro	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
79E2:						
Menfro	Moderately suited		Poorly suited		Moderately suited	
	Stickiness	0.50	Slope	0.75	Low strength	0.50
			Stickiness	0.50	Slope	0.50
90A:						
Bethalto	Well suited		Well suited		Moderately suited	
					Low strength	0.50
119D2, 119D3:						
Elco	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
119E2:						
Elco	Moderately suited		Poorly suited		Moderately suited	
	Stickiness	0.50	Slope	0.75	Low strength	0.50
			Stickiness	0.50	Slope	0.50
175F:						
Lamont	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Slope	0.50
175G:						
Lamont	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
216B:						
Stookey	Well suited		Well suited		Moderately suited	
					Low strength	0.50
216C2, 216C3, 216D2, 216D3:						
Stookey	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
257A:						
Clarksdale	Well suited		Well suited		Moderately suited	
					Low strength	0.50
257B:						
Clarksdale	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
264D3:						
El Dara	Well suited		Moderately suited		Well suited	
			Slope	0.50		
264E2:						
El Dara	Well suited		Poorly suited		Moderately suited	
			Slope	0.75	Slope	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
264G:						
El Dara	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
267A 267B:						
Caseyville	Well suited		Well suited		Moderately suited	
					Low strength	0.50
271C3, 271D3:						
Timula	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
274F:						
Seaton	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
274G:						
Seaton	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
					Low strength	0.50
278A:						
Stronghurst	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
279B:						
Rozetta	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
279C2, 279C3:						
Rozetta	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
280B:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
280C2, 280C3, 280D2, 280D3:						
Fayette	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
283B:						
Downsouth	Well suited		Well suited		Moderately suited	
					Low strength	0.50
283C2:						
Downsouth	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
403G:						
Elizabeth	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Rock fragments	0.50	Rock fragments	0.50	Low strength	0.50
441B:						
Wakenda	Well suited		Well suited		Moderately suited	
					Low strength	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
472D2:						
Baylis	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
472E2:						
Baylis	Moderately suited		Poorly suited		Moderately suited	
	Stickiness	0.50	Slope	0.75	Low strength	0.50
			Stickiness	0.50	Slope	0.50
477B:						
Winfield	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
477C2, 477C3:						
Winfield	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
515C2, 515C3, 515D2, 515D3:						
Bunkum	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
549E2:						
Marseilles	Moderately suited		Poorly suited		Moderately suited	
	Stickiness	0.50	Slope	0.75	Low strength	0.50
			Stickiness	0.50	Slope	0.50
549F:						
Marseilles	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
549G:						
Marseilles	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
559F:						
Lindley	Moderately suited		Unsuited		Moderately suited	
	Stickiness	0.50	Slope	1.00	Low strength	0.50
			Stickiness	0.50	Slope	0.50
559G:						
Lindley	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
605D2, 605D3:						
Ursa	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
605E2:						
Ursa	Moderately suited		Poorly suited		Moderately suited	
	Stickiness	0.50	Slope	0.75	Low strength	0.50
			Stickiness	0.50	Slope	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
606F:						
Goss	Poorly suited		Unsuited		Moderately suited	
	Stickiness	0.75	Slope	1.00	Low strength	0.50
			Stickiness	0.75	Slope	0.50
			Rock fragments	0.50		
606G:						
Goss	Poorly suited		Unsuited		Poorly suited	
	Stickiness	0.75	Slope	1.00	Slope	1.00
	Slope	0.50	Stickiness	0.75	Low strength	0.50
			Rock fragments	0.50		
630B2:						
Navlys	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
630C2, 630C3:						
Navlys	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
651D2, 651D3:						
Keswick	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Slope	0.50	Low strength	0.50
			Stickiness	0.50		
651E2:						
Keswick	Moderately suited		Poorly suited		Moderately suited	
	Stickiness	0.50	Slope	0.75	Low strength	0.50
			Stickiness	0.50	Slope	0.50
652C2, 652C3, 652D2, 652D3:						
Passport	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
699A:						
Timewell	Well suited		Well suited		Moderately suited	
					Low strength	0.50
785G:						
Lacrescent	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
			Rock fragments	0.50	Low strength	0.50
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2:						
Stookey	Well suited		Poorly suited		Moderately suited	
			Slope	0.75	Low strength	0.50
					Slope	0.50
Timula	Well suited		Poorly suited		Moderately suited	
			Slope	0.75	Low strength	0.50
					Slope	0.50
856F:						
Stookey	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
856F:						
Timula	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Low strength	0.50
					Slope	0.50
856G:						
Stookey	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
					Low strength	0.50
Timula	Moderately suited		Unsuited		Poorly suited	
	Slope	0.50	Slope	1.00	Slope	1.00
					Low strength	0.50
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	Poorly suited		Poorly suited		Poorly suited	
	Wetness	0.75	Wetness	0.75	Wetness	1.00
					Low strength	0.50
3028A:						
Jules	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3070A, 3070L:						
Beaucoup	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3071L:						
Darwin	Poorly suited		Poorly suited		Moderately suited	
	Stickiness	0.75	Stickiness	0.75	Low strength	0.50
					Stickiness	0.50
3092A, 3092L:						
Sarpy	Well suited		Well suited		Well suited	
3302L:						
Ambraw	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3331A, 3331L:						
Haymond	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3333A, 3333L:						
Wakeland	Well suited		Well suited		Moderately suited	
					Low strength	0.50
3404A, 3404L:						
Titus	Moderately suited		Moderately suited		Moderately suited	
	Stickiness	0.50	Stickiness	0.50	Low strength	0.50
3415A, 3415L:						
Orion	Well suited		Well suited		Moderately suited	
					Low strength	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3428A, 3428L:						
Coffeen	Well suited		Well suited		Moderately suited Low strength	0.50
3475A, 3475L:						
Elsah	Well suited		Moderately suited Rock fragments	0.50	Well suited	
3877L:						
Blake	Well suited		Well suited		Moderately suited Low strength	0.50
Slacwater	Well suited		Well suited		Moderately suited Low strength	0.50
7037B:						
Worthen	Well suited		Well suited		Moderately suited Low strength	0.50
7075B:						
Drury	Well suited		Well suited		Moderately suited Low strength	0.50
7242A:						
Kendall	Well suited		Well suited		Moderately suited Low strength	0.50
7430B:						
Raddle	Well suited		Well suited		Moderately suited Low strength	0.50
7815B:						
Udorthents	Well suited		Well suited		Moderately suited Low strength	0.50
8070A:						
Beaucoup	Well suited		Well suited		Moderately suited Low strength	0.50
8071A:						
Darwin	Poorly suited Stickiness	0.75	Poorly suited Stickiness	0.75	Moderately suited Low strength Stickiness	0.50 0.50
8092A:						
Sarpy	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
8162A:						
Gorham	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
8180A:						
Dupo	Well suited		Well suited		Moderately suited Low strength	0.50
8183A:						
Shaffton	Well suited		Well suited		Moderately suited Low strength	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8217A:						
Twomile	Well suited		Well suited		Moderately suited Low strength	0.50
8284A:						
Tice	Well suited		Well suited		Moderately suited Low strength	0.50
8288A:						
Petrolia	Well suited		Well suited		Moderately suited Low strength	0.50
8302A:						
Ambraw	Well suited		Well suited		Moderately suited Low strength	0.50
8331A:						
Haymond	Well suited		Well suited		Moderately suited Low strength	0.50
8333A:						
Wakeland	Well suited		Well suited		Moderately suited Low strength	0.50
8349B:						
Zumbro	Well suited		Well suited		Well suited	
8395A:						
Ceresco	Well suited		Well suited		Moderately suited Low strength	0.50
8396A:						
Vesser	Well suited		Well suited		Moderately suited Low strength	0.50
8404A:						
Titus	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
8415A:						
Orion	Well suited		Well suited		Moderately suited Low strength	0.50
8428A:						
Coffeen	Well suited		Well suited		Moderately suited Low strength	0.50
8451A:						
Lawson	Well suited		Well suited		Moderately suited Low strength	0.50
8452A:						
Riley	Well suited		Well suited		Moderately suited Low strength	0.50
8634A:						
Blyton	Well suited		Well suited		Moderately suited Low strength	0.50

Table 12c.--Forestland Management--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8674A:						
Dozaville	Well suited		Well suited		Moderately suited Low strength	0.50
8789A:						
Ambraw	Well suited		Well suited		Moderately suited Low strength	0.50
Ceresco	Well suited		Well suited		Moderately suited Low strength	0.50
Sarpy	Well suited		Well suited		Well suited	
9278A:						
Stronghurst	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
9278B:						
Stronghurst	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
9279B:						
Rozetta	Moderately suited Stickiness	0.50	Moderately suited Stickiness	0.50	Moderately suited Low strength	0.50
9279C2:						
Rozetta	Moderately suited Stickiness	0.50	Moderately suited Slope Stickiness	0.50 0.50	Moderately suited Low strength	0.50
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 12d.--Forestland Management

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

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Well suited		Well suited		Low	
8E2, 8F:						
Hickory	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
8G:						
Hickory	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
17A, 17B:						
Keomah	Well suited		Well suited		High	
					Wetness	1.00
19D3:						
Sylvan	Well suited		Well suited		Low	
30F:						
Hamburg	Poorly suited		Poorly suited		Moderate	
	Slope	0.50	Slope	0.50	Lime	0.50
30G:						
Hamburg	Unsuited		Unsuited			
	Slope	1.00	Slope	1.00	Moderate	
					Lime	0.50
43A, 43B:						
Ipava	Well suited		Well suited		Low	
50A:						
Virden	Well suited		Well suited		High	
					Wetness	1.00
75C, 75C2:						
Drury	Well suited		Well suited		Low	
79B, 79C2, 79C3, 79D2, 79D3:						
Menfro	Well suited		Well suited		Low	
79E2:						
Menfro	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
90A:						
Bethalto	Well suited		Well suited		High	
					Wetness	1.00
119D2, 119D3:						
Elco	Well suited		Well suited		Low	
119E2:						
Elco	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		

Table 12d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
175F:						
Lamont	Poorly suited Slope	0.50	Poorly suited Slope	0.50	Low	
175G:						
Lamont	Unsuited Slope	1.00	Unsuited Slope	1.00	Low	
216B, 216C2, 216C3, 216D2, 216D3:						
Stookey	Well suited		Well suited		Low	
257A, 257B:						
Clarksdale	Well suited		Well suited		High Wetness	1.00
264D3:						
El Dara	Well suited		Well suited		Low	
264E2:						
El Dara	Poorly suited Slope	0.50	Poorly suited Slope	0.50	Low	
264G:						
El Dara	Unsuited Slope	1.00	Unsuited Slope	1.00	Low	
267A, 267B:						
Caseyville	Well suited		Well suited		Low	
271C3:						
Timula	Well suited		Well suited		Low	
271D3:						
Timula	Well suited		Well suited		Moderate Lime	0.50
274F:						
Seaton	Poorly suited Slope	0.50	Poorly suited Slope	0.50	Low	
274G:						
Seaton	Unsuited Slope	1.00	Unsuited Slope	1.00	Low	
278A:						
Stronghurst	Well suited		Well suited		High Wetness	1.00
279B, 279C2, 279C3:						
Rozetta	Well suited		Well suited		Low	
280B, 280C2, 280C3, 280D2, 280D3:						
Fayette	Well suited		Well suited		Low	
283B, 283C2:						
Downsouth	Well suited		Well suited		Low	

Table 12d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403G:						
Elizabeth	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
	Rock fragments	0.50				
441B:						
Wakenda	Well suited		Well suited		Low	
472D2:						
Baylis	Well suited		Well suited		Low	
472E2:						
Baylis	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
477B, 477C2, 477C3:						
Winfield	Well suited		Well suited		Low	
515C2, 515C3, 515D2, 515D3:						
Bunkum	Well suited		Well suited		Low	
549E2, 549F:						
Marseilles	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
549G:						
Marseilles	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
559F:						
Lindley	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
559G:						
Lindley	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
605D2, 605D3:						
Ursa	Well suited		Well suited		Low	
605E2:						
Ursa	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
606F:						
Goss	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
	Stickiness	0.50				
606G:						
Goss	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
	Stickiness	0.50				
630B2, 630C2, 630C3:						
Navlys	Well suited		Well suited		Low	

Table 12d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651D2, 651D3:						
Keswick	Well suited		Well suited		Low	
651E2:						
Keswick	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
652C2, 652C3, 652D2, 652D3:						
Passport	Well suited		Well suited		Low	
699A:						
Timewell	Well suited		Well suited		Low	
785G:						
Lacrescent	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2, 856F:						
Stookey	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
Timula	Poorly suited		Poorly suited		Low	
	Slope	0.50	Slope	0.50		
856G:						
Stookey	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
Timula	Unsuited		Unsuited		Low	
	Slope	1.00	Slope	1.00		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	Unsuited		Unsuited		High	
	Wetness	0.75	Wetness	1.00	Wetness	1.00
3028A:						
Jules	Well suited		Well suited		Moderate	
					Lime	0.50
					Soil reaction	0.50
3070A, 3070L:						
Beaucoup	Well suited		Well suited		High	
					Wetness	1.00
3071L:						
Darwin	Poorly suited		Well suited		High	
	Stickiness	0.50			Wetness	1.00

Table 12d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3092A:						
Sarpy	Well suited		Well suited		Low	
3092L:						
Sarpy	Well suited		Well suited		High	
					Wetness	1.00
3302L:						
Ambraw	Well suited		Well suited		High	
					Wetness	1.00
3331A:						
Haymond	Well suited		Well suited		Low	
3331L:						
Haymond	Well suited		Well suited		High	
					Wetness	1.00
3333A,3333L:						
Wakeland	Well suited		Well suited		High	
					Wetness	1.00
3404A, 3404L:						
Titus	Well suited		Well suited		High	
					Wetness	1.00
3415A:						
Orion	Well suited		Well suited		Low	
3415L:						
Orion	Well suited		Well suited		High	
					Wetness	1.00
3428A:						
Coffeen	Well suited		Well suited		Low	
3428L:						
Coffeen	Well suited		Well suited		High	
					Wetness	1.00
3475A:						
Elsah	Well suited		Well suited		Low	
3475L:						
Elsah	Well suited		Well suited			
					High	
					Wetness	1.00
3877L:						
Blake	Well suited		Well suited		High	
					Wetness	1.00
					Lime	0.50
					Soil reaction	0.50
Slacwater	Well suited		Well suited		High	
					Wetness	1.00
					Lime	0.50
					Soil reaction	0.50

Table 12d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7037B:						
Worthen	Well suited		Well suited		Low	
7075B:						
Drury	Well suited		Well suited		Low	
7242A:						
Kendall	Well suited		Well suited		High Wetness	1.00
7430B:						
Raddle	Well suited		Well suited		Low	
7815B:						
Udorthents	Well suited		Well suited		Low	
8070A:						
Beaucoup	Well suited		Well suited		High Wetness	1.00
8071A:						
Darwin	Poorly suited Stickiness	0.50	Well suited		High Wetness	1.00
8092A:						
Sarpy	Well suited		Well suited		Low	
8162A:						
Gorham	Well suited		Well suited		High Wetness	1.00
8180A:						
Dupo	Well suited		Well suited		Low	
8183A:						
Shaffton	Well suited		Well suited		High Wetness	1.00
8217A:						
Twomile	Well suited		Well suited		High Wetness	1.00
8284A:						
Tice	Well suited		Well suited		Low	
8288A:						
Petrolia	Well suited		Well suited		High Wetness	1.00
8302A:						
Ambraw	Well suited		Well suited		High Wetness	1.00
8331A:						
Haymond	Well suited		Well suited		Low	
8333A:						
Wakeland	Well suited		Well suited		High Wetness	1.00

Table 12d.--Forestland Management--Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8349B:						
Zumbro	Well suited		Well suited		Low	
8395A:						
Ceresco	Well suited		Well suited		Low	
8396A:						
Vesser	Well suited		Well suited		High	
					Wetness	1.00
8404A:						
Titus	Well suited		Well suited		High	
					Wetness	1.00
8415A:						
Orion	Well suited		Well suited		Low	
8428A:						
Coffeen	Well suited		Well suited		Low	
8451A:						
Lawson	Well suited		Well suited		Low	
8452A:						
Riley	Well suited		Well suited		Low	
8634A:						
Blyton	Well suited		Well suited		Low	
8674A:						
Dozaville	Well suited		Well suited		Low	
8789A:						
Ambraw	Well suited		Well suited		High	
					Wetness	1.00
Ceresco	Well suited		Well suited		Low	
Sarpy	Well suited		Well suited		Low	
9278A:						
Stronghurst	Well suited		Well suited		High	
					Wetness	1.00
9278B:						
Stronghurst	Well suited		Well suited		High	
					Wetness	1.00
9279B:						
Rozetta	Well suited		Well suited		Low	
9279C2:						
Rozetta	Well suited		Well suited		Low	
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 13a.--Recreation

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

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
8E2, 8F, 8G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
17A:						
Keomah	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Restricted permeability	0.96	Depth to saturated zone	1.00
	Restricted permeability	0.96	Depth to saturated zone	0.94	Restricted permeability	0.96
17B:						
Keomah	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Restricted permeability	0.96	Depth to saturated zone	1.00
	Restricted permeability	0.96	Depth to saturated zone	0.94	Restricted permeability	0.96
					Slope	0.28
19D3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
30F, 30G:						
Hamburg	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
43A:						
Ipava	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
43B:						
Ipava	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	Slope	0.28
					Restricted permeability	0.21
50A:						
Virden	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 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
75C, 75C2:						
Drury	Not limited		Not limited		Very limited	
					Slope	1.00
79B:						
Menfro	Not limited		Not limited		Somewhat limited	
					Slope	0.28
79C2, 79C3:						
Menfro	Not limited		Not limited		Very limited	
					Slope	1.00
79D2, 79D3:						
Menfro	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
79E2:						
Menfro	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
90A:						
Bethalto	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
119D2, 119D3:						
Elco	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Restricted permeability	0.43
119E2:						
Elco	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Restricted permeability	0.43
175F, 175G:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
216B:						
Stookey	Not limited		Not limited		Somewhat limited	
					Slope	0.28
216C2, 216C3:						
Stookey	Not limited		Not limited		Very limited	
					Slope	1.00
216D2, 216D3:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
257A:						
Clarksdale	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
257B:						
Clarksdale	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Slope	0.28
					Restricted permeability	0.21
264D3:						
El Dara	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
264E2, 264G:						
El Dara	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
267A:						
Caseyville	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
267B:						
Caseyville	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
					Slope	0.28
271C3:						
Timula	Not limited		Not limited		Very limited	
					Slope	1.00
271D3:						
Timula	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
274F, 274G:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
278A:						
Stronghurst	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
279B:						
Rozetta	Not limited		Not limited		Somewhat limited	
					Slope	0.28
279C2, 279C3:						
Rozetta	Not limited		Not limited		Very limited	
					Slope	1.00
280B:						
Fayette	Not limited		Not limited		Somewhat limited	
					Slope	0.28
280C2, 280C3:						
Fayette	Not limited		Not limited		Very limited	
					Slope	1.00

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
280D2, 280D3:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
283B:						
Downsouth	Not limited		Not limited		Somewhat limited	
					Slope	0.28
283C2:						
Downsouth	Not limited		Not limited		Very limited	
					Slope	1.00
403G:						
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
	Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
					Gravel content	0.01
441B:						
Wakenda	Not limited		Not limited		Somewhat limited	
					Slope	0.28
472D2:						
Baylis	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
472E2:						
Baylis	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
477B:						
Winfield	Not limited		Not limited		Somewhat limited	
					Slope	0.28
477C2, 477C3:						
Winfield	Not limited		Not limited		Very limited	
					Slope	1.00
515C2, 515C3:						
Bunkum	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Depth to saturated zone	0.98
					Restricted permeability	0.21
515D2, 515D3:						
Bunkum	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Slope	0.96	Slope	1.00
	Slope	0.96	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
549E2, 549F, 549G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
					Depth to bedrock	0.10

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
559F, 559G:						
Lindley	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
605D2, 605D3:						
Ursa	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
605E2:						
Ursa	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
606F, 606G:						
Goss	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel content	0.04	Gravel content	0.04	Gravel content	1.00
					Content of large stones	0.01
630B2:						
Navlys	Not limited		Not limited		Somewhat limited	
					Slope	0.28
630C2, 630C3:						
Navlys	Not limited		Not limited		Very limited	
					Slope	1.00
651D2, 651D3:						
Keswick	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
651E2:						
Keswick	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
652C2, 652C3:						
Passport	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Depth to saturated zone	0.98
					Restricted permeability	0.21
652D2, 652D3:						
Passport	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Slope	0.96	Slope	1.00
	Slope	0.96	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
699A:						
Timewell	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
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Content of large stones	0.84
					Gravel content	0.02
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2, 856F, 856G:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	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	0.26	Flooding	0.60
	Restricted permeability	0.26			Restricted permeability	0.26
3028A:						
Jules	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3070A, 3070L:						
Beaucoup	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
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
3071L:						
Darwin	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Restricted permeability	1.00	Ponding	1.00
	Restricted permeability	1.00	Too clayey	1.00	Restricted permeability	1.00
	Too clayey	1.00	Flooding	0.40	Too clayey	1.00

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3092A, 3092L:						
Sarpy	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Too sandy	0.50	Flooding	1.00
	Too sandy	0.50	Flooding	0.40	Too sandy	0.50
3302L:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
3331A, 3331L:						
Haymond	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3333A, 3333L:						
Wakeland	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
3404A, 3404L:						
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	Flooding	1.00
	Ponding	1.00	Restricted permeability	0.96	Ponding	1.00
	Restricted permeability	0.96	Flooding	0.40	Restricted permeability	0.96
3415A, 3415L:						
Orion	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3428A, 3428L:						
Coffeen	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Depth to saturated zone	0.75	Flooding	1.00
	Depth to saturated zone	0.98	Flooding	0.40	Depth to saturated zone	0.98
3475A, 3475L:						
Elsah	Very limited		Somewhat limited		Very limited	
	Flooding	1.00	Flooding	0.40	Gravel content	1.00
	Gravel content	0.17	Gravel content	0.17	Flooding	1.00
					Content of large stones	0.26
3877L:						
Blake	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

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3877L:						
Slacwater	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
7037B:						
Worthen	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Slope	0.28
7075B:						
Drury	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Slope	0.28
7242A:						
Kendall	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Flooding	1.00				
7430B:						
Raddle	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Slope	0.28
7815B:						
Udorthents	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Slope	0.28
8070A:						
Beaucoup	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	0.26	Flooding	0.60
	Restricted permeability	0.26			Restricted permeability	0.26
8071A:						
Darwin	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	1.00	Restricted permeability	1.00
	Restricted permeability	1.00	Too clayey	1.00	Too clayey	1.00
	Too clayey	1.00			Flooding	0.60
8092A:						
Sarpy	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Too sandy	0.98	Too sandy	0.98
	Too sandy	0.98			Flooding	0.60
8162A:						
Gorham	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.21	Flooding	0.60
	Restricted permeability	0.21			Restricted permeability	0.21

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8180A:						
Dupo	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Restricted permeability	0.96	Depth to saturated zone	0.98
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Restricted permeability	0.96
	Restricted permeability	0.96			Flooding	0.60
8183A:						
Shaffton	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.78	Depth to saturated zone	0.99
	Depth to saturated zone	0.99			Flooding	0.60
8217A:						
Twomile	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	Restricted permeability	0.96	Restricted permeability	0.96
	Restricted permeability	0.96			Flooding	0.60
8284A:						
Tice	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
8288A:						
Petrolia	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.21	Flooding	0.60
	Restricted permeability	0.21			Restricted permeability	0.21
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	Restricted permeability	0.21	Flooding	0.60
	Restricted permeability	0.21			Restricted permeability	0.21
8331A:						
Haymond	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60
8333A:						
Wakeland	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Flooding	1.00			Flooding	0.60
8349B:						
Zumbro	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60
					Slope	0.28

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8395A:						
Ceresco	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
8396A:						
Vesser	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
8404A:						
Titus	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Restricted permeability	0.96	Restricted permeability	0.96
	Restricted permeability	0.96			Flooding	0.60
8415A:						
Orion	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98			Flooding	0.60
8428A:						
Coffeen	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98			Flooding	0.60
8451A:						
Lawson	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98			Flooding	0.60
8452A:						
Riley	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98			Flooding	0.60
8634A:						
Blyton	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60
8674A:						
Dozaville	Very limited		Not limited		Somewhat limited	
	Flooding	1.00			Flooding	0.60
8789A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00			Flooding	0.60

Table 13a.--Recreation--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8789A:						
Ceresco	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
Sarpy	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Too sandy	0.88	Too sandy	0.88
	Too sandy	0.88			Flooding	0.60
9278A:						
Stronghurst	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
9278B:						
Stronghurst	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
					Slope	0.28
9279B:						
Rozetta	Not limited		Not limited		Somewhat limited	
					Slope	0.28
9279C2:						
Rozetta	Not limited		Not limited		Very limited	
					Slope	1.00
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 13b.--Recreation

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

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Not limited		Not limited		Somewhat limited Slope	0.96
8E2:						
Hickory	Somewhat limited Slope	0.82	Not limited		Very limited Slope	1.00
8F:						
Hickory	Very limited Slope	1.00	Somewhat limited Slope	0.04	Very limited Slope	1.00
8G:						
Hickory	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
17A, 17B:						
Keomah	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94
19D3:						
Sylvan	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96
30F:						
Hamburg	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.04	Very limited Slope	1.00
30G:						
Hamburg	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
43A, 43B:						
Ipava	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
50A:						
Virden	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
75C, 75C2:						
Drury	Not limited		Not limited		Not limited	
79B, 79C2, 79C3:						
Menfro	Not limited		Not limited		Not limited	
79D2, 79D3:						
Menfro	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79E2:						
Menfro	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.82				
90A:						
Bethalto	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
119D2, 119D3:						
Elco	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
119E2:						
Elco	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.82				
175F:						
Lamont	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
175G:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
216B, 216C2, 216C3:						
Stookey	Not limited		Not limited		Not limited	
216D2, 216D3:						
Stookey	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
257A, 257B:						
Clarksdale	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
264D3:						
El Dara	Not limited		Not limited		Somewhat limited	
					Slope	0.96
264E2:						
El Dara	Somewhat limited		Not limited		Very limited	
	Slope	0.82			Slope	1.00
264G:						
El Dara	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
267A, 267B:						
Caseyville	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
271C3:						
Timula	Not limited		Not limited		Not limited	

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
271D3:						
Timula	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
274F:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Water erosion	1.00	Slope	0.04		
274G:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Water erosion	1.00	Slope	1.00		
278A:						
Stronghurst	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
279B, 279C2, 279C3:						
Rozetta	Not limited		Not limited		Not limited	
280B, 280C2, 280C3:						
Fayette	Not limited		Not limited		Not limited	
280D2, 280D3:						
Fayette	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
283B, 283C2:						
Downsouth	Not limited		Not limited		Not limited	
403G:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Content of large stones	0.01	Content of large stones	0.01	Slope	1.00
					Content of large stones	0.99
					Droughty	0.95
441B:						
Wakenda	Not limited		Not limited		Not limited	
472D2:						
Baylis	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
472E2:						
Baylis	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.82				
477B, 477C2, 477C3:						
Winfield	Not limited		Not limited		Not limited	
515C2, 515C3:						
Bunkum	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 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
515D2, 515D3:						
Bunkum	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.96
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
549E2:						
Marseilles	Somewhat limited		Not limited		Very limited	
	Slope	0.82			Slope	1.00
					Depth to bedrock	0.10
549F:						
Marseilles	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
					Depth to bedrock	0.10
549G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Depth to bedrock	0.10
559F:						
Lindley	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
559G:						
Lindley	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
605D2, 605D3:						
Ursa	Not limited		Not limited		Somewhat limited	
					Slope	0.96
605E2:						
Ursa	Somewhat limited		Not limited		Very limited	
	Slope	0.82			Slope	1.00
606F:						
Goss	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.04	Slope	1.00
					Droughty	0.34
					Gravel content	0.04
					Content of large stones	0.01
606G:						
Goss	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Droughty	0.34
					Gravel content	0.04
					Content of large stones	0.01
630B2, 630C2, 630C3:						
Navlys	Not limited		Not limited		Not limited	
651D2, 651D3:						
Keswick	Not limited		Not limited		Somewhat limited	
					Slope	0.96

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651E2:						
Keswick	Somewhat limited		Not limited		Very limited	
	Slope	0.82			Slope	1.00
652C2, 652C3:						
Passport	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
652D2, 652D3:						
Passport	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Slope	0.96
					Depth to saturated zone	0.75
699A:						
Timewell	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Content of large stones	0.84
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2:						
Stookey	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.82				
Timula	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.82				
856F:						
Stookey	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
Timula	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.04		
856G:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Water erosion	1.00	Slope	1.00		
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Water erosion	1.00	Slope	1.00		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1070A:						
Beaucoup	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
3028A:						
Jules	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	1.00
3070A, 3070L:						
Beaucoup	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3071L:						
Darwin	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Too clayey	1.00	Too clayey	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Too clayey	1.00
3092A, 3092L:						
Sarpy	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.50	Too sandy	0.50	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Droughty	0.69
3302L:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3331A, 3331L:						
Haymond	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	1.00
3333A, 3333L:						
Wakeland	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.94
3404A, 3404L:						
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	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
3415A, 3415L:						
Orion	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3428A, 3428L:						
Coffeen	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
3475A, 3475L:						
Elsah	Somewhat limited		Somewhat limited		Very limited	
	Flooding	0.40	Flooding	0.40	Flooding	1.00
					Content of large stones	0.26
					Gravel content	0.17
					Droughty	0.01
3877L:						
Blake	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.75
Slacwater	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
7037B:						
Worthen	Not limited		Not limited		Not limited	
7075B:						
Drury	Not limited		Not limited		Not limited	
7242A:						
Kendall	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
7430B:						
Raddle	Not limited		Not limited		Not limited	
7815B:						
Udorthents	Not limited		Not limited		Not limited	
8070A:						
Beaucoup	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
8071A:						
Darwin	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Too clayey	1.00	Too clayey	1.00	Too clayey	1.00
					Flooding	0.60

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8092A:						
Sarpy	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.98	Too sandy	0.98	Droughty	0.69
					Flooding	0.60
					Too sandy	0.50
8162A:						
Gorham	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
8180A:						
Dupo	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
8183A:						
Shaffton	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
					Flooding	0.60
8217A:						
Twomile	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
8284A:						
Tice	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
8288A:						
Petrolia	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
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	0.60
8331A:						
Haymond	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
8333A:						
Wakeland	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
					Flooding	0.60

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8349B:						
Zumbro	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
8395A:						
Ceresco	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
8396A:						
Vesser	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
8404A:						
Titus	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Flooding	0.60
8415A:						
Orion	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
					Flooding	0.60
8428A:						
Coffeen	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
					Flooding	0.60
8451A:						
Lawson	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
					Flooding	0.60
8452A:						
Riley	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
					Flooding	0.60
8634A:						
Blyton	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
8674A:						
Dozaville	Not limited		Not limited		Somewhat limited	
					Flooding	0.60
8789A:						
Ambraw	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Flooding	0.60

Table 13b.--Recreation--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8789A:						
Ceresco	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone Flooding	0.75 0.60
Sarpy	Somewhat limited Too sandy	0.88	Somewhat limited Too sandy	0.88	Somewhat limited Droughty Flooding	0.69 0.60
9278A:						
Stronghurst	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94
9278B:						
Stronghurst	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94
9279B:						
Rozetta	Not limited		Not limited		Not limited	
9279C2:						
Rozetta	Not limited		Not limited		Not limited	
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 14.--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 herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
8D2, 8D3:										
Hickory	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
8E2:										
Hickory	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
8F:										
Hickory	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
8G:										
Hickory	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
17A:										
Keomah	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
17B:										
Keomah	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
19D3:										
Sylvan	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
30F, 30G:										
Hamburg	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
43A:										
Ipava	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
43B:										
Ipava	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
50A:										
Virden	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
75C, 75C2:										
Drury	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
79B:										
Menfro	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
79C2, 79C3:										
Menfro	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
79D2, 79D3:										
Menfro	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
79E2:										
Menfro	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
90A:										
Bethalto	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
119D2, 119D3:										
Elco	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
119E2:										
Elco	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
175F:										
Lamont	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
175G:										
Lamont	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
216B:										
Stookey	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
216C2, 216C3:										
Stookey	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
216D2, 216D3:										
Stookey	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
257A:										
Clarksdale	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
257B:										
Clarksdale	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
264D3:										
El Dara	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
264E2:										
El Dara	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
264G:										
El Dara	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
267A:										
Caseyville	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
267B:										
Caseyville	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
271C3:										
Timula	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
271D3:										
Timula	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
274F:										
Seaton	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
274G:										
Seaton	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
278A:										
Stronghurst	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
279B:										
Rozetta	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
279C2, 279C3:										
Rozetta	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
280B:										
Fayette	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
280C2, 280C3:										
Fayette	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
280D2, 280D3:										
Fayette	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
283B:										
Downsouth	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
283C2:										
Downsouth	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
403G:										
Elizabeth	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
441B:										
Wakenda	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
472D2:										
Baylis	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
472E2:										
Baylis	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
477B:										
Winfield	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
477C2, 477C3:										
Winfield	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
515C2, 515C3:										
Bunkum	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
515D2, 515D3:										
Bunkum	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
549E2:										
Marseilles	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
549F:										
Marseilles	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
549G:										
Marseilles	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
559F:										
Lindley	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
559G:										
Lindley	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
605D2, 605D3:										
Ursa	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
605E2:										
Ursa	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
606F, 606G:										
Goss	Very poor	Poor	Good	Fair	Fair	Very poor	Very poor	Poor	Good	Very poor
630B2:										
Navlys	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
630C2, 630C3:										
Navlys	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 14.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
651D2, 651D3:										
Keswick	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
651E2:										
Keswick	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
652C2, 652C3:										
Passport	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
652D2, 652D3:										
Passport	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
699A:										
Timewell	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
785G:										
Lacrescent	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
835G:										
Earthen Dam.										
856E2:										
Stookey	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Timula	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
856F:										
Stookey	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Timula	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
856G:										
Stookey	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Timula	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
864:										
Pits, quarries.										
865:										
Pits, gravel.										
1070A:										
Beaucoup	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
3028A:										
Jules	Poor	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Very poor

Table 14.--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
3070A, 3070L:										
Beaucoup	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
3071L:										
Darwin	Poor	Fair	Fair	Fair	Fair	Poor	Good	Fair	Good	Fair
3092A, 3092L:										
Sarpy	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
3302L:										
Ambraw	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
3331A, 3331L:										
Haymond	Poor	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Very poor
3333A, 3333L:										
Wakeland	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
3404A, 3404L:										
Titus	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
3415A, 3415L:										
Orion	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
3428A, 3428L:										
Coffeen	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
3475A, 3475L:										
Elsah	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
3877L:										
Blake	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
Slacwater	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Good	Fair
7037B:										
Worthen	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
7075B:										
Drury	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
7242A:										
Kendall	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
7430B:										
Raddle	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
7815B:										
Udorthents	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
8070A:										
Beaucoup	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good

Table 14.--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
8071A:										
Darwin	Poor	Fair	Fair	Fair	Fair	Poor	Good	Fair	Fair	Fair
8092A:										
Sarpy	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
8162A:										
Gorham	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
8180A:										
Dupo	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8183A:										
Shaffton	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8217A:										
Twomile	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
8284A:										
Tice	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8288A:										
Petrolia	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
8302A:										
Ambraw	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
8331A:										
Haymond	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
8333A:										
Wakeland	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8349B:										
Zumbro	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
8395A:										
Ceresco	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8396A:										
Vesser	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
8404A:										
Titus	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
8415A:										
Orion	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8428A:										
Coffeen	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8451A:										
Lawson	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
8452A:										
Riley	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair

Table 14.--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
8634A:										
Blyton	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
8674A:										
Dozaville	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
8789A:										
Ambraw	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Ceresco	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Sarpy	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
9278A:										
Stronghurst	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
9278B:										
Stronghurst	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
9279B:										
Rozetta	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
9279C2:										
Rozetta	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
M-W:										
Miscellaneous water.										
W:										
Water.										

Table 15a.--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
8D2, 8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8E2, 8F, 8G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
17A, 17B:						
Keomah	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
19D3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
30F, 30G:						
Hamburg	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
43A, 43B:						
Ipava	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
50A:						
Virden	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
75C, 75C2:						
Drury	Not limited		Not limited		Somewhat limited	
79B:						
Menfro	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Shrink-swell	0.50
79C2, 79C3:						
Menfro	Somewhat limited		Not limited		Somewhat limited	
	Shrink-swell	0.50			Slope	0.97
79D2, 79D3:						
Menfro	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50

Table 15a.--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
79E2:						
Menfro	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
90A:						
Bethalto	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
119D2, 119D3:						
Elco	Somewhat limited		Very limited		Very limited	
	Slope	0.96	Shrink-swell	1.00	Slope	1.00
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Slope	0.96		
119E2:						
Elco	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	1.00	Shrink-swell	0.50
			Depth to saturated zone	0.99		
175F, 175G:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
216B:						
Stookey	Not limited		Not limited		Not limited	
216C2, 216C3:						
Stookey	Not limited		Not limited		Somewhat limited	
					Slope	0.97
216D2, 216D3:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
257A, 257B:						
Clarksdale	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
264D3:						
El Dara	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Depth to saturated zone	0.99	Slope	1.00
			Slope	0.96		
264E2, 264G:						
El Dara	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to saturated zone	0.99		

Table 15a.--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
267A, 267B:						
Caseyville---	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
271C3:						
Timula-------	Not limited		Not limited		Somewhat limited	
					Slope	0.97
271D3:						
Timula-------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.96	Slope	0.96	Slope	1.00
274F, 274G:						
Seaton-------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
278A:						
Stronghurst--	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
279B:						
Rozetta------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
279C2, 279C3:						
Rozetta------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
280B:						
Fayette------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
280C2, 280C3:						
Fayette------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
280D2, 280D3:						
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
283B:						
Downsouth----	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 15a.--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
283C2:						
Downsouth----	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
403G:						
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
	Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
441B:						
Wakenda------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
472D2:						
Baylis-------	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
472E2:						
Baylis-------	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
477B:						
Winfield-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
477C2, 477C3:						
Winfield-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	0.97
					Shrink-swell	0.50
515C2, 515C3:						
Bunkum-------	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	Slope	0.97
					Shrink-swell	0.50
515D2, 515D3:						
Bunkum-------	Somewhat limited		Very limited		Very limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 15a.--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
549E2, 549F, 549G:						
Marseilles--	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to soft bedrock	0.10		
559F, 559G:						
Lindley------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
605D2, 605D3:						
Ursa---------	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Shrink-swell	1.00
			Depth to saturated zone	0.15		
605E2:						
Ursa---------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
			Depth to saturated zone	0.15		
606F, 606G:						
Goss---------	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
630B2:						
Navlys-------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.15	Shrink-swell	0.50
630C2, 630C3:						
Navlys-------	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.15	Slope	0.97
					Shrink-swell	0.50
651D2, 651D3:						
Keswick------	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
	Slope	0.96	Depth to saturated zone	0.99	Shrink-swell	1.00
			Slope	0.96		
651E2:						
Keswick------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
			Depth to saturated zone	0.99		

Table 15a.--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
652C2, 652C3:						
Passport-----	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	Slope	0.97
					Shrink-swell	0.50
652D2, 652D3:						
Passport-----	Somewhat limited		Very limited		Very limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Slope	1.00
	Slope	0.96	Slope	0.96	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
699A:						
Timewell-----	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	0.50	Depth to saturated zone	0.98
785G:						
Lacrescent---	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Content of large stones	0.20	Content of large stones	0.20	Content of large stones	0.20
835G:						
Earthen Dam--	Not rated		Not rated		Not rated	
856E2, 856F, 856G:						
Stookey-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
864:						
Pits, quarries----	Not rated		Not rated		Not rated	
865:						
Pits, gravel------	Not rated		Not rated		Not rated	
1070A:						
Beaucoup-----	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
3028A:						
Jules--------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		

Table 15a.--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
3070A, 3070L:						
Beaucoup-----	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
3071L:						
Darwin-------	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
3092A, 3092L:						
Sarpy--------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
3302L:						
Ambraw-------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
3331A, 3331L:						
Haymond------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
3333A, 3333L:						
Wakeland-----	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
3404A, 3404L:						
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
3415A, 3415L:						
Orion--------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
3428A, 3428L:						
Coffeen------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98

Table 15a.--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
3475A, 3475L:						
Elsah	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Content of large stones	0.35	Content of large stones	0.35	Content of large stones	0.35
3877L:						
Blake	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	Shrink-swell	0.50	Shrink-swell	0.50
Slacwater	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
7037B:						
Worthen	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
7075B:						
Drury	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
7242A:						
Kendall	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
7430B:						
Raddle	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
7815B:						
Udorthents	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.35		
8070A:						
Beaucoup	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 15a.--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
8071A:						
Darwin-------	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
8092A:						
Sarpy--------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
8162A:						
Gorham-------	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
8180A:						
Dupo---------	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	1.00		
8183A:						
Shaffton-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8217A:						
Twomile------	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		
8284A:						
Tice---------	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	Shrink-swell	0.50	Shrink-swell	0.50
8288A:						
Petrolia-----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 15a.--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
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
	Shrink-swell	0.50			Shrink-swell	0.50
8331A:						
Haymond	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
8333A:						
Wakeland	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
8349B:						
Zumbro	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
8395A:						
Ceresco	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
8396A:						
Vesser	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
8404A:						
Titus	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
8415A:						
Orion	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
8428A:						
Coffeen	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
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		

Table 15a.--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
8452A:						
Riley	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			Shrink-swell	0.50
8634A:						
Blyton	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.99		
8674A:						
Dozaville	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
8789A:						
Ambraw	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
Ceresco	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
Sarpy	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
9278A, 9278B:						
Stronghurst	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
9279B:						
Rozetta	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
			Depth to saturated zone	0.15		
9279C2:						
Rozetta	Somewhat limited		Somewhat limited		Somewhat limited	
	Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.97
			Depth to saturated zone	0.15	Shrink-swell	0.50
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 15b.--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
8D2, 8D3:						
Hickory	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
8E2, 8F, 8G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Frost action	0.50				
17A, 17B:						
Keomah	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	1.00				
	Depth to saturated zone	0.94				
19D3:						
Sylvan	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.50		
	Slope	0.96				
	Shrink-swell	0.50				
30F, 30G:						
Hamburg	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.50		
43A, 43B:						
Ipava	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		
	Shrink-swell	1.00				
	Depth to saturated zone	0.75				
50A:						
Virden	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				

Table 15b.--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
75C, 75C2:						
Drury	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
79B:						
Menfro	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
79C2, 79C3:						
Menfro	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
79D2, 79D3:						
Menfro	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				
79E2:						
Menfro	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
90A:						
Bethalto	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
	Shrink-swell	0.50				
119D2, 119D3:						
Elco	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	0.99	Slope	0.96
	Low strength	1.00				
	Slope	0.96	Slope	0.96		
	Shrink-swell	0.50	Cutbanks cave	0.10		
119E2:						
Elco	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Depth to saturated zone	0.99		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
175F, 175G:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	0.10		

Table 15b.--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
216B:						
Stookey	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.50		
	Low strength	1.00				
216C2, 216C3:						
Stookey	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.50		
	Low strength	1.00				
216D2, 216D3:						
Stookey	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Low strength	1.00	Cutbanks cave	0.50		
	Slope	0.96				
257A, 257B:						
Clarksdale	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	1.00				
	Depth to saturated zone	0.94				
264D3:						
El Dara	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.96	Cutbanks cave	1.00	Slope	0.96
	Frost action	0.50	Depth to saturated zone	0.99		
			Slope	0.96		
264E2, 264G:						
El Dara	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	1.00		
			Depth to saturated zone	0.99		
267A, 267B:						
Caseyville	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				
271C3:						
Timula	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.50		
271D3:						
Timula	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Slope	0.96	Slope	0.96
	Slope	0.96	Cutbanks cave	0.50		
274F, 274G:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.50		
	Low strength	1.00				

Table 15b.--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
278A:						
Stronghurst--	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00				
	Depth to saturated zone	0.94	Cutbanks cave	0.10		
	Shrink-swell	0.50				
279B:						
Rozetta------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
279C2, 279C3:						
Rozetta------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
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, 280C3:						
Fayette------	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
280D2, 280D3:						
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				
283B:						
Downsouth----	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		
283C2:						
Downsouth----	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		
403G:						
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
	Low strength	1.00	Cutbanks cave	0.10	Content of large stones	0.99
	Frost action	0.50	Content of large stones	0.01	Droughty	0.95
	Content of large stones	0.01				

Table 15b.--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
441B:						
Wakenda	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00				
	Shrink-swell	0.50	Cutbanks cave	0.10		
472D2:						
Baylis	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Cutbanks cave	1.00	Slope	0.96
	Slope	0.96	Slope	0.96		
	Shrink-swell	0.50				
472E2:						
Baylis	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50				
477B:						
Winfield	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		
477C2, 477C3:						
Winfield	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		
515C2, 515C3:						
Bunkum	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Low strength	1.00				
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
	Shrink-swell	0.50				
515D2, 515D3:						
Bunkum	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Slope	0.96
	Low strength	1.00			Depth to saturated zone	0.75
	Slope	0.96	Slope	0.96		
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
	Shrink-swell	0.50				
549E2, 549F, 549G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.10	Depth to bedrock	0.10
	Low strength	1.00	Depth to soft bedrock	0.10		
	Shrink-swell	0.50				

Table 15b.--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
559F, 559G:						
Lindley	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Depth to saturated zone	0.15		
	Shrink-swell	0.50	Cutbanks cave	0.10		
	Frost action	0.50				
605D2, 605D3:						
Ursa	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Slope	0.96	Slope	0.96
	Shrink-swell	1.00	Depth to saturated zone	0.15		
	Slope	0.96	Cutbanks cave	0.10		
	Frost action	0.50	Too clayey	0.01		
605E2:						
Ursa	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Depth to saturated zone	0.15		
	Shrink-swell	1.00	Cutbanks cave	0.10		
	Frost action	0.50	Too clayey	0.01		
606F, 606G:						
Goss	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Cutbanks cave	1.00	Droughty	0.34
	Frost action	0.50	Too clayey	0.50	Gravel content	0.04
					Content of large stones	0.00
630B2:						
Navlys	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				
630C2, 630C3:						
Navlys	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				
651D2, 651D3:						
Keswick	Very limited		Somewhat limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	0.99	Slope	0.96
	Shrink-swell	1.00	Slope	0.96		
	Slope	0.96	Cutbanks cave	0.10		
	Frost action	0.50	Too clayey	0.01		
651E2:						
Keswick	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	1.00	Cutbanks cave	0.10		
	Frost action	0.50	Too clayey	0.01		

Table 15b.--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
652C2, 652C3:						
Passport	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				
652D2, 652D3:						
Passport	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Slope	0.96
	Low strength	1.00	Slope	0.96	Depth to saturated zone	0.75
	Slope	0.96	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
699A:						
Timewell	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		
	Shrink-swell	1.00				
	Depth to saturated zone	0.75				
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.84
	Content of large stones	0.20	Content of large stones	0.20		
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2, 856F, 856G:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.50		
	Low strength	1.00				
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	0.50		
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	

Table 15b.--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
1070A:						
Beaucoup	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				
3028A:						
Jules	Very limited		Somewhat limited		Very limited	
	Frost action	1.00	Flooding	0.80	Flooding	1.00
	Flooding	1.00	Depth to saturated zone	0.15		
	Low strength	0.22	Cutbanks cave	0.10		
3070A, 3070L:						
Beaucoup	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				
3071L:						
Darwin	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Frost action	1.00	Too clayey	0.68	Too clayey	1.00
	Flooding	1.00	Cutbanks cave	0.10		
3092A, 3092L:						
Sarpy	Very limited		Very limited		Very limited	
	Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
			Flooding	0.80	Droughty	0.69
3302L:						
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	Flooding	1.00
	Frost action	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80		
	Low strength	1.00				
3331A, 3331L:						
Haymond	Very limited		Somewhat limited		Very limited	
	Frost action	1.00	Flooding	0.80	Flooding	1.00
	Flooding	1.00	Cutbanks cave	0.10		
3333A, 3333L:						
Wakeland	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	0.94
	Depth to saturated zone	0.94	Cutbanks cave	0.10		

Table 15b.--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
3404A, 3404L:						
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	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				
3415A, 3415L:						
Orion	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.75
	Low strength	1.00	Flooding	0.80		
	Depth to saturated zone	0.75				
3428A, 3428L:						
Coffeen	Very limited		Very limited		Very limited	
	Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.75
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
3475A, 3475L:						
Elsah	Very limited		Very limited		Very limited	
	Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
	Frost action	0.50	Flooding	0.80	Content of large stones	0.26
	Content of large stones	0.35	Content of large stones	0.35	Gravel content	0.17
					Droughty	0.00
3877L:						
Blake	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	Flooding	0.80		
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
	Shrink-swell	0.50				
Slacwater	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	0.50		
	Low strength	1.00				
7037B:						
Worthen	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	0.78				
	Flooding	0.40				
7075B:						
Drury	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Flooding	0.40				

Table 15b.--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
7242A:						
Kendall	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
	Shrink-swell	0.50				
	Flooding	0.40				
7430B:						
Raddle	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Flooding	0.40				
7815B:						
Udorthents	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.35		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
	Flooding	0.40				
8070A:						
Beaucoup	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	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
8071A:						
Darwin	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too clayey	0.68	Too clayey	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
8092A:						
Sarpy	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Cutbanks cave	1.00	Droughty	0.69
			Flooding	0.60	Flooding	0.60
					Too sandy	0.50
8162A:						
Gorham	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	Flooding	0.60
	Flooding	1.00	Flooding	0.60		
	Low strength	1.00				

Table 15b.--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
8180A:						
Dupo	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	0.50		
			Too clayey	0.04		
8183A:						
Shaffton	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.78
	Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
	Depth to saturated zone	0.78	Flooding	0.60		
	Shrink-swell	0.50				
8217A:						
Twomile	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.50		
8284A:						
Tice	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
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
8288A:						
Petrolia	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				
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	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
	Shrink-swell	0.50				
8331A:						
Haymond	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		

Table 15b.--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
8333A:						
Wakeland	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.94	Cutbanks cave	0.10		
8349B:						
Zumbro	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
			Flooding	0.60		
8395A:						
Ceresco	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		
8396A:						
Vesser	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.50		
	Low strength	1.00				
8404A:						
Titus	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
8415A:						
Orion	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
8428A:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.75	Cutbanks cave	0.10		
8451A:						
Lawson	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Flooding	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.75	Cutbanks cave	0.10		

Table 15b.--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
8452A:						
Riley	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	Cutbanks cave	1.00	Flooding	0.60
	Low strength	1.00	Flooding	0.60		
	Depth to saturated zone	0.75				
	Shrink-swell	0.50				
8634A:						
Blyton	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	0.99	Flooding	0.60
	Flooding	1.00	Flooding	0.60		
			Cutbanks cave	0.10		
8674A:						
Dozaville	Very limited		Somewhat limited		Somewhat limited	
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
8789A:						
Ambraw	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Flooding	0.60	Flooding	0.60
	Flooding	1.00	Cutbanks cave	0.10		
	Low strength	1.00				
Ceresco	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		
Sarpy	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Cutbanks cave	1.00	Droughty	0.69
			Flooding	0.60	Flooding	0.60
9278A, 9278B:						
Stronghurst	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Cutbanks cave	0.10		
	Depth to saturated zone	0.94				
	Shrink-swell	0.50				
9279B:						
Rozetta	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				
9279C2:						
Rozetta	Very limited		Somewhat limited		Not limited	
	Frost action	1.00	Depth to saturated zone	0.15		
	Low strength	1.00	Cutbanks cave	0.10		
	Shrink-swell	0.50				

Table 15b.--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
M-W: Miscellaneous Water	Not rated		Not rated		Not rated	
W: Water	Not rated		Not rated		Not rated	

Table 16a.--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
8D2:				
Hickory	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
8D3:				
Hickory	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
8E2:				
Hickory	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
8F:				
Hickory	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
8G:				
Hickory	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
17A:				
Keomah	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.53
17B:				
Keomah	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.53
			Slope	0.18
19D3:				
Sylvan	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 16a.--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
30F:				
Hamburg	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
30G:				
Hamburg	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
43A:				
Ipava	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
43B:				
Ipava	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
50A:				
Virden	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		
75C:				
Drury	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
75C2:				
Drury	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
79B:				
Menfro	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
79C2:				
Menfro	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
79C3:				
Menfro	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53

Table 16a.--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
79D2:				
Menfro	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
79D3:				
Menfro	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
79E2:				
Menfro	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
90A:				
Bethalto	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
119D2:				
Elco	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.96
	Slope	0.96	Seepage	0.53
119D3:				
Elco	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.96
	Slope	0.96	Seepage	0.53
119E2:				
Elco	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	0.96
	Restricted permeability	1.00	Seepage	0.53
175F:				
Lamont	Very limited		Very limited	
	Slope	1.00	Slope	1.00
			Seepage	1.00
175G:				
Lamont	Very limited		Very limited	
	Slope	1.00	Slope	1.00
			Seepage	1.00

Table 16a.--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
216B:				
Stookey	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
216C2:				
Stookey	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
216C3:				
Stookey	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
216D2:				
Stookey	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
216D3:				
Stookey	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
257A:				
Clarksdale	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
257B:				
Clarksdale	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
264D3:				
El Dara	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slope	0.96	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
264E2:				
El Dara	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 16a.--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
264G:				
El Dara	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
267A:				
Caseyville	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
267B:				
Caseyville	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
271C3:				
Timula	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
271D3:				
Timula	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
274F:				
Seaton	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
274G:				
Seaton	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
278A:				
Stronghurst	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
279B:				
Rozetta	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Seepage	0.53

Table 16a.--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
279C2:				
Rozetta	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53
279C3:				
Rozetta	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53
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
280C3:				
Fayette	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
280D2:				
Fayette	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
280D3:				
Fayette	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
283B:				
Downsouth	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
283C2:				
Downsouth	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53

Table 16a.--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
403G:				
Elizabeth	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
	Content of large stones	0.01	Seepage	0.53
			Content of large stones	0.03
441B:				
Wakenda	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18
472D2:				
Baylis	Somewhat limited		Very limited	
	Slope	0.96	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
472E2:				
Baylis	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
477B:				
Winfield	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
477C2:				
Winfield	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
477C3:				
Winfield	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Slope	1.00
			Seepage	0.53
515C2:				
Bunkum	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Slope	1.00

Table 16a.--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
515C3:				
Bunkum	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Slope	1.00
515D2:				
Bunkum	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Slope	0.96		
515D3:				
Bunkum	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Slope	0.96		
549E2:				
Marseilles	Very limited		Very limited	
	Restricted permeability	1.00	Depth to soft bedrock	1.00
	Depth to bedrock	1.00	Slope	1.00
	Slope	1.00		
549F:				
Marseilles	Very limited		Very limited	
	Restricted permeability	1.00	Depth to soft bedrock	1.00
	Depth to bedrock	1.00	Slope	1.00
	Slope	1.00		
549G:				
Marseilles	Very limited		Very limited	
	Restricted permeability	1.00	Depth to soft bedrock	1.00
	Depth to bedrock	1.00	Slope	1.00
	Slope	1.00		
559F:				
Lindley	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	1.00		
	Depth to saturated zone	0.40		
559G:				
Lindley	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	1.00		
	Depth to saturated zone	0.40		

Table 16a.--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
605D2:				
Ursa	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Slope	0.96		
	Depth to saturated zone	0.40		
605D3:				
Ursa	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Slope	0.96		
	Depth to saturated zone	0.40		
605E2:				
Ursa	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Slope	1.00		
	Depth to saturated zone	0.40		
606F:				
Goss	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
606G:				
Goss	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
630B2:				
Navlys	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18
630C2:				
Navlys	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53
630C3:				
Navlys	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53

Table 16a.--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
651D2:				
Keswick	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.96
	Slope	0.96		
651D3:				
Keswick	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.96
	Slope	0.96		
651E2:				
Keswick	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.96
	Slope	1.00		
652C2:				
Passport	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Slope	1.00
652C3:				
Passport	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Slope	1.00
652D2:				
Passport	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	0.96		
652D3:				
Passport	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	0.96		
699A:				
Timewell	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00		

Table 16a.--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
785G:				
Lacrescent	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Content of large stones	0.20	Seepage	1.00
			Content of large stones	0.08
835G:				
Earthen Dam	Not rated		Not rated	
856E2:				
Stookey	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
Timula	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
856F:				
Stookey	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
Timula	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
856G:				
Stookey	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
Timula	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	0.46	Seepage	0.53
864:				
Pits, quarries	Not rated		Not rated	
865:				
Pits, gravel	Not rated		Not rated	
1070A:				
Beaucoup	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	1.00		

Table 16a.--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
3028A:				
Jules	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40		
3070A:				
Beaucoup	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	1.00		
3070L:				
Beaucoup	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	1.00		
3071L:				
Darwin	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		
3092A:				
Sarpy	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
3092L:				
Sarpy	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
3302L:				
Ambraw	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	1.00		
3331A:				
Haymond	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 16a.--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
3331L:				
Haymond	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	0.46	Seepage	0.53
3333A:				
Wakeland	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
3333L:				
Wakeland	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
3404A:				
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		
3404L:				
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		
3415A:				
Orion	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
3415L:				
Orion	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

Table 16a.--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
3428A:				
Coffeen	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	1.00
3428L:				
Coffeen	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	1.00
3475A:				
Elsah	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
	Content of large stones	0.35	Content of large stones	0.55
3475L:				
Elsah	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
	Content of large stones	0.35	Content of large stones	0.55
3877L:				
Blake	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
Slacwater	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
7037B:				
Worthen	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Flooding	0.40	Flooding	0.40
			Slope	0.18
7075B:				
Drury	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Flooding	0.40	Flooding	0.40
			Slope	0.18

Table 16a.--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
7242A:				
Kendall	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
	Flooding	0.40	Flooding	0.40
7430B:				
Raddle	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Flooding	0.40	Flooding	0.40
			Slope	0.18
7815B:				
Udorthents	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.84	Flooding	0.40
	Restricted permeability	0.72	Slope	0.18
	Flooding	0.40	Depth to saturated zone	0.17
8070A:				
Beaucoup	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	1.00		
8071A:				
Darwin	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		
8092A:				
Sarpy	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
8162A:				
Gorham	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Poor filtering capacity	1.00		

Table 16a.--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
8180A:				
Dupo	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	1.00	Seepage	0.53
	Depth to saturated zone	1.00	Depth to saturated zone	0.01
8183A:				
Shaffton	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Poor filtering capacity	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46		
8217A:				
Twomile	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.53
8284A:				
Tice	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
8288A:				
Petrolia	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	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	Seepage	0.28
8331A:				
Haymond	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 16a.--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
8333A:				
Wakeland	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
8349B:				
Zumbro	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
			Slope	0.18
8395A:				
Ceresco	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Seepage	1.00
8396A:				
Vesser	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
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		
8415A:				
Orion	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
8428A:				
Coffeen	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	1.00

Table 16a.--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
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
8452A:				
Riley	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Poor filtering capacity	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46		
8634A:				
Blyton	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
8674A:				
Dozaville	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Restricted permeability	0.46	Seepage	0.53
8789A:				
Ambraw	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	0.72	Seepage	0.28
Ceresco	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Seepage	1.00
Sarpy	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Poor filtering capacity	1.00	Seepage	1.00
9278A:				
Stronghurst	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53

Table 16a.--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
9278B:				
Stronghurst	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.46	Seepage	0.53
			Slope	0.18
9279B:				
Rozetta	Somewhat limited		Somewhat limited	
	Restricted permeability	0.46	Seepage	0.53
	Depth to saturated zone	0.40	Slope	0.18
9279C2:				
Rozetta	Somewhat limited		Very limited	
	Restricted permeability	0.46	Slope	1.00
	Depth to saturated zone	0.40	Seepage	0.53
M-W:				
Miscellaneous water	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 16b.--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
8D2:						
Hickory	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
8D3:						
Hickory	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
8E2:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
8F:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
8G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
17A:						
Keomah	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
17B:						
Keomah	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
19D3:						
Sylvan	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
30F:						
Hamburg	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
30G:						
Hamburg	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
43A:						
Ipava	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

Table 16b.--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
43B:						
Ipava	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
50A:						
Virden	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
75C:						
Drury	Not limited		Not limited		Not limited	
75C2:						
Drury	Not limited		Not limited		Not limited	
79B:						
Menfro	Not limited		Not limited		Somewhat limited	
					Too clayey	0.50
79C2:						
Menfro	Not limited		Not limited		Somewhat limited	
					Too clayey	0.50
79C3:						
Menfro	Not limited		Not limited		Somewhat limited	
					Too clayey	0.50
79D2:						
Menfro	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
					Too clayey	0.50
79D3:						
Menfro	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
					Too clayey	0.50
79E2:						
Menfro	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Too clayey	0.50
90A:						
Bethalto	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
119D2:						
Elco	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Depth to saturated zone	0.68	Depth to saturated zone	0.68	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24

Table 16b.--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
119D3:						
Elco	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Depth to saturated zone	0.68	Depth to saturated zone	0.68	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
119E2:						
Elco	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to saturated zone	0.68	Depth to saturated zone	0.68	Too clayey	0.50
	Too clayey	0.50			Depth to saturated zone	0.24
175F:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Seepage	0.52
175G:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Seepage	0.52
216B:						
Stookey	Not limited		Not limited		Not limited	
216C2:						
Stookey	Not limited		Not limited		Not limited	
216C3:						
Stookey	Not limited		Not limited		Not limited	
216D2:						
Stookey	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
216D3:						
Stookey	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
257A:						
Clarksdale	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			Hard to compact	1.00
					Too clayey	0.50
257B:						
Clarksdale	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
264D3:						
El Dara	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	0.96
	Slope	0.96	Slope	0.96	Depth to saturated zone	0.24

Table 16b.--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
264E2:						
El Dara	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
264G:						
El Dara	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
267A:						
Caseyville	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
267B:						
Caseyville	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
271C3:						
Timula	Not limited		Not limited		Not limited	
271D3:						
Timula	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
274F:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
274G:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
278A:						
Stronghurst	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
279B:						
Rozetta	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				
279C2:						
Rozetta	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				

Table 16b.--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
279C3:						
Rozetta	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				
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
280C3:						
Fayette	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
280D2:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
280D3:						
Fayette	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
283B:						
Downsouth	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			Depth to saturated zone	0.24
283C2:						
Downsouth	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			Depth to saturated zone	0.24
403G:						
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
	Content of large stones	0.01			Content of large stones	0.01
441B:						
Wakenda	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				
472D2:						
Baylis	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50

Table 16b.--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
472E2:						
Baylis	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
477B:						
Winfield	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
477C2:						
Winfield	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
477C3:						
Winfield	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.24
515C2:						
Bunkum	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
515C3:						
Bunkum	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
515D2:						
Bunkum	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
515D3:						
Bunkum	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
549E2:						
Marseilles	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
	Too clayey	0.50			Too clayey	0.50
549F:						
Marseilles	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
	Too clayey	0.50			Too clayey	0.50

Table 16b.--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
549G:						
Marseilles	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
	Too clayey	0.50			Too clayey	0.50
559F:						
Lindley	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
559G:						
Lindley	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
605D2:						
Ursa	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Slope	0.96	Too clayey	1.00
	Slope	0.96			Hard to compact	1.00
					Slope	0.96
605D3:						
Ursa	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Slope	0.96	Too clayey	1.00
	Slope	0.96			Hard to compact	1.00
					Slope	0.96
605E2:						
Ursa	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	1.00			Too clayey	1.00
					Hard to compact	1.00
606F:						
Goss	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	1.00			Too clayey	1.00
	Content of large stones	0.01			Gravel content	0.67
					Content of large stones	0.01
606G:						
Goss	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	1.00			Too clayey	1.00
	Content of large stones	0.01			Gravel content	0.67
					Content of large stones	0.01
630B2:						
Navlys	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
630C2:						
Navlys	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		

Table 16b.--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
630C3:						
Navlys	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
651D2:						
Keswick	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Slope	0.96	Too clayey	1.00
	Slope	0.96	Depth to saturated zone	0.68	Hard to compact	1.00
	Depth to saturated zone	0.68			Slope	0.96
					Depth to saturated zone	0.24
651D3:						
Keswick	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Slope	0.96	Too clayey	1.00
	Slope	0.96	Depth to saturated zone	0.68	Hard to compact	1.00
	Depth to saturated zone	0.68			Slope	0.96
					Depth to saturated zone	0.24
651E2:						
Keswick	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	1.00	Depth to saturated zone	0.68	Too clayey	1.00
	Depth to saturated zone	0.68			Hard to compact	1.00
					Depth to saturated zone	0.24
652C2:						
Passport	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
652C3:						
Passport	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
652D2:						
Passport	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
652D3:						
Passport	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	0.96	Slope	0.96	Slope	0.96
	Too clayey	0.50			Too clayey	0.50
699A:						
Timewell	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

Table 16b.--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
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Content of large stones	0.77
	Content of large stones	0.77			Seepage	0.52
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
856F:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
856G:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	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	Too clayey	0.50
	Too clayey	0.50				
3028A:						
Jules	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3070A:						
Beaucoup	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	Too clayey	0.50
	Too clayey	0.50				

Table 16b.--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
3070L:						
Beaucoup	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	Too clayey	0.50
	Too clayey	0.50				
3071L:						
Darwin	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	Too clayey	1.00
	Too clayey	1.00			Hard to compact	1.00
3092A:						
Sarpy	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
3092L:						
Sarpy	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
3302L:						
Ambraw	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	Too clayey	0.50
	Too clayey	0.50				
3331A:						
Haymond	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
3331L:						
Haymond	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
3333A:						
Wakeland	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		
3333L:						
Wakeland	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		

Table 16b.--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
3404A:						
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
3404L:						
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
3415A:						
Orion	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		
3415L:						
Orion	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		
3428A:						
Coffeen	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	0.22
	Seepage	1.00	Seepage	1.00		
3428L:						
Coffeen	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	0.22
	Seepage	1.00	Seepage	1.00		
3475A:						
Elsah	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Seepage	1.00
	Seepage	1.00	Seepage	1.00	Content of large stones	0.54
	Content of large stones	0.54			Gravel content	0.07
3475L:						
Elsah	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Seepage	1.00
	Seepage	1.00	Seepage	1.00	Content of large stones	0.54
	Content of large stones	0.54			Gravel content	0.07
3877L:						
Blake	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		

Table 16b.--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
3877L:						
Slacwater	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		Too clayey	0.50
	Too clayey	0.50				
7037B:						
Worthen	Somewhat limited		Somewhat limited		Not limited	
	Flooding	0.40	Flooding	0.40		
7075B:						
Drury	Somewhat limited		Somewhat limited		Not limited	
	Flooding	0.40	Flooding	0.40		
7242A:						
Kendall	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	Flooding	0.40	Too clayey	0.50
	Flooding	0.40				
7430B:						
Raddle	Somewhat limited		Somewhat limited		Not limited	
	Flooding	0.40	Flooding	0.40		
7815B:						
Udorthents	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Flooding	0.40	Flooding	0.40		
8070A:						
Beaucoup	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	Too clayey	0.50
	Too clayey	0.50				
8071A:						
Darwin	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	Too clayey	1.00
	Too clayey	1.00			Hard to compact	1.00
8092A:						
Sarpy	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				

Table 16b.--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
8162A:						
Gorham	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	Seepage	1.00
	Seepage	1.00			Too clayey	0.50
	Too clayey	0.50				
8180A:						
Dupo	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Hard to compact	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	1.00				
8183A:						
Shaffton	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 clayey	0.50
	Seepage	1.00	Seepage	1.00		
	Too clayey	0.50				
8217A:						
Twomile	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		
8284A:						
Tice	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 clayey	0.50
	Too clayey	0.50				
8288A:						
Petrolia	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	Too clayey	0.50
	Too clayey	0.50				
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	Too clayey	0.50
	Too clayey	0.50				
8331A:						
Haymond	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
8333A:						
Wakeland	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		

Table 16b.--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
8349B:						
Zumbro	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
8395A:						
Ceresco	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	0.22
	Seepage	1.00	Seepage	1.00		
8396A:						
Vesser	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		
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
8415A:						
Orion	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		
8428A:						
Coffeen	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	1.00				
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		
8452A:						
Riley	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to saturated zone	1.00
	Too sandy	1.00				

Table 16b.--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
8634A:						
Blyton	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.24
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
8674A:						
Dozaville	Very limited		Very limited		Not limited	
	Flooding	1.00	Flooding	1.00		
8789A:						
Ambraw	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	Too clayey	0.50
	Too clayey	0.50				
Ceresco	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	0.22
	Seepage	1.00	Seepage	1.00		
Sarpy	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
9278A:						
Stronghurst	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
9278B:						
Stronghurst	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
9279B:						
Rozetta	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				
9279C2:						
Rozetta	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				
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 17a.--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 the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
8D2:				
Hickory	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8D3:				
Hickory	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8E2:				
Hickory	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8F:				
Hickory	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8G:				
Hickory	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
17A:				
Keomah	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
17B:				
Keomah	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
19D3:				
Sylvan	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
30F:				
Hamburg	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
30G:				
Hamburg	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
43A:				
Ipava	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
43B:				
Ipava	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
50A:				
Virden	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
75C:				
Drury	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
75C2:				
Drury	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79B:				
Menfro	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79C2:				
Menfro	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79C3:				
Menfro	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79D2:				
Menfro	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79D3:				
Menfro	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
79E2:				
Menfro	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
90A:				
Bethalto	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
119D2:				
Elco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
119D3:				
Elco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
119E2:				
Elco	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
175F:				
Lamont	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
175G:				
Lamont	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216B:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216C2:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216C3:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216D2:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
216D3:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
257A:				
Clarksdale	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
257B:				
Clarksdale	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
264D3:				
El Dara	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.06
264E2:				
El Dara	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.06
264G:				
El Dara	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.06
267A:				
Caseyville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
267B:				
Caseyville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
271C3:				
Timula	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
271D3:				
Timula	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
274F:				
Seaton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
274G:				
Seaton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
278A:				
Stronghurst	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
279B:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
279C2:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
279C3:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280B:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280C2:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280C3:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280D2:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
280D3:				
Fayette	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
283B:				
Downsouth	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
283C2:				
Downsouth	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
403G:				
Elizabeth	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
441B:				
Wakenda	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
472D2:				
Baylis	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
472E2:				
Baylis	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
477B:				
Winfield	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477C2:				
Winfield	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
477C3:				
Winfield	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
515C2:				
Bunkum	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
515C3:				
Bunkum	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
515D2:				
Bunkum	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
515D3:				
Bunkum	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
549E2:				
Marseilles	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
549F:				
Marseilles	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
549G:				
Marseilles	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
559F:				
Lindley	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
559G:				
Lindley	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
605D2:				
Ursa	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
605D3:				
Ursa	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
605E2:				
Ursa	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
606F:				
Goss	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
606G:				
Goss	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
630B2:				
Navlys	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
630C2:				
Navlys	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
630C3:				
Navlys	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
651D2:				
Keswick	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
651D3:				
Keswick	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
651E2:				
Keswick	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
652C2:				
Passport	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
652C3:				
Passport	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
652D2:				
Passport	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
652D3:				
Passport	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
699A:				
Timewell	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
785G:				
Lacrescent	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
835G:				
Earthen Dam	Not rated		Not rated	
856E2:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Timula	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
856F:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Timula	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
856G:				
Stookey	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Timula	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
864:				
Pits, quarries	Not rated		Not rated	
865:				
Pits, gravel	Not rated		Not rated	

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
1070A:				
Beaucoup	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3028A:				
Jules	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3070A:				
Beaucoup	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3070L:				
Beaucoup	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3071L:				
Darwin	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3092A:				
Sarpy	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.22
3092L:				
Sarpy	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.22
3302L:				
Ambraw	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3331A:				
Haymond	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3331L:				
Haymond	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3333A:				
Wakeland	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3333L:				
Wakeland	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
3404A:				
Titus	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3404L:				
Titus	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3415A:				
Orion	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3415L:				
Orion	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3428A:				
Coffeen	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3428L:				
Coffeen	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3475A:				
Elsah	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
3475L:				
Elsah	Poor		Poor	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.00
3877L:				
Blake	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Slacwater	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7037B:				
Worthen	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7075B:				
Drury	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
7242A:				
Kendall	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7430B:				
Raddle	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
7815B:				
Udorthents	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8070A:				
Beaucoup	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8071A:				
Darwin	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8092A:				
Sarpy	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.22
	Thickest layer	0.00	Thickest layer	0.22
8162A:				
Gorham	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.12
8180A:				
Dupo	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8183A:				
Shaffton	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.11
8217A:				
Twomile	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8284A:				
Tice	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8288A:				
Petrolia	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
8302A:				
Ambraw	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8331A:				
Haymond	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8333A:				
Wakeland	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8349B:				
Zumbro	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.09
	Thickest layer	0.00	Bottom layer	0.10
8395A:				
Ceresco	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.04
8396A:				
Vesser	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8404A:				
Titus	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8415A:				
Orion	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8428A:				
Coffeen	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8451A:				
Lawson	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8452A:				
Riley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.09
8634A:				
Blyton	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 17a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
8674A:				
Dozaville	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8789A:				
Ambraw	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Ceresco	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.04
Sarpy	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.15
	Thickest layer	0.00	Bottom layer	0.22
9278A:				
Stronghurst	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
9278B:				
Stronghurst	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
9279B:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
9279C2:				
Rozetta	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
M-W:				
Miscellaneous water	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 17b.--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 roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2' 8D3:				
Hickory	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.94	Too clayey	0.57
			Rock fragments	0.88
8E2:				
Hickory	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.18	Too clayey	0.57
	Shrink-swell	0.94	Rock fragments	0.88
8F, 8G:				
Hickory	Poor		Poor	
	Slope	0.00	Slope	0.00
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.94	Rock fragments	0.88
17A, 17B:				
Keomah	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.04
	Depth to saturated zone	0.04	Too clayey	0.05
	Shrink-swell	0.70		
19D3:				
Sylvan	Poor		Fair	
	Low strength	0.00	Slope	0.04
			Too clayey	0.57
30F, 30G:				
Hamburg	Poor		Poor	
	Slope	0.00	Slope	0.00
			Carbonate content	0.88
43A:				
Ipava	Poor		Fair	
	Low strength	0.00	Too clayey	0.14
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.83		
43B:				
Ipava	Poor		Fair	
	Low strength	0.00	Too clayey	0.01
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.22		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
50A:				
Virden	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.02
	Shrink-swell	0.35		
75C:				
Drury	Fair		Good	
	Low strength	0.22		
75C2:				
Drury	Fair		Good	
	Low strength	0.22		
79B:				
Menfro	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.99		
79C2:				
Menfro	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.99		
79C3:				
Menfro	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.99		
79D2:				
Menfro	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.99	Too clayey	0.57
79D3:				
Menfro	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.99	Too clayey	0.57
79E2:				
Menfro	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.18	Too clayey	0.57
	Shrink-swell	0.99		
90A:				
Bethalto	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.04
	Depth to saturated zone	0.04	Too clayey	0.70
	Shrink-swell	0.91		
119D2:				
Elco	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.38	Too clayey	0.57
	Depth to saturated zone	0.98	Depth to saturated zone	0.98

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
119D3:				
Elco	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.34	Too clayey	0.57
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
119E2:				
Elco	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.18	Too clayey	0.57
	Shrink-swell	0.45	Depth to saturated zone	0.98
	Depth to saturated zone	0.98		
175F:				
Lamont	Poor		Poor	
	Slope	0.00	Slope	0.00
175G:				
Lamont	Poor		Poor	
	Slope	0.00	Slope	0.00
216B:				
Stookey	Poor		Good	
	Low strength	0.00		
216C2:				
Stookey	Fair		Good	
	Low strength	0.22		
216C3:				
Stookey	Fair		Good	
	Low strength	0.22		
216D2:				
Stookey	Fair		Fair	
	Low strength	0.22	Slope	0.04
216D3:				
Stookey	Fair		Fair	
	Low strength	0.22	Slope	0.04
257A:				
Clarksdale	Poor		Fair	
	Low strength	0.00	Too clayey	0.01
	Depth to saturated zone	0.04	Depth to saturated zone	0.04
	Shrink-swell	0.50		
257B:				
Clarksdale	Poor		Fair	
	Low strength	0.00	Too clayey	0.01
	Depth to saturated zone	0.04	Depth to saturated zone	0.04
	Shrink-swell	0.79		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
264D3:				
El Dara	Fair		Fair	
	Depth to saturated zone	0.98	Slope	0.04
			Depth to saturated zone	0.98
264E2:				
El Dara	Fair		Poor	
	Slope	0.18	Slope	0.00
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
264G:				
El Dara	Poor		Poor	
	Slope	0.00	Slope	0.00
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
267A:				
Caseyville	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.70
	Shrink-swell	0.95		
267B:				
Caseyville	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.70
	Shrink-swell	0.97		
271C3:				
Timula	Good		Fair	
			Carbonate content	0.92
271D3:				
Timula	Good		Fair	
			Slope	0.04
			Carbonate content	0.92
274F:				
Seaton	Poor		Poor	
	Slope	0.00	Slope	0.00
	Low strength	0.00		
274G:				
Seaton	Poor		Poor	
	Slope	0.00	Slope	0.00
	Low strength	0.00		
278A:				
Stronghurst	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.04
	Depth to saturated zone	0.04	Too clayey	0.70
	Shrink-swell	0.97		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
279B:				
Rozetta	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.92		
279C2:				
Rozetta	Poor		Fair	
	Low strength	0.00	Too clayey	0.60
	Shrink-swell	0.90		
279C3:				
Rozetta	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.99		
280B:				
Fayette	Poor		Fair	
	Low strength	0.00	Too clayey	0.64
	Shrink-swell	0.87		
280C2:				
Fayette	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.87		
280C3:				
Fayette	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.87		
280D2:				
Fayette	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.87	Too clayey	0.57
280D3:				
Fayette	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Shrink-swell	0.87	Too clayey	0.57
283B:				
Downsouth	Poor		Fair	
	Low strength	0.00	Too clayey	0.70
	Shrink-swell	0.89	Depth to saturated zone	0.98
	Depth to saturated zone	0.98		
283C2:				
Downsouth	Poor		Fair	
	Low strength	0.00	Too clayey	0.70
	Shrink-swell	0.87	Depth to saturated zone	0.98
	Depth to saturated zone	0.98		
403G:				
Elizabeth	Poor		Poor	
	Depth to bedrock	0.00	Slope	0.00
	Slope	0.00	Depth to bedrock	0.00
	Low strength	0.00	Rock fragments	0.02

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
441B:				
Wakenda	Poor		Fair	
	Low strength	0.00	Too clayey	0.81
	Shrink-swell	0.93		
472D2:				
Baylis	Fair		Poor	
	Shrink-swell	0.87	Hard to reclaim	0.00
			Slope	0.04
			Too clayey	0.64
472E2:				
Baylis	Fair		Poor	
	Slope	0.18	Slope	0.00
	Shrink-swell	0.87	Hard to reclaim	0.00
			Too clayey	0.64
477B:				
Winfield	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
477C2:				
Winfield	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
477C3:				
Winfield	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
515C2:				
Bunkum	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.57
	Shrink-swell	0.95		
515C3:				
Bunkum	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.57
	Shrink-swell	0.95		
515D2:				
Bunkum	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.95	Too clayey	0.57

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
515D3:				
Bunkum	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.95	Too clayey	0.57
549E2:				
Marseilles	Poor		Poor	
	Depth to bedrock	0.00	Slope	0.00
	Low strength	0.00	Too clayey	0.44
	Slope	0.18	Too acid	0.88
	Shrink-swell	0.87	Depth to bedrock	0.90
549F:				
Marseilles	Poor		Poor	
	Depth to bedrock	0.00	Slope	0.00
	Low strength	0.00	Too clayey	0.39
	Slope	0.00	Too acid	0.88
	Shrink-swell	0.87	Depth to bedrock	0.90
549G:				
Marseilles	Poor		Poor	
	Depth to bedrock	0.00	Slope	0.00
	Slope	0.00	Too clayey	0.39
	Low strength	0.00	Too acid	0.88
	Shrink-swell	0.87	Depth to bedrock	0.90
559F:				
Lindley	Poor		Poor	
	Slope	0.00	Slope	0.00
	Low strength	0.00	Too clayey	0.65
	Shrink-swell	0.87		
559G:				
Lindley	Poor		Poor	
	Slope	0.00	Slope	0.00
	Low strength	0.00	Too clayey	0.65
	Shrink-swell	0.87		
605D2:				
Ursa	Poor		Poor	
	Low strength	0.00	Too clayey	0.00
	Shrink-swell	0.16	Slope	0.04
605D3:				
Ursa	Poor		Poor	
	Low strength	0.00	Too clayey	0.00
	Shrink-swell	0.31	Slope	0.04
605E2:				
Ursa	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.18	Too clayey	0.00
	Shrink-swell	0.34		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
606F:				
Goss	Poor		Poor	
	Slope	0.00	Slope	0.00
	Cobble content	0.81	Rock fragments	0.00
	Shrink-swell	0.89	Too clayey	0.00
			Hard to reclaim	0.00
			Too acid	0.98
606G:				
Goss	Poor		Poor	
	Slope	0.00	Slope	0.00
	Cobble content	0.81	Rock fragments	0.00
	Shrink-swell	0.89	Too clayey	0.00
			Hard to reclaim	0.00
			Too acid	0.98
630B2:				
Navlys	Poor		Fair	
	Low strength	0.00	Too clayey	0.67
630C2:				
Navlys	Poor		Fair	
	Low strength	0.00	Too clayey	0.57
630C3:				
Navlys	Poor		Fair	
	Low strength	0.00	Too clayey	0.64
651D2:				
Keswick	Poor		Poor	
	Low strength	0.00	Too clayey	0.00
	Shrink-swell	0.28	Slope	0.04
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
651D3:				
Keswick	Poor		Poor	
	Low strength	0.00	Too clayey	0.00
	Shrink-swell	0.45	Slope	0.04
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
651E2:				
Keswick	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.18	Too clayey	0.00
	Shrink-swell	0.28	Depth to saturated zone	0.98
	Depth to saturated zone	0.98		
652C2:				
Passport	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.64
	Shrink-swell	0.69		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
652C3:				
Passport	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.64
	Shrink-swell	0.51		
652D2:				
Passport	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.69	Too clayey	0.64
652D3:				
Passport	Poor		Fair	
	Low strength	0.00	Slope	0.04
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.51	Too clayey	0.64
699A:				
Timewell	Poor		Fair	
	Low strength	0.00	Too clayey	0.01
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Shrink-swell	0.55		
785G:				
Lacrescent	Poor		Poor	
	Slope	0.00	Slope	0.00
	Cobble content	0.02	Hard to reclaim	0.00
			Rock fragments	0.02
835G:				
Earthen Dam	Not rated		Not rated	
856E2:				
Stookey	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.18		
Timula	Fair		Poor	
	Slope	0.18	Slope	0.00
			Carbonate content	0.92
856F:				
Stookey	Poor		Poor	
	Low strength	0.00	Slope	0.00
	Slope	0.00		
Timula	Poor		Poor	
	Slope	0.00	Slope	0.00
			Carbonate content	0.92
856G:				
Stookey	Poor		Poor	
	Slope	0.00	Slope	0.00
	Low strength	0.00		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
856G:				
Timula	Poor		Poor	
	Slope	0.00	Slope	0.00
			Carbonate content	0.92
864:				
Pits, quarries	Not rated		Not rated	
865:				
Pits, gravel	Not rated		Not rated	
1070A:				
Beaucoup	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.98
	Shrink-swell	0.87		
3028A:				
Jules	Fair		Fair	
	Low strength	0.78	Carbonate content	0.46
3070A:				
Beaucoup	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.86
	Shrink-swell	0.87		
3070L:				
Beaucoup	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.86
	Shrink-swell	0.87		
3071L:				
Darwin	Poor		Poor	
	Depth to saturated zone	0.00	Too clayey	0.00
	Shrink-swell	0.00	Depth to saturated zone	0.00
	Low strength	0.00		
3092A:				
Sarpy	Good		Poor	
			Too sandy	0.00
3092L:				
Sarpy	Good		Poor	
			Too sandy	0.00
3302L:				
Ambraw	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Shrink-swell	0.98	Too clayey	0.64
3331A:				
Haymond	Good		Good	

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3331L:				
Haymond	Good		Good	
3333A:				
Wakeland	Fair		Fair	
	Depth to saturated zone	0.04	Depth to saturated zone	0.04
3333L:				
Wakeland	Fair		Fair	
	Depth to saturated zone	0.04	Depth to saturated zone	0.04
3404A:				
Titus	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.01
	Shrink-swell	0.12		
3404L:				
Titus	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.01
	Shrink-swell	0.12		
3415A:				
Orion	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14		
3415L:				
Orion	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14		
3428A:				
Coffeen	Fair		Fair	
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
3428L:				
Coffeen	Fair		Fair	
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
3475A:				
Elsah	Fair		Poor	
	Cobble content	0.07	Rock fragments	0.00
			Hard to reclaim	0.00
3475L:				
Elsah	Fair		Poor	
	Cobble content	0.07	Rock fragments	0.00
			Hard to reclaim	0.00

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3877L:				
Blake	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Carbonate content	0.97
	Shrink-swell	0.87		
Slacwater	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.57
	Shrink-swell	0.89	Carbonate content	0.97
7037B:				
Worthen	Poor		Good	
	Low strength	0.00		
7075B:				
Drury	Fair		Good	
	Low strength	0.22		
7242A:				
Kendall	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.04
	Depth to saturated zone	0.04	Too clayey	0.57
	Shrink-swell	0.95		
7430B:				
Raddle	Poor		Good	
	Low strength	0.00		
7815B:				
Udorthents	Poor		Good	
	Low strength	0.00		
	Shrink-swell	0.87		
8070A:				
Beaucoup	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.76
	Shrink-swell	0.87		
8071A:				
Darwin	Poor		Poor	
	Depth to saturated zone	0.00	Too clayey	0.00
	Low strength	0.00	Depth to saturated zone	0.00
	Shrink-swell	0.00		
8092A:				
Sarpy	Good		Poor	
			Too sandy	0.00
8162A:				
Gorham	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Shrink-swell	0.98	Too clayey	0.54

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8180A:				
Dupo	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14		
	Shrink-swell	0.90		
8183A:				
Shaffton	Fair		Fair	
	Depth to saturated zone	0.12	Depth to saturated zone	0.12
	Shrink-swell	0.97	Too clayey	0.93
8217A:				
Twomile	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00		
	Shrink-swell	0.98		
8284A:				
Tice	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14	Too clayey	0.64
	Shrink-swell	0.87		
8288A:				
Petrolia	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.67
	Shrink-swell	0.87		
8302A:				
Ambraw	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Shrink-swell	0.99	Too clayey	0.81
8331A:				
Haymond	Good		Good	
8333A:				
Wakeland	Fair		Fair	
	Depth to saturated zone	0.04	Depth to saturated zone	0.04
8349B:				
Zumbro	Good		Fair	
			Too sandy	0.32
8395A:				
Ceresco	Fair		Fair	
	Depth to saturated zone	0.14	Depth to saturated zone	0.14

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
8396A:				
Vesser	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00		
8404A:				
Titus	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Low strength	0.00	Too clayey	0.01
	Shrink-swell	0.12		
8415A:				
Orion	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14		
8428A:				
Coffeen	Fair		Fair	
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
8451A:				
Lawson	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.14
	Depth to saturated zone	0.14		
8452A:				
Riley	Fair		Fair	
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
8634A:				
Blyton	Fair		Fair	
	Depth to saturated zone	0.98	Depth to saturated zone	0.98
8674A:				
Dozaville	Poor		Good	
	Low strength	0.00		
8789A:				
Ambraw	Poor		Poor	
	Depth to saturated zone	0.00	Depth to saturated zone	0.00
Ceresco	Fair		Fair	
	Depth to saturated zone	0.14	Depth to saturated zone	0.14
Sarpy	Good		Poor	
			Too sandy	0.00
9278A:				
Stronghurst	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.04
	Depth to saturated zone	0.04	Too clayey	0.70
	Shrink-swell	0.97		

Table 17b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value
9278B:				
Stronghurst	Poor		Fair	
	Low strength	0.00	Depth to saturated zone	0.04
	Depth to saturated zone	0.04	Too clayey	0.70
	Shrink-swell	0.99		
9279B:				
Rozetta	Poor		Fair	
	Low strength	0.00	Too clayey	0.60
	Shrink-swell	0.87	Too acid	0.98
9279C2:				
Rozetta	Poor		Fair	
	Low strength	0.00	Too clayey	0.60
	Shrink-swell	0.87	Too acid	0.98
W-M:				
Miscellaneous water	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 18a.--Water Management

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

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2, 8D3:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
	Slope	0.02				
8E2:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.01	Depth to water	1.00
	Slope	0.18				
8F:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.05	Depth to water	1.00
	Slope	0.36				
8G:						
Hickory	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Piping	0.27	Depth to water	1.00
	Seepage	0.72				
17A, 17B:						
Keomah	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.30		
19D3:						
Sylvan	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.06	Depth to water	1.00
	Slope	0.02				
30F:						
Hamburg	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.36				
30G:						
Hamburg	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Piping	1.00	Depth to water	1.00
	Seepage	0.72				
43A, 43B:						
Ipava	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.08		
50A:						
Virden	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

Table 18a.--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
75C, 75C2:						
Drury	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	Depth to water	1.00
79B, 79C2, 79C3:						
Menfro	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.49	Depth to water	1.00
79D2, 79D3:						
Menfro	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.48	Depth to water	1.00
	Slope	0.02				
79E2:						
Menfro	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.41	Depth to water	1.00
	Slope	0.18				
90A:						
Bethalto	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.71	Cutbanks cave	0.10
119D2, 119D3:						
Elco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
	Slope	0.02				
119E2:						
Elco	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Depth to water	1.00
	Slope	0.18				
			Piping	0.05		
175F:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.01	Depth to water	1.00
	Slope	0.36				
175G:						
Lamont	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.01	Depth to water	1.00
	Slope	0.99				
216B, 216C2, 216C3:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.98	Depth to water	1.00
216D2, 216D3:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.98	Depth to water	1.00
	Slope	0.02				
257A, 257B:						
Clarksdale	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.03	Cutbanks cave	0.10

Table 18a.--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
264D3:						
El Dara	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Cutbanks cave	1.00
	Slope	0.02			Slow refill	0.28
			Seepage	0.06	Depth to water	0.14
264E2:						
El Dara	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Depth to saturated zone	0.68	Cutbanks cave	1.00
	Slope	0.18			Slow refill	0.28
			Seepage	0.06	Depth to water	0.14
264G:						
El Dara	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Depth to saturated zone	0.68	Cutbanks cave	1.00
	Seepage	0.72			Slow refill	0.28
			Seepage	0.06	Depth to water	0.14
267A, 267B:						
Caseyville	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	0.72		
271C3:						
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
271D3:						
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.02				
274F:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.93	Depth to water	1.00
	Slope	0.36				
274G:						
Seaton	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Piping	0.94	Depth to water	1.00
	Seepage	0.72				
278A:						
Stronghurst	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
279B, 279C2, 279C3:						
Rozetta	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
280B, 280C2, 280C3:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
280D2, 280D3:						
Fayette	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.03	Depth to water	1.00
	Slope	0.02				

Table 18a.--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
283B, 283C2:						
Downsouth	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	0.29	Cutbanks cave	0.10
403G:						
Elizabeth	Very limited		Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
	Slope	0.99	Piping	0.50		
	Seepage	0.02	Content of large stones	0.01		
441B:						
Wakenda	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.10	Depth to water	1.00
472D2:						
Baylis	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
	Slope	0.02				
472E2:						
Baylis	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
	Slope	0.18				
477B, 477C2, 477C3:						
Winfield	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	0.32	Cutbanks cave	0.10
515C2, 515C3:						
Bunkum	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
					Cutbanks cave	0.10
			Piping	0.56		
515D2, 515D3:						
Bunkum	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
	Slope	0.02			Cutbanks cave	0.10
			Piping	0.56		
549E2:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.18	Thin layer	0.70	Depth to water	1.00
	Depth to bedrock	0.04	Hard to pack	0.01		
549F:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.36	Thin layer	0.70	Depth to water	1.00
	Depth to bedrock	0.04				
549G:						
Marseilles	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Thin layer	0.70	Depth to water	1.00
	Depth to bedrock	0.04				

Table 18a.--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
559F:						
Lindley	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.36	Piping	0.03	Depth to water	1.00
	Seepage	0.04				
559G:						
Lindley	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Piping	0.03	Depth to water	1.00
	Seepage	0.04				
605D2, 605D3:						
Ursa	Somewhat limited		Not limited		Very limited	
	Slope	0.02			Depth to water	1.00
605E2:						
Ursa	Somewhat limited		Not limited		Very limited	
	Slope	0.18			Depth to water	1.00
606F:						
Goss	Somewhat limited		Not limited		Very limited	
	Seepage	0.72			Depth to water	1.00
	Slope	0.36				
606G:						
Goss	Somewhat limited		Not limited		Very limited	
	Slope	0.99			Depth to water	1.00
	Seepage	0.72				
630B2, 630C2, 630C3:						
Navlys	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.34	Depth to water	1.00
651D2, 651D3:						
Keswick	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.04	Depth to saturated zone	0.68	Depth to water	1.00
	Slope	0.02				
651E2:						
Keswick	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.18	Depth to saturated zone	0.68	Depth to water	1.00
	Seepage	0.04				
652C2, 652C3:						
Passport	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
			Piping	0.13	Cutbanks cave	0.10
652D2, 652D3:						
Passport	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.96
	Slope	0.02	Piping	0.13	Cutbanks cave	0.10
699A:						
Timewell	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10

Table 18a.--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
785G:						
Lacrescent	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Content of large stones	0.20	Depth to water	1.00
	Slope	0.99				
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.95	Depth to water	1.00
	Slope	0.18				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.18				
856F:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.95	Depth to water	1.00
	Slope	0.36				
Timula	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
	Slope	0.36				
856G:						
Stookey	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.99	Piping	0.95	Depth to water	1.00
	Seepage	0.72				
Timula	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Piping	1.00	Depth to water	1.00
	Seepage	0.72				
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.03	Ponding	1.00	Slow refill	0.97
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.32		
3028A:						
Jules	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
3070A, 3070L:						
Beaucoup	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
			Piping	0.24		

Table 18a.--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
3071L:						
Darwin	Not limited		Very limited		Very limited	
			Ponding	1.00	Slow refill	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Hard to pack	1.00		
3092A, 3092L:						
Sarpy	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
3302L:						
Ambraw	Somewhat limited		Very limited		Very limited	
	Seepage	0.04	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.84		
3331A, 3331L:						
Haymond	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
3333A, 3333L:						
Wakeland	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	1.00	Cutbanks cave	0.10
3404A, 3404L:						
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
3415A, 3415L:						
Orion	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00	Slow refill	0.28
3428A, 3428L:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
3475A, 3475L:						
Elsah	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Content of large stones	0.35	Depth to water	1.00
3877L:						
Blake	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.03	Cutbanks cave	0.10

Table 18a.--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
3877L:						
Slacwater	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Ponding	1.00	Cutbanks cave	0.50
			Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.28		
7037B:						
Worthen	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.95	Depth to water	1.00
7075B:						
Drury	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.88	Depth to water	1.00
7242A:						
Kendall	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.93	Cutbanks cave	0.10
7430B:						
Raddle	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
7815B:						
Udorthents	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.54	Piping	0.50	Depth to water	0.96
					Slow refill	0.46
					Cutbanks cave	0.10
8070A:						
Beaucoup	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.03	Ponding	1.00	Slow refill	0.97
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.06		
8071A:						
Darwin	Not limited		Very limited		Very limited	
			Ponding	1.00	Slow refill	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Hard to pack	1.00		
8092A:						
Sarpy	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
8162A:						
Gorham	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Piping	0.68		
			Seepage	0.12		
8180A:						
Dupo	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Depth to saturated zone	1.00	Depth to water	1.00

Table 18a.--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
8183A:						
Shaffton	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	0.94		
			Seepage	0.11		
8217A:						
Twomile	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	0.50
			Piping	0.64	Slow refill	0.28
8284A:						
Tice	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
8288A:						
Petrolia	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	0.41		
8302A:						
Ambraw	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	0.61	Cutbanks cave	0.10
8331A:						
Haymond	Somewhat limited		Very limited		Very limited	
	Seepage	0.72	Piping	1.00	Depth to water	1.00
8333A:						
Wakeland	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
			Piping	1.00	Cutbanks cave	0.10
8349B:						
Zumbro	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.10	Depth to water	1.00
8395A:						
Ceresco	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
			Seepage	0.04		
8396A:						
Vesser	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	0.50
			Piping	0.70	Slow refill	0.28

Table 18a.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8404A:						
Titus	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.04	Ponding	1.00	Slow refill	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
8415A:						
Orion	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	1.00		
8428A:						
Coffeen	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
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		
8452A:						
Riley	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.09		
8634A:						
Blyton	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Piping	1.00	Slow refill	0.28
			Depth to saturated zone	0.68	Depth to water	0.14
					Cutbanks cave	0.10
8674A:						
Dozaville	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.72	Piping	0.99	Depth to water	1.00
8789A:						
Ambraw	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.54	Ponding	1.00	Slow refill	0.28
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.80		
Ceresco	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	1.00		
			Seepage	0.04		
Sarpy	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.22	Depth to water	1.00
9278A, 9278B:						
Stronghurst	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10

Table 18a.--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
9279B, 9279C2:						
Rozetta	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 18b.--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	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8D2:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
8D3:						
Hickory	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.56	Cutbanks cave	0.10
8E2:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Cutbanks cave	0.10
8F, 8G:						
Hickory	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
17A:						
Keomah	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
17B:						
Keomah	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		
19D3:						
Sylvan	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
30F, 30G:						
Hamburg	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
43A:						
Ipava	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
43B:						
Ipava	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		

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
50A:						
Virden	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
75C, 75C2:						
Drury	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
79B:						
Menfro	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
79C2, 79C3:						
Menfro	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
79D2, 79D3:						
Menfro	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.10
79E2:						
Menfro	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.10
90A:						
Bethalto	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
119D2, 119D3:						
Elco	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	0.99
			Slope	1.00	Slope	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
119E2:						
Elco	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Cutbanks cave	0.10
175F, 175G:						
Lamont	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.17	Cutbanks cave	0.10
216B:						
Stookey	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.25		

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
216C2, 216C3:						
Stookey	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.99		
216D2, 216D3:						
Stookey	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50
257A:						
Clarksdale	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
257B:						
Clarksdale	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		
264D3:						
El Dara	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Water erosion	0.89	Slope	0.96
264E2, 264G:						
El Dara	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to saturated zone	1.00	Cutbanks cave	1.00
			Water erosion	0.89	Depth to saturated zone	0.99
267A:						
Caseyville	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
267B:						
Caseyville	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		
271C3:						
Timula	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.50
			Slope	0.99		
271D3:						
Timula	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.50

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
274F, 274G:						
Seaton	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
278A:						
Stronghurst	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
279B:						
Rozetta	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25	Cutbanks cave	0.10
279C2, 279C3:						
Rozetta	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.99	Cutbanks cave	0.10
280B:						
Fayette	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
280C2, 280C3:						
Fayette	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.99		
280D2, 280D3:						
Fayette	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Water erosion	1.00	Slope	0.96
			Slope	1.00	Cutbanks cave	0.10
283B:						
Downsouth	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		
283C2:						
Downsouth	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		
403G:						
Elizabeth	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Rock fragments	1.00	Rock fragments	1.00	Cutbanks cave	0.10
			Water erosion	0.01	Content of large stones	0.01

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
441B:						
Wakenda	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
472D2:						
Baylis	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Cutbanks cave	1.00
	Rock fragments	0.83	Slope	1.00	Slope	0.96
			Rock fragments	0.83		
472E2:						
Baylis	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Rock fragments	0.83	Slope	1.00	Cutbanks cave	1.00
			Rock fragments	0.83		
477B:						
Winfield	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		
477C2, 477C3:						
Winfield	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		
515C2, 515C3:						
Bunkum	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.99		
515D2, 515D3:						
Bunkum	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
			Slope	1.00	Slope	0.96
			Depth to saturated zone		Cutbanks cave	0.10
549E2, 549F, 549G:						
Marseilles	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Depth to soft bedrock	0.10	Slope	1.00	Cutbanks cave	0.10
			Depth to soft bedrock	0.10	Depth to soft bedrock	0.10
559F, 559G:						
Lindley	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Depth to saturated zone	0.15
					Cutbanks cave	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
605D2:						
Ursa	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.89	Depth to saturated zone	0.15
					Cutbanks cave	0.10
					Too clayey	0.01
605D3:						
Ursa	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Slope	0.96
			Water erosion	0.56	Depth to saturated zone	0.15
					Cutbanks cave	0.10
					Too clayey	0.01
605E2:						
Ursa	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Water erosion	0.89	Depth to saturated zone	0.15
					Cutbanks cave	0.10
					Too clayey	0.01
606F, 606G:						
Goss	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Rock fragments	1.00	Rock fragments	1.00	Cutbanks cave	1.00
			Water erosion	0.89	Too clayey	0.50
630B2:						
Navlys	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
630C2, 630C3:						
Navlys	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
651D2:						
Keswick	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Slope	0.96
			Water erosion	0.89	Cutbanks cave	0.10
					Too clayey	0.01
651D3:						
Keswick	Very limited		Very limited		Somewhat limited	
	Slope	1.00	Slope	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Slope	0.96
			Water erosion	0.56	Cutbanks cave	0.10
					Too clayey	0.01

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651E2:						
Keswick	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.99
			Water erosion	0.89	Cutbanks cave	0.10
					Too clayey	0.01
652C2, 652C3:						
Passport	Somewhat limited		Very limited		Very limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10
			Slope	0.99		
652D2, 652D3:						
Passport	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Depth to saturated zone	1.00
			Slope	1.00	Slope	0.96
			Depth to saturated zone	1.00	Cutbanks cave	0.10
699A:						
Timewell	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
785G:						
Lacrescent	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
	Rock fragments	1.00	Slope	1.00	Cutbanks cave	1.00
			Rock fragments	1.00	Content of large	0.20
835G:						
Earthen Dam	Not rated		Not rated		Not rated	
856E2, 856F, 856G:						
Stookey	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
Timula	Very limited		Very limited		Very limited	
	Slope	1.00	Water erosion	1.00	Slope	1.00
			Slope	1.00	Cutbanks cave	0.50
864:						
Pits, quarries	Not rated		Not rated		Not rated	
865:						
Pits, gravel	Not rated		Not rated		Not rated	
1070A:						
Beaucoup	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3028A:						
Jules	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
					Depth to saturated zone	0.15
					Cutbanks cave	0.10
3070A, 3070L:						
Beaucoup	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.89	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3071L:						
Darwin	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Too clayey	0.68
					Cutbanks cave	0.10
3092A, 3092L:						
Sarpy	Not limited		Very limited		Very limited	
			Too sandy	1.00	Flooding	1.00
					Cutbanks cave	1.00
3302L:						
Ambraw	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.56	Depth to saturated zone	1.00
					Cutbanks cave	1.00
3331A, 3331L:						
Haymond	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
					Cutbanks cave	0.10
3333A, 3333L:						
Wakeland	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3404A, 3404L:						
Titus	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Flooding	1.00
			Water erosion	0.89	Depth to saturated zone	1.00
					Cutbanks cave	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3415A, 3415L:						
Orion	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	1.00
3428A, 3428L:						
Coffeen	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10
3475A, 3475L:						
Elsah	Very limited		Very limited		Very limited	
	Rock fragments	1.00	Rock fragments	1.00	Flooding	1.00
			Water erosion	0.56	Cutbanks cave	1.00
					Content of large stones	0.35
3877L:						
Blake	Not limited		Very limited		Very limited	
			Water erosion	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.10
Slacwater	Not limited		Very limited		Very limited	
			Water erosion	1.00	Ponding	1.00
			Ponding	1.00	Flooding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Cutbanks cave	0.50
7037B:						
Worthen	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.25	Water erosion	0.89	Cutbanks cave	0.10
			Slope	0.25		
7075B:						
Drury	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
7242A:						
Kendall	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
7430B:						
Raddle	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Cutbanks cave	0.10
			Slope	0.25		
7815B:						
Udorthents	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.35
			Slope	0.25	Cutbanks cave	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8070A:						
Beaucoup	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
8071A:						
Darwin	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Too clayey	0.68
					Flooding	0.60
					Cutbanks cave	0.10
8092A:						
Sarpy	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
					Flooding	0.60
8162A:						
Gorham	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
					Flooding	0.60
8180A:						
Dupo	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.50
					Too clayey	0.04
8183A:						
Shaffton	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Cutbanks cave	1.00
					Flooding	0.60
8217A:						
Twomile	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.50
8284A:						
Tice	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

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8288A:						
Petrolia	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	Flooding	0.60
					Cutbanks cave	0.10
8302A:						
Ambraw	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.56	Flooding	0.60
					Cutbanks cave	0.10
8331A:						
Haymond	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Flooding	0.60
					Cutbanks cave	0.10
8333A:						
Wakeland	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.10
8349B:						
Zumbro	Somewhat limited		Very limited		Very limited	
	Slope	0.25	Too sandy	1.00	Cutbanks cave	1.00
			Slope	0.25	Flooding	0.60
			Water erosion	0.01		
8395A:						
Ceresco	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
8396A:						
Vesser	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.50
8404A:						
Titus	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10
8415A:						
Orion	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8428A:						
Coffeen	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.10
8451A:						
Lawson	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10
8452A:						
Riley	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Too sandy	1.00	Cutbanks cave	1.00
			Water erosion	0.89	Flooding	0.60
8634A:						
Blyton	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Depth to saturated zone	0.99
			Depth to saturated zone	1.00	Flooding	0.60
					Cutbanks cave	0.10
8674A:						
Dozaville	Not limited		Very limited		Somewhat limited	
			Water erosion	1.00	Flooding	0.60
					Cutbanks cave	0.10
8789A:						
Ambraw	Not limited		Very limited		Very limited	
			Ponding	1.00	Ponding	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Water erosion	0.89	Flooding	0.60
					Cutbanks cave	0.10
Ceresco	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
Sarpy	Not limited		Very limited		Very limited	
			Too sandy	1.00	Cutbanks cave	1.00
					Flooding	0.60
9278A:						
Stronghurst	Not limited		Very limited		Very limited	
			Water erosion	1.00	Depth to saturated zone	1.00
			Depth to saturated zone	1.00	Cutbanks cave	0.10

Table 18b.--Water Management--Continued

Map symbol and soil name	Grassed waterways and surface drains		Terraces and diversions		Drainage	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9278B:						
Stronghurst	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		
9279B:						
Rozetta	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.25	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.25	Cutbanks cave	0.10
9279C2:						
Rozetta	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.99	Water erosion	1.00	Depth to saturated zone	0.15
			Slope	0.99	Cutbanks cave	0.10
M-W:						
Miscellaneous water	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 18c.--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 column 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	Sprinkler irrigation	
	Rating class and limiting features	Value
8D2, 8D3:		
Hickory	Somewhat limited	
	Slope	0.98
8E2, 8F, 8G:		
Hickory	Very limited	
	Slope	1.00
17A:		
Keomah	Very limited	
	Depth to saturated zone	1.00
17B:		
Keomah	Very limited	
	Depth to saturated zone	1.00
	Water erosion	1.00
19D3:		
Sylvan	Very limited	
	Water erosion	1.00
	Slope	0.98
30F, 30G:		
Hamburg	Very limited	
	Slope	1.00
	Water erosion	1.00
43A, 43B:		
Ipava	Very limited	
	Depth to saturated zone	1.00
50A:		
Virden	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
75C, 75C2:		
Drury	Very limited	
	Water erosion	1.00
	Slope	0.06
79B:		
Menfro	Very limited	
	Water erosion	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
79C2, 79C3:		
Menfro	Very limited	
	Water erosion	1.00
	Slope	0.06
79D2, 79D3:		
Menfro	Very limited	
	Water erosion	1.00
	Slope	0.98
79E2:		
Menfro	Very limited	
	Slope	1.00
	Water erosion	1.00
90A:		
Bethalto	Very limited	
	Depth to saturated zone	1.00
119D2, 119D3:		
Elco	Very limited	
	Water erosion	1.00
	Slope	0.98
119E2:		
Elco	Very limited	
	Slope	1.00
	Water erosion	1.00
175F, 175G:		
Lamont	Very limited	
	Slope	1.00
	Available water	0.15
216B:		
Stookey	Very limited	
	Water erosion	1.00
216C2, 216C3:		
Stookey	Very limited	
	Water erosion	1.00
	Slope	0.06
216D2, 216D3:		
Stookey	Very limited	
	Water erosion	1.00
	Slope	0.98
257A:		
Clarksdale	Very limited	
	Depth to saturated zone	1.00
257B:		
Clarksdale	Very limited	
	Depth to saturated zone	1.00
	Water erosion	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
264D3:		
El Dara	Somewhat limited	
	Slope	0.98
264E2, 264G:		
El Dara	Very limited	
	Slope	1.00
267A:		
Caseyville	Very limited	
	Depth to saturated zone	1.00
267B:		
Caseyville	Very limited	
	Depth to saturated zone	1.00
	Water erosion	1.00
271C3:		
Timula	Very limited	
	Water erosion	1.00
	Slope	0.06
271D3:		
Timula	Very limited	
	Water erosion	1.00
	Slope	0.98
274F, 274G:		
Seaton	Very limited	
	Slope	1.00
	Water erosion	1.00
278A:		
Stronghurst	Very limited	
	Depth to saturated zone	1.00
279B:		
Rozetta	Very limited	
	Water erosion	1.00
279C2, 279C3:		
Rozetta	Very limited	
	Water erosion	1.00
	Slope	0.06
280B:		
Fayette	Very limited	
	Water erosion	1.00
280C2, 280C3:		
Fayette	Very limited	
	Water erosion	1.00
	Slope	0.06
280D2, 280D3:		
Fayette	Very limited	
	Water erosion	1.00
	Slope	0.98

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
283B:		
Downsouth	Very limited	
	Water erosion	1.00
283C2:		
Downsouth	Very limited	
	Water erosion	1.00
	Slope	0.06
403G:		
Elizabeth	Very limited	
	Available water	1.00
	Slope	1.00
	Depth to bedrock	0.97
	Rock fragments	0.50
441B:		
Wakenda	Not limited	
472D2:		
Baylis	Very limited	
	Water erosion	1.00
	Slope	0.98
472E2:		
Baylis	Very limited	
	Slope	1.00
	Water erosion	1.00
477B:		
Winfield	Very limited	
	Water erosion	1.00
477C2, 477C3:		
Winfield	Very limited	
	Water erosion	1.00
	Slope	0.06
515C2, 515C3:		
Bunkum	Very limited	
	Water erosion	1.00
	Depth to saturated zone	1.00
	Slope	0.06
515D2, 515D3:		
Bunkum	Very limited	
	Water erosion	1.00
	Depth to saturated zone	1.00
	Slope	0.98
549E2, 549F, 549G:		
Marseilles	Very limited	
	Depth to bedrock	1.00
	Slope	1.00
	Available water	0.12
559F, 559G:		
Lindley	Very limited	
	Slope	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
605D2, 605D3:		
Ursa	Somewhat limited	
	Slope	0.98
	Available water	0.13
605E2:		
Ursa	Very limited	
	Slope	1.00
	Available water	0.13
606F, 606G:		
Goss	Very limited	
	Slope	1.00
	Available water	1.00
630B2:		
Navlys	Very limited	
	Water erosion	1.00
630C2, 630C3:		
Navlys	Very limited	
	Water erosion	1.00
	Slope	0.06
651D2, 651D3:		
Keswick	Somewhat limited	
	Slope	0.98
	Available water	0.12
651E2:		
Keswick	Very limited	
	Slope	1.00
	Available water	0.12
652C2, 652C3:		
Passport	Very limited	
	Depth to saturated zone	1.00
	Slope	0.06
652D2:		
Passport	Very limited	
	Depth to saturated zone	1.00
	Slope	0.98
652D3:		
Passport	Very limited	
	Water erosion	1.00
	Depth to saturated zone	1.00
	Slope	0.98
699A:		
Timewell	Very limited	
	Depth to saturated zone	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
785G:		
Lacrescent	Very limited	
	Slope	1.00
	Rock fragments	0.50
	Available water	0.24
835G:		
Earthen Dam	Not rated	
856E2, 856F, 856G:		
Stookey	Very limited	
	Slope	1.00
	Water erosion	1.00
Timula	Very limited	
	Slope	1.00
	Water erosion	1.00
864:		
Pits, quarries	Not rated	
865:		
Pits, gravel	Not rated	
1070A:		
Beaucoup	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
3028A:		
Jules	Very limited	
	Flooding	1.00
3070A, 3070L:		
Beaucoup	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
	Flooding	1.00
3071L:		
Darwin	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
	Flooding	1.00
	Available water	0.40
3092A:		
Sarpy	Very limited	
	Sandy surface	1.00
	Soil blowing	1.00
	Available water	1.00
	Flooding	1.00
3092L:		
Sarpy	Very limited	
	Soil blowing	1.00
	Available water	1.00
	Flooding	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
3302L:		
Ambraw	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
	Flooding	1.00
3331A, 3331L:		
Haymond	Very limited	
	Flooding	1.00
3333A, 3333L:		
Wakeland	Very limited	
	Depth to saturated zone	1.00
	Flooding	1.00
3404A, 3404L:		
Titus	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
	Flooding	1.00
3415A, 3415L:		
Orion	Very limited	
	Depth to saturated zone	1.00
	Flooding	1.00
3428A, 3428L:		
Coffeen	Very limited	
	Depth to saturated zone	1.00
	Flooding	1.00
3475A, 3475L:		
Elsah	Very limited	
	Available water	1.00
	Flooding	1.00
	Rock fragments	0.50
3877L:		
Blake	Very limited	
	Depth to saturated zone	1.00
	Flooding	1.00
Slacwater	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
	Flooding	1.00
7037B:		
Worthen	Not limited	
7075B:		
Drury	Very limited	
	Water erosion	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
7242A:		
Kendall	Very limited	
	Depth to saturated zone	1.00
7430B:		
Raddle	Not limited	
7815B:		
Udorthents	Very limited	
	Water erosion	1.00
8070A:		
Beaucoup	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
8071A:		
Darwin	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
	Available water	0.40
8092A:		
Sarpy	Very limited	
	Sandy surface	1.00
	Soil blowing	1.00
	Available water	1.00
8162A:		
Gorham	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
8180A:		
Dupo	Very limited	
	Depth to saturated zone	1.00
8183A:		
Shaffton	Very limited	
	Depth to saturated zone	1.00
8217A:		
Twomile	Very limited	
	Depth to saturated zone	1.00
8284A:		
Tice	Very limited	
	Depth to saturated zone	1.00

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
8288A:		
Petrolia	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
8302A:		
Ambraw	Very limited	
	Depth to saturated zone	1.00
8331A:		
Haymond	Not limited	
8333A:		
Wakeland	Very limited	
	Depth to saturated zone	1.00
8349B:		
Zumbro	Somewhat limited	
	Available water	0.58
8395A:		
Ceresco	Very limited	
	Depth to saturated zone	1.00
8396A:		
Vesser	Very limited	
	Depth to saturated zone	1.00
8404A:		
Titus	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
8415A:		
Orion	Very limited	
	Depth to saturated zone	1.00
8428A:		
Coffeen	Very limited	
	Depth to saturated zone	1.00
8451A:		
Lawson	Very limited	
	Depth to saturated zone	1.00
8452A:		
Riley	Very limited	
	Depth to saturated zone	1.00
8634A:		
Blyton	Not limited	

Table 18c.--Water Management--Continued

Map symbol and soil name	Sprinkler irrigation	
	Rating class and limiting features	Value
8674A:		
Dozaville	Not limited	
8789A:		
Ambraw	Very limited	
	Ponding	1.00
	Depth to saturated zone	1.00
Ceresco	Very limited	
	Depth to saturated zone	1.00
Sarpy	Very limited	
	Soil blowing	1.00
	Available water	1.00
9278A:		
Stronghurst	Very limited	
	Depth to saturated zone	1.00
9278B:		
Stronghurst	Very limited	
	Depth to saturated zone	1.00
	Water erosion	1.00
9279B:		
Rozetta	Very limited	
	Water erosion	1.00
9279C2:		
Rozetta	Very limited	
	Water erosion	1.00
	Slope	0.06
864:		
Miscellaneous water	Not rated	
W:		
Water	Not rated	

Table 19.--Engineering Index Properties

(Absence of an entry indicates that the data were not estimated.)

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*	
8D2:												
Hickory---------	0-6	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	6-51	Clay loam, silty clay loam, gravelly clay loam	CL	A-6, A-7	0-1	0-5	85-100	70-100	65-95	50-80	30-50	15-30
	51-60	Loam, clay loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
8D3:												
Hickory---------	0-5	Clay loam	CL	A-6, A-7	0	0-5	95-100	90-100	80-100	65-80	30-50	15-30
	5-30	Clay loam, silty clay loam, gravelly clay loam	CL	A-6, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	30-40	Clay loam, loam, gravelly clay loam	CL	A-6, A-4	0-1	0-5	85-100	70-100	65-95	50-85	30-50	8-30
	40-60	Clay loam, loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
8E2:												
Hickory---------	0-6	Loam	CL	A-4, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	8-15
	6-51	Clay loam, silty clay loam, gravelly clay loam	CL	A-6, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	51-60	Sandy loam, loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
8F:												
Hickory---------	0-4	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	4-12	Loam	CL, ML, CL-ML	A-4, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	12-53	Clay loam, silty clay loam, gravelly clay loam	CL	A-6, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	53-58	Loam, sandy loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
	58-63	Loam, sandy loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
8G:												
Hickory---------	0-4	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	4-12	Loam	CL, ML, CL-ML	A-4, A-6	0	0-5	95-100	90-100	75-100	55-100	20-35	3-15
	12-40	Clay loam, silty clay loam, gravelly clay loam	CL	A-6, A-7	0-1	0-5	85-100	70-100	65-95	50-85	30-50	15-30
	40-58	Loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20
	58-63	Loam, sandy loam, gravelly clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0-1	0-5	85-100	70-95	45-95	25-75	20-40	5-20

Table 19.--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*	
17A:												
Keomah	0-11	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-35	10-15
	11-18	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-35	10-20
	18-33	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	100	95-100	45-55	25-30
	33-51	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	100	95-100	35-45	15-25
	51-89	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	100	100	95-100	25-35	5-15
17B:												
Keomah	0-9	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	95-100	25-35	10-15
	9-31	Silty clay, silty clay loam	CH, CL	A-7, A-7-6	0	0	100	100	100	95-100	45-55	25-30
	31-51	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	100	95-100	35-45	15-25
	51-80	Silt loam	CL, CL-ML, ML	A-6, A-4	0	0	100	100	100	95-100	25-35	5-15
19D3:												
Sylvan	0-9	Silty clay loam	CL	A-6, A-7, A-7-6	0	0	100	100	100	95-100	35-50	20-30
	9-28	Silty clay loam, silt loam	CL	A-6, A-7, A-7-6	0	0	100	100	100	95-100	35-50	20-30
	28-60	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	20-40	5-20
30F, 30G:												
Hamburg	0-7	Silt loam	CL-ML, ML	A-4	0	0	100	100	100	95-100	0-25	NP-5
	7-60	Silt loam, silt, very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	100	95-100	0-25	NP-5
43A:												
Ipava	0-10	Silt loam	CL	A-4	0	0	100	100	97-100	95-100	24-37	4-14
	10-18	Silty clay loam	CL	A-7-6	0	0	100	100	97-100	95-100	40-46	15-20
	18-31	Silty clay loam, silty clay	CH, CL	A-7-6	0	0	100	100	97-100	95-100	45-57	22-32
	31-50	Silty clay loam	CL	A-7-6	0	0	100	100	97-100	95-100	37-46	16-24
	50-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	96-100	93-100	24-37	7-18
43B:												
Ipava	0-17	Silt loam	CL, ML	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	17-58	Silty clay loam, silty clay	CH, CL	A-7-6	0	0	100	100	95-100	90-100	45-70	25-40
	58-60	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-20
50A:												
Virden	0-16	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	30-50	10-25
	16-49	Silty clay, silty clay loam	CH, CL	A-7-6	0	0	100	100	95-100	95-100	40-60	20-40
	49-60	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	30-50	10-25

Table 19.--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*	
75C:												
Drury	0-7	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	95-100	90-100	25-35	10-15
	7-43	Silt loam	CL	A-4, A-6	0	0	100	95-100	95-100	90-100	30-35	10-15
	43-80	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	95-100	55-95	25-35	10-15
75C2:												
Drury	0-6	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	95-100	90-100	25-35	10-15
	6-31	Silt loam	CL	A-4, A-6	0	0	100	95-100	95-100	90-100	30-35	10-15
	31-80	Silt loam, loam, very fine sandy loam	CL, ML	A-4, A-6	0	0	100	95-100	95-100	55-95	25-35	10-15
79B:												
Menfro	0-8	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20
	8-14	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	11-20
	14-40	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	40-80	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
79C2:												
Menfro	0-9	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20
	9-37	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	37-80	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
79C3:												
Menfro	0-6	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	25-41	11-20
	6-39	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	39-80	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
79D2:												
Menfro	0-8	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-35	11-20
	8-37	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	37-80	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
79D3:												
Menfro	0-4	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	25-41	11-20
	4-37	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	37-80	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
79E2:												
Menfro	0-6	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
	6-37	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	37-80	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	90-100	25-35	5-15
90A:												
Bethalto	0-8	Silt loam	CL	A-6	0	0	100	100	95-100	92-100	30-35	10-15
	8-14	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	92-100	20-35	5-15
	14-63	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	98-100	95-100	30-45	10-20
	63-80	Silt loam	CL	A-6	0	0	100	100	98-100	95-100	30-35	10-15
119D2:												
Elco	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-40	5-15
	6-28	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	25-45	10-30
	28-60	Silty clay loam, loam, clay	CL	A-6, A-7	0	0	100	90-100	80-100	60-95	25-50	10-30

Table 19.--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*	
119D3:												
Elco	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	15-30
	5-26	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	25-45	10-30
	26-60	Clay loam, silty clay loam, loam, clay	CL	A-6, A-7	0	0	100	90-100	80-100	60-95	25-50	10-30
119E2:												
Elco	0-2	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	2-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-40	5-15
	9-32	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	25-45	10-30
	32-60	Silty clay loam, clay loam, clay	CL	A-6, A-7	0	0	100	90-100	85-95	75-95	25-45	10-30
175F, 175G:												
Lamont	0-3	Sandy loam	SC, SC-SM	A-2, A-4	0	0	100	100	80-95	25-50	15-25	5-10
	3-6	Fine sandy loam, loamy fine sand	SC-SM, SM	A-2, A-4, A-2-4	0	0	100	100	80-95	15-50	0-25	NP-5
	6-80	Fine sandy loam, loamy sand, sandy clay loam, sandy loam	SC, SC-SM	A-2, A-4	0	0	100	100	85-95	30-50	20-30	5-10
216B:												
Stookey	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	7-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	10-65	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	65-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216C2:												
Stookey	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	9-43	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	43-79	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216C3:												
Stookey	0-5	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	5-43	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	43-79	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216D2:												
Stookey	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	9-43	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	43-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
216D3:												
Stookey	0-5	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	5-43	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	43-79	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15

Table 19.--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*	
257A:												
Clarksdale------	0-8	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	8-16	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	20-35	8-18
	16-47	Silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-65	25-40
	47-67	Silt loam, silty clay loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-100	25-45	10-25
	67-80	Silt loam	CL	A-6	0	0	95-100	95-100	95-100	90-100	25-40	10-20
257B:												
Clarksdale------	0-9	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	9-29	Silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-65	25-40
	29-47	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	95-100	90-100	35-45	15-25
	47-80	Silt loam	CL	A-6	0	0	95-100	95-100	95-100	90-100	25-40	10-20
264D3:												
El Dara---------	0-3	Sandy loam	CL, ML, SC, SM	A-4	0	0	100	100	95-100	35-55	15-25	NP-10
	3-47	Sandy clay loam, clay loam, sandy loam	CL, SC, SM	A-2-4, A-2-6, A-6	0	0	95-100	95-100	90-100	30-60	20-35	10-20
	47-60	Stratified sand to sandy clay loam	SC, SC-SM, SM, SP-SM	A-2, A-2-4	0	0	100	95-100	95-100	10-30	0-20	NP-10
264E2:												
El Dara---------	0-6	Sandy loam	CL, ML, SC, SM	A-4	0	0	100	100	95-100	35-55	15-25	NP-10
	6-67	Sandy clay loam, clay loam, sandy loam	CL, SC, SM	A-2-4, A-2-6, A-6	0	0	95-100	95-100	95-100	30-60	20-35	10-20
	67-79	Stratified sand to sandy clay loam	SC, SC-SM, SM, SP-SM	A-2, A-2-4	0	0	100	95-100	95-100	10-30	0-20	NP-10
264G:												
El Dara---------	0-5	Fine sandy loam	CL, ML, SC, SM	A-4	0	0	100	100	95-100	35-55	15-25	NP-10
	5-8	Fine sandy loam, loam, silt loam	SC, SC-SM, SM	A-2, A-4	0	0	100	95-100	95-100	30-50	0-20	NP-10
	8-45	Sandy clay loam, clay loam, sandy loam	CL, SC, SM	A-2-4, A-2-6, A-6	0	0	95-100	95-100	95-100	30-60	20-35	10-20
	45-60	Stratified sand to sandy clay loam	SC, SC-SM, SM, SP-SM	A-2, A-2-4	0	0	100	95-100	95-100	10-30	0-20	NP-10

Table 19.--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*	
267A:												
Caseyville------	0-9	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	28-35	9-15
	9-16	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	25-40	9-20
	16-50	Silty clay loam, silt loam	CL	A-4, A-6, A-7-6	0	0	100	100	98-100	93-100	30-45	9-20
	50-60	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	93-100	28-35	9-15
267B:												
Caseyville------	0-7	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	90-100	28-35	9-15
	7-47	Silty clay loam, silt loam	CL	A-4, A-6, A-7-6	0	0	100	100	98-100	93-100	30-45	9-20
	47-60	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	93-100	28-35	9-15
271C3:												
Timula----------	0-7	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	7-22	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	22-60	Silt loam, silt	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
271D3:												
Timula----------	0-7	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	7-11	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	11-60	Silt loam, silt	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
274F:												
Seaton----------	0-5	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	100	95-100	24-35	5-15
	5-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	100	95-100	20-30	5-15
	9-57	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	30-40	10-15
	57-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	100	90-100	25-35	7-15
274G:												
Seaton----------	0-5	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	100	95-100	24-35	5-15
	5-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	100	95-100	20-30	5-15
	9-46	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	30-40	10-15
	46-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	100	90-100	25-35	7-15
278A:												
Stronghurst-----	0-8	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	8-47	Silty clay loam, silt loam	CL	A-7-6, A-6	0	0	100	100	95-100	95-100	40-55	20-35
	47-60	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	95-100	25-40	5-20
279B:												
Rozetta---------	0-7	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	24-35	8-15
	7-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	20-30	5-15
	11-55	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-50	15-30
	55-60	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	25-40	7-20
279C2:												
Rozetta---------	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	24-35	8-15
	8-56	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-50	15-30
	56-80	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	25-40	7-20

Table 19.--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*	
279C3:												
Rozetta---------	0-6	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	95-100	35-45	10-20
	6-40	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-50	15-30
	40-60	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-100	25-40	7-20
280B:												
Fayette---------	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	100	95-100	25-35	5-15
	9-39	Silty clay loam, silt loam	CL	A-6, A-7	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
280C3:												
Fayette---------	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-45	15-25
	8-48	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-45	15-25
	48-60	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-20
280D2:												
Fayette---------	0-6	Silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	30-45	10-25
	6-48	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	95-100	35-45	15-25
	48-60	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-40	10-20
280D3:												
Fayette---------	0-8	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	15-25
	8-36	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	15-25
	36-60	Silt loam	CL	A-6	0	0	100	100	95-100	95-100	30-40	10-20
283B:												
Downsouth-------	0-7	Silt loam	CL, ML	A-4, A-6	0	0	100	100	98-100	95-100	30-40	9-15
	7-11	Silt loam	CL, ML	A-6, A-4	0	0	100	100	98-100	95-100	28-36	8-14
	11-73	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	98-100	95-100	35-45	15-20
	73-80	Silt loam	CL, ML	A-6	0	0	100	100	98-100	95-100	30-40	9-15
283C2:												
Downsouth-------	0-7	Silt loam	CL, ML	A-6	0	0	100	100	98-100	95-100	30-40	9-15
	7-60	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	98-100	95-100	35-45	15-20
	60-80	Silt loam	CL, ML	A-6	0	0	100	100	98-100	95-100	30-40	9-15

Table 19.--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*	
403G:												
Elizabeth-------	0-4	Very channery silt loam	CL	A-6, A-7	0-5	15-35	80-100	70-100	60-95	50-90	30-45	10-20
	4-16	Flaggy silt loam, gravelly clay loam, cobbly loam	CL	A-6, A-7	0-5	10-35	80-100	70-100	60-95	50-90	30-45	10-20
	16-26	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
441B:												
Wakenda---------	0-16	Silt loam	CL, ML	A-4, A-6	0	0	100	100	100	90-100	30-40	5-15
	16-76	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	90-100	35-45	15-25
	76-80	Silt loam, silty clay loam	CL	A-6	0	0	100	100	100	90-100	30-40	11-20
472D2, 472E2:												
Baylis----------	0-7	Silt loam	CL	A-6	0	0	100	95-100	95-100	90-100	25-40	10-25
	7-24	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	95-100	90-100	30-45	15-25
	24-80	Silty clay loam, very gravelly silty clay loam, extremely gravelly clay	GC, SC	A-2, A-6, A-7, A-7-6	0-5	15-40	40-80	30-80	30-70	30-50	35-50	20-35
477B:												
Winfield--------	0-8	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	8-13	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-25
	13-33	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	33-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
477C2:												
Winfield--------	0-7	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	25-40	10-20
	7-33	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	33-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
477C3:												
Winfield--------	0-7	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-45	15-20
	7-33	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-45	20-25
	33-80	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	90-100	30-35	10-15
515C2:												
Bunkum----------	0-7	Silt loam	CL	A-4, A-6, A-7-6	0	0	100	100	98-100	95-100	25-41	5-15
	7-50	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	98-100	95-100	35-45	15-20
	50-65	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	95-100	25-35	9-15
	65-85	Silt loam	CL	A-4, A-6	0	0	99-100	95-100	90-100	85-100	25-35	9-15

Table 19.--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*	
515C3:												
Bunkum----------	0-3	Silty clay loam	CL	A-4, A-6, A-7-6	0	0	100	100	98-100	95-100	30-45	9-20
	3-50	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	98-100	95-100	35-45	15-20
	50-65	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	95-100	25-35	9-15
	65-80	Silt loam	CL	A-4, A-6	0	0	99-100	95-100	90-100	85-100	25-35	9-15
515D2:												
Bunkum----------	0-7	Silt loam	CL	A-4, A-6, A-7-6	0	0	100	100	98-100	95-100	25-41	5-15
	7-50	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	98-100	95-100	35-45	15-20
	50-65	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	95-100	25-35	9-15
	65-85	Silt loam	CL	A-4, A-6	0	0	99-100	95-100	90-100	85-100	25-35	9-15
515D3:												
Bunkum----------	0-3	Silty clay loam	CL	A-4, A-6, A-7-6	0	0	100	100	98-100	95-100	30-45	9-20
	3-50	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	98-100	95-100	35-45	15-20
	50-65	Silt loam	CL	A-4, A-6	0	0	100	100	98-100	95-100	25-35	9-15
	65-80	Silt loam	CL	A-4, A-6	0	0	99-100	95-100	90-100	85-100	25-35	9-15
549E2:												
Marseilles------	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-15
	6-35	Silty clay loam, silty clay, clay loam	CH, CL	A-7, A-7-6	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
549F, 549G:												
Marseilles------	0-10	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-100	25-40	5-15
	10-35	Silty clay loam, silty clay, clay loam	CH, CL	A-7-6, A-7	0-1	0-5	95-100	90-100	85-100	80-95	40-60	15-30
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
559F, 559G:												
Lindley---------	0-6	Loam	CL	A-6	0	0	95-100	90-100	85-95	50-65	25-35	10-15
	6-58	Clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	85-95	55-75	30-45	15-25
	58-80	Loam, clay loam	CL	A-6	0	0	95-100	90-100	85-95	50-70	25-35	10-15
605D2:												
Ursa------------	0-6	Silt loam	CL, ML	A-4, A-6	0	0	100	94-100	88-100	74-96	27-43	9-18
	6-56	Silty clay, clay loam, clay, silty clay loam	CH, CL	A-7, A-7-6	0	0-5	95-100	88-97	79-94	60-85	46-57	25-33
	56-80	Clay loam, loam, clay	CH, CL	A-6, A-7, A-7-6	0-2	0-5	95-98	83-97	74-93	54-84	35-55	17-32

Table 19.--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*	
605D3:												
Ursa	0-4	Silty clay loam	CL	A-6, A-7, A-7-6	0	0	100	94-100	90-100	80-95	30-50	15-30
	4-45	Clay, clay loam, silty clay, silty clay loam	CH, CL	A-7, A-7-6	0	0-5	95-100	85-98	70-90	55-90	40-60	20-35
	45-79	Clay loam, loam, clay	CH, CL	A-6, A-7, A-7-6	0-1	0-5	95-100	85-98	80-90	60-85	35-55	20-35
605E2:												
Ursa	0-6	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	95-100	90-100	80-100	20-40	5-20
	6-43	Clay, clay loam, silty clay	CH, CL	A-7, A-7-6	0	0-5	95-100	90-95	70-90	55-90	40-60	20-35
	43-60	Clay loam, loam, clay	CH, CL	A-6, A-7, A-7-6	0-1	0-5	95-100	90-95	80-90	60-85	35-55	20-35
606F, 606G:												
Goss	0-7	Gravelly silt loam	CL, CL-ML, ML	A-4	0	0-10	65-85	65-75	65-75	65-75	20-30	2-10
	7-11	Very gravelly silty clay loam, gravelly silt loam, gravelly silty clay loam	SC, GC, GC-GM, GM	A-2, A-2-4	0-5	5-40	40-60	35-55	30-50	19-35	20-30	2-10
	11-80	Gravelly silty clay loam, very gravelly silty clay, very gravelly clay	GC, SC	A-2-7, A-7	0-5	5-45	45-70	20-65	20-50	20-45	50-70	30-40
630B2:												
Navlys	0-9	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	100	95-100	25-35	5-15
	9-27	Silty clay loam, silt loam	CL	A-6, A-7, A-7-6	0	0	100	100	100	95-100	35-50	20-30
	27-60	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	95-100	95-100	20-40	5-20
630C2:												
Navlys	0-6	Silt loam	CL	A-6, A-4	0	0	100	100	100	95-100	25-35	5-15
	6-27	Silty clay loam, silt loam	CL	A-6, A-7, A-7-6	0	0	100	100	100	95-100	35-50	20-30
	27-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	20-40	5-20
630C3:												
Navlys	0-6	Silty clay loam	CL	A-6, A-7, A-7-6	0	0	100	100	100	95-100	35-50	20-30
	6-31	Silty clay loam, silt loam	CL	A-6, A-7, A-7-6	0	0	100	100	100	95-100	35-50	20-30
	31-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	20-40	5-20
651D2:												
Keswick	0-8	Loam	CL, CL-ML	A-4, A-6	0	0-5	90-100	80-100	75-90	60-80	20-30	5-15
	8-47	Clay loam, clay, silty clay	CH, CL	A-7, A-7-6	0	0-5	90-100	80-100	70-90	55-80	40-70	20-40
	47-60	Clay loam	CL	A-6	0	0-5	90-100	80-100	70-90	55-80	30-40	15-25

Table 19.--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*	
651D3:												
Keswick---	0-5	Clay loam	CL	A-7-6, A-7	0	0-5	90-100	80-100	75-90	60-80	35-50	15-25
	5-37	Clay loam, clay, silty clay	CH, CL	A-7, A-7-6	0	0-5	90-100	80-100	70-90	55-80	40-70	20-40
	37-60	Clay loam	CL	A-6	0	0-5	90-100	80-100	70-90	55-80	30-40	15-25
651E2:												
Keswick---	0-8	Loam	CL, CL-ML	A-4, A-6	0	0-5	90-100	80-100	75-90	60-80	20-30	5-15
	8-47	Clay loam, clay, silty clay	CH, CL	A-7, A-7-6	0	0-5	90-100	80-100	70-90	55-80	40-70	20-40
	47-60	Clay loam	CL	A-6	0	0-5	90-100	80-100	70-90	55-80	30-40	15-25
652C2:												
Passport---	0-5	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	97-100	95-100	70-90	25-35	7-15
	5-45	Silty clay loam, clay loam, loam	CL	A-4, A-6, A-7-6	0	0	100	93-100	90-100	60-85	28-43	9-21
	45-84	Clay loam, loam, silty clay	CH, CL	A-6, A-7-6	0	0	100	93-97	90-95	55-85	34-52	14-28
652C3:												
Passport---	0-3	Silty clay loam	CL	A-6, A-7-6	0	0	100	97-100	95-100	75-90	37-43	16-21
	3-35	Silty clay loam, clay loam, loam	CL	A-4, A-6, A-7-6	0	0	100	93-100	90-100	60-85	28-43	9-21
	35-80	Clay loam, loam, silty clay	CH, CL	A-6, A-7-6	0	0	100	93-97	90-95	55-85	34-52	14-28
652D2:												
Passport---	0-5	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	97-100	95-100	70-90	25-35	7-15
	5-45	Silty clay loam, clay loam, loam	CL	A-4, A-6, A-7-6	0	0	100	93-100	90-100	60-85	28-43	9-21
	45-84	Clay loam, loam, silty clay	CH, CL	A-6, A-7-6	0	0	100	93-97	90-95	55-85	34-52	14-28
652D3:												
Passport---	0-3	Silty clay loam	CL	A-6, A-7-6	0	0	100	97-100	95-100	75-90	37-43	16-21
	3-35	Silty clay loam, clay loam, loam	CL	A-4, A-6, A-7-6	0	0	100	93-100	90-100	60-85	28-43	9-21
	35-84	Clay loam, loam, silty clay	CH, CL	A-6, A-7-6	0	0	100	93-97	90-95	55-85	34-52	14-28
699A:												
Timewell---	0-18	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	90-100	30-40	5-15
	18-40	Silty clay loam, silty clay	CH, CL	A-7-6	0	0	100	100	95-100	90-100	45-60	25-40
	40-67	Silty clay loam, silt loam	CL	A-6, A-7-6	0	0	100	100	95-100	90-100	35-50	20-35
	67-80	Silt loam	CL	A-6	0	0	100	100	90-100	80-100	30-40	10-20

Table 19.--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*	
785G:												
Lacrescent------	0-21	Channery silt loam, gravelly silt loam	CL, ML	A-6, A-7	0	15-30	80-100	70-100	60-95	50-90	30-45	10-20
	21-38	Very gravelly silt loam, extremely cobbly fine sandy loam, very cobbly loam	CL, ML, SC, SM	A-1, A-2, A-4, A-6	0	30-55	55-80	45-80	40-65	20-60	20-35	3-12
	38-60	Extremely cobbly loam, very flaggy silt loam, very cobbly fine sandy loam	CL, ML, SC, SM	A-1, A-2, A-4, A-6, A-2-4	0	50-65	50-75	40-65	35-60	15-55	0-30	NP-12
835G:												
Earthen Dam.												
856E2:												
Stookey---------	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	9-60	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	60-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
Timula----------	0-7	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	7-22	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	22-60	Silt loam, silt	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
856F, 856G:												
Stookey---------	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
	6-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	15-25	4-12
	9-60	Silt loam	CL	A-6	0	0	100	100	98-100	93-100	30-40	10-15
	60-80	Silt loam, silt	CL, CL-ML	A-4, A-6	0	0	100	100	98-100	93-100	20-30	5-15
Timula----------	0-7	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	7-22	Silt loam	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
	22-60	Silt loam, silt	ML	A-4	0	0	100	100	95-100	85-100	25-35	NP-10
864:												
Pits, quarries.												
865:												
Pits, gravel.												
1070A:												
Beaucoup--------	0-21	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-45	15-20
	21-42	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-45	15-20
	42-60	Stratified silty clay loam to very fine sandy loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	65-95	20-41	5-20
3028A:												
Jules-----------	0-8	Silt loam	ML	A-4	0	0	100	100	90-100	80-90	27-36	4-10
	8-60	Silt loam	ML	A-4	0	0	100	100	90-100	80-100	27-36	4-10

Table 19.--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*	
3070A, 3070L:												
Beaucoup	0-16	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-45	15-20
	16-64	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	35-45	15-20
	64-80	Stratified silty clay loam to very fine sandy loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	65-95	20-41	5-25
3071L:												
Darwin	0-16	Silty clay	CH, CL	A-7, A-7-6	0	0	100	100	100	90-100	45-70	25-45
	16-62	Silty clay, clay	CL, CH	A-7, A-7-6	0	0	100	100	100	85-100	45-75	25-50
	62-80	Silty clay, clay, silty clay loam	CH, CL	A-7, A-6, A-7-6	0	0	100	100	95-100	90-100	35-70	20-45
3092A:												
Sarpy	0-10	Loamy sand	SM	A-2-4	0	0	100	100	60-80	15-35	0-14	NP
	10-60	Fine sand, loamy fine sand, sand	SM, SP, SP-SM	A-2-4, A-3	0	0	100	100	60-80	2-35	0-14	NP
3092L:												
Sarpy	0-10	Loamy fine sand	SM	A-2-4	0	0	100	100	60-80	15-35	0-14	NP
	10-60	Fine sand, loamy fine sand, sand	SM, SP, SP-SM	A-2-4, A-3	0	0	100	100	60-80	2-35	0-14	NP
3302L:												
Ambraw	0-17	Clay loam	CL, ML	A-6, A-7	0	0	100	100	85-95	70-95	30-45	10-20
	17-43	Clay loam, loam	CL, ML	A-6, A-7	0	0	100	100	85-95	50-85	30-50	10-25
	43-80	Stratified sand to silty clay loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	100	90-100	80-90	30-80	15-40	NP-17
3331A:												
Haymond	0-7	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	85-100	20-30	3-10
	7-69	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-10
	69-80	Fine sandy loam, silt loam, loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15
3331L:												
Haymond	0-7	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	85-100	20-30	3-10
	7-68	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-10
	68-79	Fine sandy loam, silt loam, loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15
3333A:												
Wakeland	0-10	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	10-50	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	50-80	Silt loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	60-100	16-28	3-9
3333L:												
Wakeland	0-8	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	5-10
	8-68	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	5-10
	68-80	Silt loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	60-100	20-30	5-10

Table 19.--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*	
3404A, 3404L:												
Titus	0-13	Silty clay loam	CH, CL	A-7, A-7-6	0	0	100	100	95-100	90-100	40-55	20-30
	13-67	Silty clay loam, silty clay	CH, CL	A-7, A-7-6	0	0	100	100	95-100	90-100	40-55	20-30
	67-79	Silty clay loam, silt loam, loam	CL	A-6	0	0	100	90-100	70-90	55-85	20-40	10-25
3415A:												
Orion	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	80-100	25-35	4-12
	7-22	Stratified very fine sand to silt loam	CL-ML, CL	A-4	0	0	100	100	90-100	70-80	20-30	4-10
	22-60	Silt loam, silty clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	85-100	85-100	20-40	4-18
	60-80	Stratified sand to silt loam	CL-ML, CL	A-4	0	0	80-100	80-100	80-100	80-100	20-30	4-10
3415L:												
Orion	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	80-100	25-35	4-12
	6-22	Stratified silt loam to very fine sand	CL, CL-ML	A-4	0	0	100	100	90-100	70-80	20-30	4-10
	22-60	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	85-100	20-40	4-18
	60-80	Stratified sand to silt loam	CL-ML, CL	A-4	0	0	80-100	80-100	80-100	80-100	20-30	4-10
3428A, 3428L:												
Coffeen	0-17	Silt loam	CL, CL-ML	A-6, A-4	0	0	100	100	90-100	85-100	25-40	5-20
	17-33	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-95	20-35	3-10
	33-60	Stratified silt loam to sandy loam	CL, ML, SC, SM	A-2, A-4	0	0	100	90-100	85-100	30-85	15-30	NP-10
3475A, 3475L:												
Elsah	0-6	Gravelly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0-1	10-15	75-90	55-70	40-65	35-60	20-35	5-15
	6-12	Gravelly silt loam, very gravelly loam	CL, ML, SC, SM	A-4, A-6	0-5	10-30	50-90	35-70	35-65	35-60	15-30	3-15
	12-60	Very gravelly loam, gravelly loam, very gravelly sandy loam	CL, ML, SC, SM	A-2-4, A-2-6, A-4, A-6	0-10	10-65	45-85	30-70	25-65	20-60	0-25	NP-15
3877L:												
Blake	0-14	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	30-40	10-20
	14-60	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	85-95	30-50	10-30
Slacwater	0-12	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	95-100	90-100	80-100	15-35	3-15
	12-80	Silt loam, silt, silty clay loam	CL	A-6	0	0	100	95-100	90-100	85-100	25-40	10-25

Table 19.--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*	
7037B:												
Worthen---	0-30	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	80-100	25-30	5-15
	30-63	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	80-100	25-35	10-15
	63-80	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	80-100	25-35	10-15
7075B:												
Drury---	0-7	Silt loam	CL, ML	A-4, A-6	0	0	100	95-100	95-100	90-100	25-35	10-15
	7-43	Silt loam	CL	A-4, A-6	0	0	100	95-100	95-100	90-100	30-35	10-15
	43-80	Silt loam, loam	CL, ML	A-4, A-6	0	0	100	95-100	95-100	55-95	25-35	10-15
7242A:												
Kendall---	0-9	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-95	20-35	5-15
	9-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-95	15-30	5-15
	14-54	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	30-45	10-20
	54-60	Silt loam	CL, ML	A-4, A-6	0	0	100	100	95-100	90-100	25-35	8-15
	60-80	Stratified sandy loam to clay loam	CL, CL-ML, SC, SC-SM	A-4	0	0-5	95-100	90-100	70-90	40-70	15-25	4-15
7430B:												
Raddle---	0-15	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	25-35	8-15
	15-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	80-100	20-30	4-14
7815B:												
Udorthents---	0-60	Silt loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	80-95	25-45	5-25
8070A:												
Beaucoup---	0-15	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	30-45	15-25
	15-48	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	85-100	30-45	15-30
	48-60	Stratified silt loam to silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	65-95	25-45	5-25
	60-80	Stratified silt loam to silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	60-95	20-40	5-20
8071A:												
Darwin---	0-12	Silty clay	CH, CL	A-7, A-7-6	0	0	100	100	100	90-100	45-85	25-55
	12-40	Silty clay, clay	CH, CL	A-7, A-7-6	0	0	100	100	100	85-100	45-85	25-55
	40-60	Silty clay loam, silty clay	CH, CL	A-6, A-7, A-7-6	0	0	100	100	95-100	90-100	35-70	20-45
8092A:												
Sarpy---	0-9	Sand	SM, SP, SP-SM	A-2-4, A-3	0	0	100	100	60-80	2-15	0-14	NP
	9-60	Sandy loam, loamy sand, sand	SM, SP, SP-SM	A-2-4, A-3	0	0	100	100	60-80	2-35	0-14	NP-5
8162A:												
Gorham---	0-10	Silty clay loam	CL	A-6, A-7, A-7-6	0	0	100	95-100	90-100	70-90	35-50	15-25
	10-40	Silty clay loam, silty clay	CH, CL	A-7, A-7-6	0	0	100	100	100	90-95	40-55	15-30
	40-44	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0	100	80-90	70-80	50-80	30-45	10-20
	44-80	Sand, loamy fine sand, sandy loam	SC, SC-SM, SM, SP-SM	A-2, A-4, A-2-4	0	0	100	75-90	55-80	10-50	0-30	NP-10

Table 19.--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*	
8180A:												
Dupo----------	0-7	Silt loam	CL, CL-ML	A-4	0	0	100	100	100	95-100	20-30	5-10
	7-36	Silt loam, silt	CL, CL-ML	A-4	0	0	100	100	100	95-100	20-30	5-10
	36-85	Silty clay, clay, silty clay loam	CH	A-7-6	0	0	100	100	100	98-100	50-70	30-45
8183A:												
Shaffton--------	0-12	Clay loam	CL	A-6	0	0	100	100	85-95	60-80	30-40	11-20
	12-32	Sandy clay loam, clay loam, loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	55-65	25-35	5-15
	32-36	Loamy sand, sandy loam	SC-SM, SM, SP-SM	A-2, A-2-4	0	0	100	100	50-75	10-30	0-18	NP-5
	36-51	Silty clay loam, coarse sandy loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	35-45	15-25
	51-60	Coarse sand, fine sand, sand, loamy sand	SP, SP-SM, SW, SW-SM	A-1, A-1-b	0	0	90-100	90-95	20-35	3-5	0-14	NP
8217A:												
Twomile---------	0-10	Silt loam	CL, CL-ML	A-4	0	0	100	100	95-100	90-100	20-30	4-9
	10-26	Silt loam, silt	CL, CL-ML	A-4	0	0	100	100	95-100	90-100	20-30	4-9
	26-58	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	95-100	90-100	85-95	30-45	15-25
	58-80	Clay loam, silt loam, loam	CL	A-6	0	0	100	95-100	90-100	70-90	30-40	10-20
8284A:												
Tice----------	0-14	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	30-45	10-20
	14-80	Silty clay loam, silt loam	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	15-30
8288A:												
Petrolia--------	0-11	Silt loam	CL, ML	A-6, A-4	0	0	100	95-100	90-100	80-100	25-35	8-15
	11-33	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	85-100	35-45	15-22
	33-80	Silty clay loam, silt loam	CL	A-4, A-6, A-7	0	0	100	95-100	80-100	60-100	20-45	8-22
8302A:												
Ambraw----------	0-16	Clay loam	CL	A-6, A-7	0	0	100	100	85-95	55-80	30-45	10-20
	16-33	Clay loam, loam	CH, CL	A-6, A-7	0	0	100	100	80-90	60-80	35-55	15-30
	33-41	Clay loam, sandy clay loam	CL, SC	A-6, A-7	0	0	100	90-100	85-95	40-80	30-50	10-25
	41-70	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
8331A:												
Haymond---------	0-14	Silt loam	ML, CL, CL-ML	A-4	0	0	100	100	90-100	85-100	25-30	5-10
	14-44	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	5-10
	44-80	Silt loam, loam, fine sandy loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	90-100	65-100	35-90	15-35	2-15

Table 19.--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*	
8333A:												
Wakeland--------	0-10	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	10-50	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	16-28	3-9
	50-80	Silt loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	60-100	16-28	3-9
8349B:												
Zumbro----------	0-11	Sandy loam	SM	A-4	0	0	100	95-100	70-95	35-50	15-28	3-10
	11-33	Loamy sand, loamy fine sand	SM	A-2, A-2-4	0	0	100	95-100	60-95	15-30	10-21	NP-5
	33-42	Sand, fine sand, loamy sand	SM, SP, SP-SM	A-2, A-3, A-2-4	0	0	95-100	85-100	60-95	4-30	0-15	NP-3
	42-80	Sand, fine sand, coarse sand	SM, SP, SP-SM	A-2, A-3, A-2-4	0	0	90-100	80-100	50-80	4-20	0-15	NP
8395A:												
Ceresco---------	0-14	Loam	CL, CL-ML	A-4	0	0	100	100	85-100	60-90	20-30	4-10
	14-42	Sandy loam, loamy fine sand, silt loam	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0	100	100	60-95	15-80	20-30	4-10
	42-60	Sandy loam, fine sandy loam, silt loam, fine sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0	100	100	60-100	30-90	20-30	4-10
8396A:												
Vesser----------	0-10	Silt loam	ML, CL	A-6	0	0	100	100	95-100	85-100	25-35	10-15
	10-22	Silt loam	ML, CL	A-6	0	0	100	100	95-100	85-100	25-35	10-15
	22-37	Silt loam	ML, CL	A-6	0	0	100	100	95-100	85-100	30-40	10-20
	37-60	Silt loam, silt	CL, ML	A-6	0	0	100	100	95-100	85-100	25-35	8-20
8404A:												
Titus-----------	0-13	Silty clay loam	CH, CL	A-7, A-7-6	0	0	100	100	95-100	90-100	40-55	20-30
	13-68	Silty clay loam, silty clay	CH, CL	A-7, A-7-6	0	0	100	100	95-100	90-100	40-55	20-30
	68-80	Silty clay loam, silt loam, loam	CL	A-6	0	0	100	90-100	70-90	55-85	20-40	10-25
8415A:												
Orion-----------	0-6	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	80-100	25-35	4-12
	6-25	Silt loam, stratified silt loam to very fine sand	CL, CL-ML	A-4	0	0	100	100	90-100	70-80	20-30	4-10
	25-60	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	85-100	20-40	4-18
8428A:												
Coffeen---------	0-15	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	25-40	5-20
	15-42	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-95	20-35	3-10
	42-60	Stratified silt loam to sandy loam	CL, ML, SC, SM	A-2, A-4	0	0	100	90-100	85-100	30-85	15-30	NP-10

Table 19.--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*	
8451A:												
Lawson----------	0-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	85-100	20-40	5-20
	14-33	Silt loam, silty clay loam	CL, CL-ML	A-4	0	0	100	100	90-100	85-100	20-30	5-10
	33-80	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	90-100	60-100	20-45	10-25
8452A:												
Riley----------	0-13	Silty clay loam	CL	A-6	0	0	100	100	95-100	80-100	30-40	15-25
	13-27	Sandy clay loam, silty clay loam, loam	SC, CL	A-6, A-7, A-7-6	0	0	100	100	90-100	40-85	35-50	15-25
	27-60	Loamy fine sand, sand, loamy sand	SC-SM, SM, SP-SM	A-2, A-4, A-2-4	0	0	100	100	90-100	10-40	10-21	NP-3
8634A:												
Blyton----------	0-11	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-9
	11-25	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	80-100	20-30	3-9
	25-64	Silt loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	85-100	60-100	20-30	3-9
8674A:												
Dozaville-------	0-18	Silt loam	CL, ML	A-6	0	0	100	100	95-100	85-100	30-35	10-15
	18-59	Silt loam	CL, ML	A-6	0	0	100	100	95-100	85-100	30-35	10-15
	59-80	Silt loam, loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	75-100	20-30	3-9
8789A:												
Ambraw----------	0-13	Loam	CL	A-6, A-7	0	0	100	100	85-95	85-95	30-45	10-20
	13-35	Clay loam, sandy clay loam, loam	CL	A-6, A-7	0	0	100	90-100	85-95	40-80	30-50	10-25
	35-60	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
Ceresco---------	0-14	Loam	CL-ML, CL	A-4	0	0	100	100	85-100	60-90	20-30	4-10
	14-42	Sandy loam, loamy fine sand, silt loam	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0	100	100	60-95	15-80	20-30	4-10
	42-60	Sandy loam, fine sandy loam, silt loam, fine sand	CL, CL-ML, SC, SC-SM	A-2, A-4	0	0	100	100	60-100	30-90	20-30	4-10
Sarpy----------	0-10	Loamy fine sand	SM	A-2-4	0	0	100	100	60-80	15-35	0-14	NP-3
	10-60	Fine sand, loamy fine sand, sand	SM, SP, SP-SM	A-2-4, A-3	0	0	100	100	60-80	2-35	0-14	NP-3
9278A:												
Stronghurst-----	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	7-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	11-47	Silty clay loam, silt loam	CH, CL	A-7, A-7-6	0	0	100	100	100	98-100	40-55	20-35
	47-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-40	5-20

Table 19.--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*	
9278B:												
Stronghurst-----	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	7-11	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-35	5-15
	11-43	Silty clay loam, silt loam	CH, CL	A-7, A-7-6	0	0	100	100	100	98-100	40-55	20-35
	43-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	95-100	25-40	5-20
9279B:												
Rozetta---------	0-9	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	24-35	8-15
	9-66	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-50	15-30
	66-76	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	25-40	7-20
9279C2:												
Rozetta---------	0-7	Silt loam	CL	A-4, A-6	0	0	100	100	95-100	95-100	24-35	8-15
	7-66	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	95-100	35-50	15-30
	66-70	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	25-40	7-20
M-W:												
Miscellaneous water.												
W:												
Water.												

Table 20.--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	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
8D2:														
Hickory-------	0-6	15-45	30-66	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.32	.32	5	6	48
	6-51	15-45	20-58	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	51-60	20-50	18-65	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.2	.28	.32			
8D3:														
Hickory-------	0-5	15-40	25-60	27-35	1.40-1.65	0.6-2	0.17-0.19	3.0-5.9	0.0-1.0	.28	.32	4	6	48
	5-30	15-45	20-60	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	30-40	15-45	20-60	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	40-60	20-50	20-65	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.28	.32			
8E2:														
Hickory-------	0-6	30-45	25-50	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	6-51	15-45	20-60	27-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	51-60	20-45	20-65	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.28	.32			
8F:														
Hickory-------	0-4	15-45	30-66	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	4-12	15-45	33-70	15-22	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	12-53	15-45	20-61	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	53-58	30-45	23-55	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.28	.32			
	58-63	30-45	25-55	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.28	.32			
8G:														
Hickory-------	0-4	15-45	30-66	19-25	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	4-12	15-45	33-70	15-22	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	12-40	15-45	20-58	24-35	1.45-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.28	.32			
	40-58	30-45	23-55	15-32	1.50-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.28	.32			
	58-63	30-45	25-55	15-30	1.50-1.75	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.28	.32			
17A:														
Keomah--------	0-11	0-7	67-84	16-26	1.35-1.45	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	11-18	0-7	67-84	16-26	1.40-1.60	0.2-0.6	0.17-0.21	0.0-2.9	0.1-1.0	.49	.49			
	18-33	0-7	51-65	35-42	1.30-1.40	0.06-0.2	0.15-0.19	6.0-8.9	0.1-0.5	.37	.37			
	33-51	0-7	58-73	27-35	1.35-1.45	0.2-0.6	0.16-0.20	3.0-5.9	0.1-0.5	.37	.37			
	51-89	0-7	66-85	15-27	1.40-1.60	0.6-2	0.19-0.22	0.0-2.9	0.0-0.2	.49	.49			
17B:														
Keomah--------	0-9	0-7	67-84	16-26	1.30-1.40	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-31	0-7	51-65	35-42	1.30-1.40	0.06-0.2	0.15-0.19	6.0-8.9	0.0-0.5	.37	.37			
	31-51	0-7	58-73	27-35	1.35-1.45	0.2-0.6	0.16-0.20	3.0-5.9	0.1-0.5	.37	.37			
	51-80	0-7	66-85	15-27	1.40-1.60	0.6-2	0.19-0.22	0.0-2.9	0.0-0.2	.49	.49			
19D3:														
Sylvan--------	0-9	0-7	61-73	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	0.0-1.0	.37	.37	5	6	48
	9-28	0-7	58-75	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	28-60	0-7	66-90	10-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
30F, 30G:														
Hamburg-------	0-7	10-20	65-85	6-15	1.20-1.30	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	4L	86
	7-60	10-50	45-90	6-12	1.20-1.30	0.6-2	0.17-0.22	0.0-2.9	0.1-0.5	.55	.55			
43A:														
Ipava---------	0-10	2-7	66-83	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
	10-18	2-7	58-71	27-35	1.20-1.40	0.6-2	0.18-0.21	3.0-5.9	1.5-3.5	.24	.24			
	18-31	2-7	48-65	35-45	1.30-1.50	0.2-0.6	0.15-0.18	6.0-8.9	0.5-1.5	.37	.37			
	31-50	2-7	58-71	27-35	1.35-1.55	0.6-2	0.18-0.21	3.0-5.9	0.1-0.5	.37	.37			
	50-60	2-7	66-83	15-27	1.40-1.60	0.6-2	0.19-0.26	0.0-2.9	0.0-0.5	.49	.49			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
43B:														
Ipava---------	0-17	0-7	66-80	20-27	1.15-1.35	0.6-2	0.22-0.24	3.0-5.9	4.0-5.0	.28	.28	5	6	48
	17-58	0-7	50-65	35-43	1.25-1.50	0.2-0.6	0.11-0.20	6.0-8.9	0.5-1.0	.37	.37			
	58-60	0-7	63-80	20-30	1.30-1.55	0.6-2	0.20-0.22	3.0-5.9	0.0-0.5	.49	.49			
50A:														
Virden--------	0-16	0-7	58-73	27-35	1.20-1.40	0.6-2	0.21-0.24	3.0-5.9	3.0-6.0	.24	.24	5	6	48
	16-49	0-7	49-65	35-42	1.20-1.45	0.2-0.6	0.11-0.20	6.0-8.9	0.0-2.0	.37	.37			
	49-60	0-7	60-75	25-33	1.25-1.55	0.2-0.6	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
75C:														
Drury---------	0-7	1-15	70-80	15-25	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.49	.49	5	5	56
	7-43	1-15	65-80	18-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.2-0.8	.49	.49			
	43-80	5-25	65-77	15-22	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.1-0.5	.49	.49			
75C2:														
Drury---------	0-6	1-15	70-80	15-25	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	6-31	1-15	65-80	18-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.1-0.5	.49	.49			
	31-80	5-45	40-77	15-22	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.1-0.3	.49	.49			
79B:														
Menfro--------	0-8	0-7	72-89	18-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-14	0-7	68-89	25-30	1.30-1.45	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	14-40	0-7	60-82	27-36	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	40-80	0-7	67-85	8-20	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.55	.55			
79C2:														
Menfro--------	0-9	0-7	67-80	18-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	9-37	0-7	60-73	27-36	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	37-80	0-7	67-80	8-20	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.55	.55			
79C3:														
Menfro--------	0-6	0-7	60-73	27-32	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	6-39	0-7	60-73	27-36	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	39-80	0-7	67-80	8-20	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.55	.55			
79D2:														
Menfro--------	0-8	0-7	60-80	18-27	1.25-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	8-37	0-7	60-73	27-36	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	37-80	0-7	67-80	8-20	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.55	.55			
79D3:														
Menfro--------	0-4	0-7	60-73	27-32	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	4-37	0-7	60-73	27-36	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	37-80	0-7	67-80	8-20	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.55	.55			
79E2:														
Menfro--------	0-6	0-7	60-80	18-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	6-37	0-7	60-73	27-36	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	37-80	0-7	67-80	8-20	1.45-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
90A:														
Bethalto------	0-8	0-7	66-80	18-27	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	8-14	0-7	66-80	15-25	1.30-1.40	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	14-63	0-7	48-73	20-36	1.30-1.45	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	63-80	0-7	66-80	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
119D2:														
Elco----------	0-6	0-7	66-80	20-27	1.20-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	6-28	0-7	58-77	23-35	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.0-0.5	.37	.37			
	28-60	15-35	20-60	25-45	1.45-1.70	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.2	.28	.28			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
119D3:														
Elco----------	0-5	0-7	58-73	27-35	1.20-1.35	0.6-2	0.18-0.21	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	5-26	0-7	58-77	23-35	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.0-0.5	.37	.37			
	26-60	15-35	20-60	25-45	1.45-1.70	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.2	.28	.28			
119E2:														
Elco----------	0-2	0-7	66-80	20-27	1.20-1.35	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	2-9	0-7	66-80	20-27	1.20-1.35	0.6-2	0.22-0.24	0.0-2.9	0.0-0.5	.49	.49			
	9-32	0-7	58-77	23-35	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.0-0.5	.37	.37			
	32-60	15-35	20-60	25-45	1.40-1.60	0.06-0.6	0.16-0.20	6.0-8.9	0.0-0.2	.28	.28			
175F, 175G:														
Lamont--------	0-3	43-80	5-50	10-15	1.50-1.55	2-6	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	4	3	86
	3-6	43-82	3-52	5-15	1.50-1.55	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
	6-80	45-87	3-45	10-22	1.45-1.65	2-6	0.14-0.16	0.0-2.9	0.0-0.5	.24	.24			
216B:														
Stookey-------	0-7	0-7	71-80	12-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-10	0-7	71-80	12-22	1.10-1.45	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	10-65	0-7	66-80	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	65-80	0-7	71-89	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216C2:														
Stookey-------	0-9	0-7	71-80	12-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	9-43	0-7	66-80	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	43-79	0-7	71-89	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216C3:														
Stookey-------	0-5	0-7	61-80	18-27	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.0-1.0	.43	.43	4	5	56
	5-43	0-7	66-80	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
	43-79	0-7	71-89	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216D2:														
Stookey-------	0-9	0-7	71-80	12-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	9-43	0-7	66-80	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	43-80	0-7	71-89	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
216D3:														
Stookey-------	0-5	0-7	61-80	18-27	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	0.0-1.0	.43	.43	4	5	56
	5-43	0-7	66-80	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
	43-79	0-7	71-89	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
257A:														
Clarksdale----	0-8	0-7	66-80	20-27	1.30-1.50	0.6-2	0.22-0.25	3.0-5.9	1.0-3.0	.37	.37	5	6	48
	8-16	0-7	66-85	15-27	1.25-1.50	0.2-0.6	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	16-47	0-7	48-65	35-45	1.30-1.50	0.2-0.6	0.11-0.20	6.0-8.9	0.0-0.5	.37	.37			
	47-67	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	3.0-5.9	0.0-0.5	.43	.43			
	67-80	0-7	66-82	18-27	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
257B:														
Clarksdale----	0-9	0-7	66-80	20-27	1.30-1.50	0.6-2	0.22-0.25	3.0-5.9	1.0-3.0	.37	.37	5	6	48
	9-29	0-7	48-65	35-45	1.30-1.50	0.2-0.6	0.11-0.20	6.0-8.9	0.0-0.5	.37	.37			
	29-47	0-7	58-73	27-35	1.35-1.45	0.6-2	0.16-0.20	3.0-5.9	0.0-0.5	.37	.37			
	47-80	0-7	66-82	18-27	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
264D3:														
El Dara-------	0-3	55-74	9-27	10-20	1.30-1.50	0.6-2	0.13-0.18	0.0-2.9	0.0-1.0	.32	.32	4	3	86
	3-47	42-66	9-27	18-30	1.35-1.60	0.6-2	0.12-0.19	0.0-2.9	0.0-0.2	.32	.32			
	47-60	65-90	5-15	5-25	1.50-1.80	0.6-2	0.11-0.19	0.0-2.9	0.0-0.1	.28	.28			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
264E2:														
El Dara-------	0-6	55-74	9-27	10-20	1.30-1.50	0.6-2	0.13-0.18	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	6-67	42-66	9-27	18-30	1.35-1.60	0.6-2	0.12-0.19	0.0-2.9	0.0-0.2	.32	.32			
	67-79	65-90	5-15	5-25	1.50-1.80	0.6-2	0.11-0.19	0.0-2.9	0.0-0.1	.28	.28			
264G:														
El Dara-------	0-5	55-74	9-27	10-20	1.30-1.50	0.6-2	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	5-8	48-74	9-50	5-20	1.35-1.55	0.6-2	0.10-0.18	0.0-2.9	0.0-0.5	.24	.24			
	8-45	42-66	9-27	18-30	1.35-1.60	0.6-2	0.12-0.19	0.0-2.9	0.0-0.2	.32	.32			
	45-60	65-90	5-15	5-25	1.50-1.80	0.6-2	0.11-0.19	0.0-2.9	0.0-0.1	.28	.28			
267A:														
Caseyville----	0-9	0-7	66-80	18-27	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-16	0-7	66-80	15-27	1.30-1.40	0.6-2	0.20-0.22	3.0-5.9	0.5-1.0	.49	.49			
	16-50	0-7	48-70	20-35	1.30-1.45	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	50-60	0-7	66-80	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
267B:														
Caseyville----	0-7	0-7	66-80	18-27	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-47	0-7	48-70	20-35	1.30-1.45	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	47-60	0-7	66-80	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
271C3:														
Timula--------	0-7	0-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	0.0-1.0	.55	.55	4	5	56
	7-22	1-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.55	.55			
	22-60	0-7	71-90	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.2-0.5	.55	.55			
271D3:														
Timula--------	0-7	0-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	0.0-1.0	.55	.55	4	5	56
	7-11	1-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.55	.55			
	11-60	0-7	71-90	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.2-0.5	.55	.55			
274F:														
Seaton--------	0-5	0-7	71-89	10-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	5-9	0-7	71-89	10-22	1.10-1.45	0.6-2	0.21-0.23	0.0-2.9	0.5-1.5	.49	.49			
	9-57	0-7	66-85	15-25	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	57-80	0-7	71-89	10-22	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.55	.55			
274G:														
Seaton--------	0-5	0-7	71-89	10-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	5-9	0-7	71-89	10-22	1.10-1.45	0.6-2	0.21-0.23	0.0-2.9	0.5-1.5	.49	.49			
	9-46	0-7	66-85	15-25	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	46-80	0-7	71-89	10-22	1.20-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.55	.55			
278A:														
Stronghurst---	0-8	1-5	66-80	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-47	1-4	58-78	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	47-60	1-4	66-80	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
279B:														
Rozetta-------	0-7	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-11	0-7	66-88	12-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	0.1-1.0	.49	.49			
	11-55	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.0-0.5	.37	.37			
	55-60	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
279C2:														
Rozetta-------	0-8	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	8-56	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	56-80	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
279C3:														
Rozetta-------	0-6	0-7	61-73	27-35	1.30-1.45	0.6-2	0.18-0.22	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	6-40	0-7	58-75	27-35	1.35-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	40-60	0-7	67-88	22-26	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
280B:														
Fayette-------	0-9	0-7	66-85	15-27	1.30-1.35	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-39	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	39-60	0-7	67-78	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
280C2:														
Fayette-------	0-8	0-7	66-75	25-27	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	8-64	0-7	58-75	25-35	1.30-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	64-80	0-7	67-88	22-26	1.45-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
280C3:														
Fayette-------	0-8	0-7	61-73	27-32	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	8-48	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			
	48-60	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			
280D2:														
Fayette-------	0-6	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
	6-48	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			
	48-60	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			
280D3:														
Fayette-------	0-8	0-7	61-73	27-32	1.35-1.45	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	8-36	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			
	36-60	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			
283B:														
Downsouth-----	0-7	0-7	66-80	18-27	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	2.0-3.0	.37	.37	5	6	48
	7-11	0-7	66-80	18-27	1.20-1.30	0.6-2	0.21-0.23	0.0-2.9	0.8-1.2	.43	.43			
	11-73	0-7	58-73	24-35	1.25-1.40	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	73-80	0-7	63-80	18-27	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
283C2:														
Downsouth-----	0-7	0-7	66-80	18-27	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.37	.37	5	6	48
	7-60	0-7	58-73	24-35	1.25-1.40	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.37	.37			
	60-80	0-7	63-80	18-27	1.30-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
403G:														
Elizabeth-----	0-4	15-40	33-67	18-27	1.15-1.25	0.6-2	0.15-0.20	0.0-2.9	2.0-5.0	.20	.24	1	8	0
	4-16	15-40	25-67	18-35	1.25-1.40	0.6-2	0.15-0.22	0.0-2.9	1.0-3.0	.20	.24			
	16-26	---	---	---	---	0.06-0.6	---	---	---	---	---			
441B:														
Wakenda-------	0-16	0-7	66-80	18-27	1.20-1.30	0.6-2	0.20-0.24	0.0-2.9	3.0-4.0	.28	.28	5	6	48
	16-76	0-7	58-73	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	76-80	0-7	63-80	20-30	1.20-1.50	0.6-2	0.20-0.22	3.0-5.9	0.0-0.5	.49	.49			
472D2, 472E2:														
Baylis--------	0-7	0-7	66-80	20-27	1.30-1.50	0.6-2	0.21-0.25	3.0-5.9	1.0-2.0	.43	.43	4	6	48
	7-24	0-7	63-73	27-35	1.35-1.60	0.6-2	0.20-0.24	3.0-5.9	0.0-1.0	.37	.37			
	24-80	15-20	38-65	32-42	1.25-1.45	0.6-2	0.06-0.08	3.0-5.9	0.0-0.5	.17	.20			
477B:														
Winfield------	0-8	0-7	66-80	20-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	8-13	0-7	66-80	22-30	1.30-1.50	0.6-2	0.18-0.22	3.0-5.9	0.5-1.0	.49	.49			
	13-33	0-7	58-73	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	33-60	0-7	66-80	20-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
477C2:														
Winfield------	0-7	0-7	66-80	20-27	1.30-1.50	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	7-33	0-7	58-73	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	33-60	0-7	66-80	20-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
477C3:														
Winfield------	0-7	0-7	63-73	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	7-33	0-7	58-76	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	33-80	0-7	66-80	20-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
515C2:														
Bunkum--------	0-7	0-7	67-82	18-26	1.25-1.35	0.2-0.6	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	7-50	0-7	58-75	25-35	1.25-1.45	0.2-0.6	0.16-0.22	3.0-5.9	0.0-0.5	.37	.37			
	50-65	8-25	48-74	18-27	1.30-1.50	0.2-0.6	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37			
	65-85	8-25	48-77	15-27	1.30-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
515C3:														
Bunkum--------	0-3	0-7	58-73	27-35	1.25-1.35	0.2-0.6	0.20-0.24	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	3-50	0-7	58-73	25-36	1.25-1.45	0.2-0.6	0.16-0.22	3.0-5.9	0.0-0.5	.37	.37			
	50-65	8-25	48-74	18-27	1.30-1.50	0.2-0.6	0.18-0.22	0.0-2.9	0.5-1.0	.37	.37			
	65-80	8-25	50-77	15-27	1.30-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
515D2:														
Bunkum--------	0-7	0-7	67-82	18-26	1.25-1.35	0.2-0.6	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	7-50	0-7	58-75	25-35	1.25-1.45	0.2-0.6	0.16-0.22	3.0-5.9	0.0-0.5	.37	.37			
	50-65	8-25	48-74	18-27	1.30-1.50	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
	65-85	8-25	48-77	15-27	1.30-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
515D3:														
Bunkum--------	0-3	0-7	58-73	27-35	1.25-1.35	0.2-0.6	0.20-0.24	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	3-50	0-7	58-75	25-35	1.25-1.45	0.2-0.6	0.16-0.22	3.0-5.9	0.0-0.5	.37	.37			
	50-65	8-25	48-74	18-27	1.30-1.50	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
	65-80	8-25	48-77	15-27	1.30-1.55	0.2-0.6	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
549E2:														
Marseilles----	0-6	0-15	58-80	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	3	6	48
	6-35	0-25	43-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-6.0	0.0-1.0	.37	.37			
	35-60	---	---	---	---	0.0015-0.2	---	---	---	---	---			
549F, 549G:														
Marseilles----	0-10	0-15	58-80	20-27	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.32	.32	3	6	48
	10-35	0-25	43-73	27-42	1.35-1.60	0.06-0.2	0.09-0.20	3.0-6.0	0.0-0.5	.37	.37			
	35-60	---	---	---	---	0.0015-0.2	---	---	---	---	---			
559F, 559G:														
Lindley-------	0-6	23-52	28-50	18-27	1.20-1.40	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	6-58	20-60	15-53	25-35	1.35-1.55	0.2-0.6	0.14-0.18	3.0-5.9	0.1-1.0	.32	.32			
	58-80	23-52	28-50	18-32	1.40-1.60	0.2-0.6	0.12-0.16	3.0-5.9	0.1-0.5	.37	.37			
605D2:														
Ursa----------	0-6	5-25	45-75	15-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	3	6	48
	6-56	15-35	30-50	35-45	1.50-1.70	0.06-0.2	0.09-0.17	6.0-8.9	0.5-1.0	.28	.28			
	56-80	15-40	25-45	25-45	1.55-1.75	0.06-0.2	0.08-0.17	3.0-5.9	0.0-0.5	.28	.28			
605D3:														
Ursa----------	0-4	5-20	45-70	35-40	1.40-1.60	0.2-0.6	0.11-0.19	3.0-5.9	0.0-1.0	.28	.28	2	4	86
	4-45	15-35	30-50	35-45	1.50-1.70	0.06-0.2	0.09-0.17	6.0-8.9	0.5-1.0	.28	.28			
	45-79	15-40	25-45	25-45	1.55-1.75	0.06-0.2	0.08-0.17	3.0-5.9	0.0-0.5	.28	.28			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
605E2:														
Ursa----------	0-6	5-25	45-75	15-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	3	6	48
	6-43	15-35	30-50	35-45	1.50-1.70	0.06-0.2	0.09-0.17	6.0-8.9	0.5-1.0	.28	.28			
	43-60	15-40	25-45	25-45	1.55-1.75	0.06-0.2	0.08-0.18	3.0-5.9	0.2-0.5	.28	.28			
606F, 606G:														
Goss----------	0-7	10-25	48-80	10-27	1.10-1.30	2-6	0.06-0.17	0.0-2.9	1.0-3.0	.28	.32	2	7	38
	7-11	5-25	45-75	20-30	1.10-1.30	2-6	0.06-0.10	0.0-2.9	0.0-0.1	.32	.37			
	11-80	5-20	0-60	35-80	1.30-1.50	0.6-2	0.04-0.09	3.0-5.9	0.0-0.5	.15	.17			
630B2:														
Navlys--------	0-9	0-7	66-86	20-27	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	9-27	0-7	58-75	25-36	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.2-1.0	.37	.37			
	27-60	0-7	66-82	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
630C2:														
Navlys--------	0-6	0-7	66-80	20-27	1.20-1.40	0.6-2	0.20-0.22	3.0-5.9	1.0-2.0	.43	.43	5	6	48
	6-27	0-7	58-75	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	27-60	0-7	66-82	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
630C3:														
Navlys--------	0-6	0-7	61-73	27-32	1.25-1.45	0.6-2	0.20-0.22	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	6-31	0-7	58-75	25-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-1.0	.37	.37			
	31-60	0-7	66-82	18-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.49	.49			
651D2:														
Keswick-------	0-8	23-40	28-50	22-27	1.45-1.50	0.6-2	0.17-0.22	3.0-5.9	1.0-2.0	.32	.32	3	6	48
	8-47	15-35	30-50	35-55	1.55-1.60	0.06-0.2	0.11-0.15	6.0-8.9	0.0-0.5	.28	.28			
	47-60	20-40	25-45	30-40	1.60-1.75	0.2-0.6	0.12-0.16	3.0-5.9	0.0-0.5	.28	.28			
651D3:														
Keswick-------	0-5	20-45	45-53	27-40	1.45-1.50	0.2-0.6	0.17-0.19	3.0-5.9	0.0-1.0	.28	.28	2	6	48
	5-37	15-30	30-50	35-55	1.55-1.60	0.06-0.2	0.11-0.15	6.0-8.9	0.0-0.5	.28	.28			
	37-60	20-40	25-45	30-40	1.60-1.75	0.2-0.6	0.12-0.16	3.0-5.9	0.0-0.5	.28	.28			
651E2:														
Keswick-------	0-8	23-40	28-50	22-27	1.45-1.50	0.6-2	0.17-0.22	3.0-5.9	1.0-2.0	.32	.32	3	6	48
	8-47	15-35	30-50	35-55	1.55-1.60	0.06-0.2	0.11-0.15	6.0-8.9	0.0-0.5	.28	.28			
	47-60	20-40	25-45	30-40	1.60-1.75	0.2-0.6	0.12-0.16	3.0-5.9	0.0-0.5	.28	.28			
652C2:														
Passport------	0-5	10-23	50-75	15-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	5	6	48
	5-45	12-35	30-70	18-35	1.40-1.60	0.2-0.6	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	45-84	15-40	15-60	25-45	1.45-1.65	0.06-0.2	0.14-0.19	6.0-8.9	0.0-0.5	.28	.28			
652C3:														
Passport------	0-3	10-20	45-63	27-35	1.35-1.55	0.2-0.6	0.21-0.23	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	3-35	12-35	30-70	18-35	1.40-1.60	0.2-0.6	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	35-80	15-40	15-60	25-45	1.45-1.65	0.06-0.2	0.14-0.19	6.0-8.9	0.0-0.5	.28	.28			
652D2:														
Passport------	0-5	10-23	50-75	15-27	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.32	.32	5	6	48
	5-45	12-35	30-70	18-35	1.40-1.60	0.2-0.6	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	45-84	15-40	15-60	25-45	1.45-1.65	0.06-0.2	0.14-0.19	6.0-8.9	0.0-0.5	.28	.28			
652D3:														
Passport------	0-3	10-20	45-63	27-35	1.35-1.55	0.2-0.6	0.21-0.23	3.0-5.9	0.0-1.0	.37	.37	4	6	48
	3-35	12-35	30-70	18-35	1.40-1.60	0.2-0.6	0.15-0.20	3.0-5.9	0.0-1.0	.37	.37			
	35-84	15-40	15-60	25-45	1.45-1.65	0.06-0.2	0.14-0.19	6.0-8.9	0.0-0.5	.28	.28			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
699A:														
Timewell------	0-18	0-7	65-80	20-27	1.15-1.30	0.6-2	0.22-0.24	3.0-5.9	3.0-4.0	.28	.28	5	6	48
	18-40	0-7	45-70	35-42	1.20-1.40	0.2-0.6	0.12-0.17	6.0-8.9	0.0-1.0	.37	.37			
	40-67	0-7	50-70	25-40	1.20-1.40	0.2-0.6	0.16-0.20	3.0-5.9	0.0-0.5	.37	.37			
	67-80	0-7	40-80	20-30	1.30-1.50	0.6-2	0.16-0.21	3.0-5.9	0.0-0.5	.49	.49			
785G:														
Lacrescent----	0-21	15-38	50-67	18-27	1.25-1.40	0.6-2	0.15-0.22	0.0-2.9	3.0-5.0	.32	.37	5	7	38
	21-38	20-60	28-77	8-23	1.30-1.50	0.6-6	0.06-0.09	0.0-2.9	0.5-2.0	.43	.49			
	38-60	20-60	28-77	8-20	1.30-1.50	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.37	.49			
835G:														
Earthen Dam.														
856E2:														
Stookey-------	0-9	0-7	71-89	12-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	9-60	0-7	66-85	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	60-80	0-7	71-89	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
Timula--------	0-7	0-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	7-22	1-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
	22-60	0-7	71-90	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.2-0.5	.55	.55			
856F, 856G:														
Stookey-------	0-6	0-7	71-80	12-22	1.10-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-9	0-7	71-80	12-22	1.10-1.45	0.6-2	0.21-0.23	0.0-2.9	0.8-1.2	.49	.49			
	9-60	0-7	66-80	18-27	1.20-1.60	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	60-80	0-7	71-90	10-24	1.20-1.50	0.6-2	0.18-0.20	0.0-2.9	0.0-0.5	.55	.55			
Timula--------	0-7	0-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-22	1-7	66-85	10-18	1.30-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
	22-60	0-7	71-90	10-18	1.40-1.60	0.6-2	0.18-0.20	0.0-2.9	0.2-0.5	.55	.55			
864:														
Pits, quarries.														
865:														
Pits, gravel.														
1070A:														
Beaucoup------	0-21	1-15	55-70	27-35	1.15-1.35	0.2-0.6	0.15-0.20	3.0-5.9	5.0-6.0	.28	.28	5	6	48
	21-42	1-15	55-70	27-35	1.30-1.50	0.2-0.6	0.18-0.20	3.0-5.9	1.0-2.0	.32	.32			
	42-60	5-50	45-70	10-30	1.35-1.55	0.2-0.6	0.18-0.22	3.0-5.9	0.5-1.0	.32	.32			
3028A:														
Jules---------	0-8	5-15	72-86	10-20	1.15-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	8-60	5-15	72-86	10-18	1.20-1.50	0.6-2	0.17-0.22	0.0-2.9	0.0-0.5	.55	.55			
3070A, 3070L:														
Beaucoup------	0-16	1-15	55-70	27-35	1.15-1.35	0.2-0.6	0.15-0.20	3.0-5.9	5.0-6.0	.28	.28	5	6	48
	16-64	1-15	55-70	27-35	1.30-1.50	0.2-0.6	0.18-0.20	3.0-5.9	1.0-2.0	.32	.32			
	64-80	5-55	35-70	10-30	1.35-1.55	0.2-0.6	0.18-0.22	3.0-5.9	0.5-1.0	.32	.32			
3071L:														
Darwin--------	0-16	1-10	40-58	40-55	1.20-1.40	0.01-0.06	0.11-0.14	9.0-25.0	4.0-5.0	.24	.24	5	4	86
	16-62	1-10	35-50	45-60	1.30-1.50	0.01-0.06	0.11-0.14	9.0-25.0	0.5-1.5	.28	.28			
	62-80	5-15	35-60	30-55	1.40-1.60	0.06-0.2	0.10-0.20	6.0-8.9	0.2-0.8	.28	.28			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
3092A, 3092L:														
Sarpy---	0-10	70-90	0-30	2-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02	5	2	134
	10-60	70-95	0-30	2-5	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.02	.02			
3302L:														
Ambraw---	0-17	20-45	15-53	27-35	1.30-1.50	0.6-2	0.15-0.19	3.0-5.9	2.0-4.0	.24	.24	5	6	48
	17-43	20-60	15-53	24-35	1.45-1.70	0.2-0.6	0.15-0.24	3.0-5.9	0.0-1.0	.28	.28			
	43-80	20-60	10-45	18-30	1.50-1.70	0.2-0.6	0.10-0.20	0.0-2.9	0.0-1.0	.24	.24			
3331A:														
Haymond---	0-7	1-15	70-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-69	5-35	60-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.49	.49			
	69-80	5-65	45-70	5-26	1.30-1.50	0.6-2	0.14-0.22	0.0-2.9	0.0-1.0	.55	.55			
3331L:														
Haymond---	0-7	1-15	70-85	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-68	5-25	60-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.49	.49			
	68-79	5-65	45-70	5-26	1.30-1.50	0.6-2	0.14-0.22	0.0-2.9	0.0-1.0	.55	.55			
3333A:														
Wakeland---	0-10	5-25	55-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	10-50	5-25	55-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.0-1.0	.55	.55			
	50-80	5-25	45-80	10-18	1.30-1.50	0.6-2	0.18-0.24	0.0-2.9	0.0-0.5	.55	.55			
3333L:														
Wakeland---	0-8	5-15	70-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	8-68	5-15	70-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.2-0.8	.55	.55			
	68-80	5-45	45-70	10-20	1.30-1.50	0.6-2	0.18-0.24	0.0-2.9	0.1-0.5	.55	.55			
3404A:														
Titus---	0-13	1-15	45-65	35-45	1.30-1.50	0.06-0.2	0.11-0.18	6.0-8.9	2.0-4.0	.28	.28	5	4	86
	13-67	1-15	45-65	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	67-79	15-30	40-60	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.32	.32			
3404L:														
Titus---	0-13	1-15	40-65	35-45	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
	13-67	1-15	35-60	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	67-80	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			
3415A:														
Orion---	0-7	1-15	67-89	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-22	2-15	67-88	9-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55	.55			
	22-60	2-15	55-88	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	3.0-8.0	.37	.37			
	60-80	2-15	67-88	9-18	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
3415L:														
Orion---	0-6	1-15	67-89	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-22	2-15	67-88	10-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55	.55			
	22-60	2-15	55-88	10-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	3.0-8.0	.37	.37			
	60-80	2-15	67-88	10-18	1.20-1.40	0.6-2	0.18-0.22	0.0-2.9	0.0-0.5	.37	.37			
3428A, 3428L:														
Coffeen---	0-17	1-15	58-84	15-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.32	.32	5	6	48
	17-33	1-15	67-89	10-18	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
	33-60	15-50	20-80	5-15	1.50-1.70	0.6-6	0.11-0.19	0.0-2.9	0.0-0.5	.32	.32			
3475A, 3475L:														
Elsah---	0-6	23-52	28-50	10-20	1.40-1.60	0.6-2	0.13-0.18	0.0-2.9	1.0-2.0	.28	.32	5	6	48
	6-12	20-50	40-70	8-18	1.30-1.50	0.6-2	0.08-0.17	0.0-2.9	0.0-0.5	.28	.32			
	12-60	23-52	28-50	5-18	1.50-1.75	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.28	.32			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
3877L:														
Blake---------	0-14	0-15	50-80	18-27	1.25-1.30	0.6-2	0.20-0.22	3.0-5.9	1.0-3.0	.37	.37	5	4L	86
	14-60	0-15	50-80	22-35	1.25-1.30	0.6-2	0.20-0.22	3.0-5.9	0.0-1.0	.49	.49			
Slacwater-----	0-12	0-15	50-80	18-27	1.35-1.65	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	12-80	0-15	40-80	8-35	1.35-1.55	0.6-2	0.17-0.20	3.0-5.9	0.0-0.5	.32	.32			
7037B:														
Worthen-------	0-30	0-15	63-88	12-22	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	30-63	0-15	59-85	15-26	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.5-2.0	.49	.49			
	63-80	10-25	51-75	15-26	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.2-0.8	.49	.49			
7075B:														
Drury---------	0-7	1-15	70-80	15-25	1.20-1.40	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.49	.49	5	5	56
	7-43	1-15	65-80	18-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.1-0.5	.49	.49			
	43-80	5-25	45-77	15-22	1.30-1.50	0.6-2	0.12-0.21	0.0-2.9	0.1-0.3	.49	.49			
7242A:														
Kendall-------	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
	9-14	0-10	65-82	18-25	1.25-1.45	0.6-2	0.20-0.22	0.0-2.9	0.1-1.0	.49	.49			
	14-54	0-10	55-73	27-35	1.30-1.50	0.6-2	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	54-60	1-10	33-70	15-27	1.45-1.55	0.6-2	0.18-0.21	0.0-2.9	0.0-0.5	.43	.43			
	60-80	30-50	35-52	5-28	1.55-1.70	0.6-2	0.11-0.20	0.0-2.9	0.0-0.5	.28	.28			
7430B:														
Raddle--------	0-15	0-15	63-88	12-22	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	15-60	0-15	59-85	15-26	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.5-2.0	.49	.49			
7815B:														
Udorthents----	0-60	1-15	63-80	20-35	1.35-1.55	0.2-2	0.18-0.22	3.0-5.9	0.2-1.0	.49	.49	5	6	48
8070A:														
Beaucoup------	0-15	0-15	55-70	27-35	1.15-1.35	0.2-0.6	0.15-0.20	3.0-5.9	5.0-6.0	.28	.28	5	6	48
	15-48	0-15	55-70	27-35	1.30-1.50	0.2-0.6	0.18-0.20	3.0-5.9	0.0-2.0	.32	.32			
	48-60	5-50	45-70	15-30	1.35-1.55	0.2-0.6	0.18-0.22	3.0-5.9	0.0-1.0	.32	.32			
	60-80	5-50	45-70	10-30	1.40-1.65	0.2-0.6	0.18-0.22	3.0-5.9	0.0-1.0	.32	.32			
8071A:														
Darwin--------	0-12	1-10	40-58	40-45	1.20-1.40	0.01-0.06	0.11-0.14	9.0-25.0	4.0-5.0	.28	.28	5	4	86
	12-40	1-10	35-50	45-60	1.30-1.50	0.01-0.06	0.11-0.14	9.0-25.0	0.0-2.0	.28	.28			
	40-60	5-15	35-60	30-55	1.40-1.60	0.06-0.2	0.10-0.20	6.0-8.9	0.0-0.5	.32	.32			
8092A:														
Sarpy---------	0-9	85-90	0-14	0-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02	5	1	220
	9-60	70-95	0-30	0-5	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02			
8162A:														
Gorham--------	0-10	5-15	45-65	27-40	1.30-1.50	0.2-0.6	0.13-0.20	3.0-5.9	4.0-5.0	.28	.28	5	4	86
	10-40	5-15	45-65	27-42	1.35-1.55	0.2-0.6	0.11-0.18	3.0-5.9	0.0-1.0	.32	.32			
	40-44	30-70	20-40	15-32	1.40-1.65	0.6-2	0.15-0.19	3.0-5.9	0.0-0.5	.32	.32			
	44-80	60-95	2-18	5-15	1.50-1.75	2-20	0.05-0.13	0.0-2.9	0.0-0.5	.02	.02			
8180A:														
Dupo----------	0-7	1-10	67-89	10-18	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	7-36	2-10	67-88	10-18	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.0-0.5	.55	.55			
	36-85	5-10	35-60	35-55	1.35-1.60	0.06-0.2	0.08-0.19	6.0-8.9	0.0-1.0	.28	.28			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
8183A:														
Shaffton------	0-12	20-70	20-40	27-35	1.45-1.55	0.6-2	0.20-0.22	3.0-5.9	2.0-3.0	.24	.24	5	6	48
	12-32	20-70	20-40	22-35	1.55-1.65	0.6-2	0.17-0.19	3.0-5.9	1.0-3.0	.28	.28			
	32-36	55-74	9-24	8-16	1.65-1.70	6-20	0.05-0.08	0.0-2.9	0.0-0.5	.24	.24			
	36-51	19-74	9-41	10-30	1.45-1.50	0.6-2	0.17-0.19	3.0-5.9	0.0-0.5	.24	.24			
	51-60	65-95	2-18	5-15	1.65-1.75	>20	0.03-0.05	0.0-2.9	0.0-0.5	.02	.02			
8217A:														
Twomile-------	0-10	0-15	67-90	10-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	10-26	0-15	67-90	10-18	1.35-1.45	0.6-2	0.22-0.24	0.0-2.9	0.5-1.0	.49	.49			
	26-58	0-15	50-75	25-35	1.30-1.40	0.06-0.2	0.08-0.10	3.0-5.9	0.0-0.5	.49	.49			
	58-80	10-25	40-78	12-35	1.30-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-0.5	.49	.49			
8284A:														
Tice----------	0-14	1-15	50-72	27-35	1.25-1.45	0.6-2	0.21-0.24	3.0-5.9	2.0-4.0	.28	.28	5	6	48
	14-80	1-15	50-75	24-35	1.30-1.50	0.6-2	0.18-0.21	3.0-5.9	0.0-1.0	.32	.32			
8288A:														
Petrolia------	0-11	0-19	51-70	20-27	1.30-1.45	0.6-2	0.22-0.24	3.0-5.9	2.0-3.0	.37	.37	5	6	48
	11-33	0-19	40-70	27-35	1.35-1.45	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
	33-80	0-40	40-80	20-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.2-1.0	.32	.32			
8302A:														
Ambraw--------	0-16	20-45	15-53	27-35	1.30-1.55	0.6-2	0.15-0.22	3.0-5.9	2.0-3.0	.24	.24	5	6	48
	16-33	20-40	15-53	25-35	1.30-1.55	0.2-0.6	0.08-0.19	3.0-5.9	0.5-2.0	.28	.28			
	33-41	20-60	15-53	24-35	1.40-1.65	0.2-2	0.10-0.15	3.0-5.9	0.5-1.0	.28	.28			
	41-70	20-60	10-45	18-30	1.35-1.65	0.2-2	0.11-0.22	0.0-2.9	0.5-1.0	.24	.24			
8331A:														
Haymond-------	0-14	1-15	70-85	10-20	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-44	5-35	60-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.2-0.8	.49	.49			
	44-80	5-65	30-70	5-26	1.30-1.50	0.6-2	0.14-0.22	0.0-2.9	0.1-0.5	.55	.55			
8333A:														
Wakeland------	0-10	5-15	70-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	10-50	5-15	70-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.0-1.0	.55	.55			
	50-80	5-45	45-70	10-20	1.30-1.50	0.6-2	0.18-0.24	0.0-2.9	0.0-0.5	.55	.55			
8349B:														
Zumbro--------	0-11	55-74	9-24	5-15	1.35-1.45	2-6	0.13-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	11-33	70-87	0-30	2-10	1.45-1.55	6-20	0.10-0.12	0.0-2.9	1.0-2.0	.02	.02			
	33-42	85-95	0-15	0-10	1.45-1.60	6-20	0.06-0.11	0.0-2.9	0.0-2.0	.02	.02			
	42-80	85-95	0-15	0-5	1.55-1.65	6-20	0.02-0.07	0.0-2.9	0.0-1.0	.02	.02			
8395A:														
Ceresco-------	0-14	23-52	28-50	10-15	1.35-1.60	2-6	0.20-0.24	0.0-2.9	3.0-5.0	.32	.32	5	5	56
	14-42	49-74	9-51	10-20	1.40-1.70	0.6-6	0.09-0.17	0.0-2.9	0.5-1.0	.24	.24			
	42-60	20-90	10-80	8-18	1.40-1.70	0.6-6	0.11-0.20	0.0-2.9	0.0-1.0	.24	.24			
8396A:														
Vesser--------	0-10	0-15	59-80	20-26	1.30-1.45	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	10-22	0-15	63-82	18-22	1.35-1.45	0.6-2	0.20-0.22	0.0-2.9	0.1-1.0	.43	.43			
	22-37	0-15	63-82	18-27	1.35-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
	37-60	0-15	63-85	11-27	1.35-1.45	0.6-2	0.20-0.22	0.0-2.9	0.0-1.0	.49	.49			
8404A:														
Titus---------	0-13	2-9	51-63	35-40	1.30-1.50	0.06-0.2	0.18-0.22	6.0-8.9	2.0-4.0	.28	.28	5	4	86
	13-68	2-15	40-64	35-45	1.30-1.60	0.06-0.2	0.11-0.22	6.0-8.9	0.2-1.0	.32	.32			
	68-80	15-30	40-65	20-30	1.45-1.75	0.2-0.6	0.10-0.20	3.0-5.9	0.2-0.5	.32	.32			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
8415A:														
Orion---------	0-6	1-15	67-89	10-18	1.20-1.30	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-25	2-15	67-88	10-18	1.20-1.30	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55	.55			
	25-60	2-15	55-88	5-30	1.25-1.45	0.6-2	0.18-0.22	0.0-2.9	3.0-8.0	.37	.37			
8428A:														
Coffeen-------	0-15	1-15	58-84	15-27	1.35-1.55	0.6-2	0.22-0.25	0.0-2.9	2.0-3.0	.32	.32	5	6	48
	15-42	1-15	67-89	10-18	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.0-2.0	.49	.49			
	42-60	15-50	20-80	5-15	1.50-1.70	0.6-6	0.11-0.19	0.0-2.9	0.0-2.0	.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			
8452A:														
Riley---------	0-13	0-20	40-73	27-35	1.15-1.35	0.6-2	0.17-0.23	3.0-5.9	3.0-4.0	.28	.28	4	6	48
	13-27	18-60	25-60	24-35	1.25-1.45	0.6-2	0.16-0.20	3.0-5.9	0.5-2.0	.32	.32			
	27-60	70-90	5-30	2-10	1.65-1.80	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.02	.02			
8634A:														
Blyton--------	0-11	5-20	50-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	11-25	5-20	50-80	10-18	1.30-1.50	0.6-2	0.20-0.24	0.0-2.9	0.5-2.0	.55	.55			
	25-64	10-40	40-80	10-18	1.30-1.50	0.6-2	0.18-0.24	0.0-2.9	0.5-1.0	.49	.49			
8674A:														
Dozaville-----	0-18	5-15	60-75	18-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	2.0-4.0	.32	.32	5	6	48
	18-59	5-15	60-75	18-24	1.20-1.40	0.6-2	0.20-0.22	0.0-2.9	0.5-1.5	.49	.49			
	59-80	5-25	49-80	10-18	1.30-1.50	0.6-2	0.18-0.24	0.0-2.9	0.5-1.0	.49	.49			
8789A:														
Ambraw--------	0-13	23-52	28-50	10-20	1.25-1.45	0.6-2	0.15-0.19	3.0-5.9	2.0-3.0	.32	.32	5	5	56
	13-35	20-60	15-53	24-35	1.40-1.65	0.2-2	0.10-0.15	3.0-5.9	0.5-1.0	.32	.32			
	35-60	20-60	10-45	18-30	1.35-1.65	0.2-2	0.11-0.22	0.0-2.9	0.5-1.0	.24	.24			
Ceresco-------	0-14	23-52	28-50	10-15	1.35-1.60	2-6	0.20-0.24	0.0-2.9	3.0-5.0	.32	.32	5	5	56
	14-42	49-74	9-51	10-20	1.40-1.70	0.6-6	0.09-0.17	0.0-2.9	0.5-1.0	.24	.24			
	42-60	20-90	10-80	8-18	1.40-1.70	0.6-6	0.11-0.20	0.0-2.9	0.0-1.0	.24	.24			
Sarpy---------	0-10	70-90	0-30	0-15	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02	5	2	134
	10-60	70-95	0-30	0-10	1.20-1.50	6-20	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02			
9278A:														
Stronghurst---	0-7	0-7	66-80	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-11	0-7	66-80	20-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.49	.49			
	11-47	0-7	58-78	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	47-60	0-7	66-80	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
9278B:														
Stronghurst---	0-7	0-7	66-80	20-27	1.25-1.45	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	7-11	0-7	66-80	20-27	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.49	.49			
	11-43	0-7	58-78	22-35	1.30-1.55	0.6-2	0.18-0.20	3.0-5.9	0.5-1.0	.37	.37			
	43-60	0-7	66-80	20-27	1.35-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
9279B:														
Rozetta-------	0-9	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-3.0	.43	.43	5	6	48
	9-66	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	66-76	0-7	63-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			

Table 20.--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			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*					
9279C2:														
Rozetta-------	0-7	0-7	66-85	15-27	1.20-1.40	0.6-2	0.22-0.24	0.0-2.9	1.0-2.0	.43	.43	5	6	48
	7-66	0-7	58-73	27-35	1.35-1.55	0.6-2	0.18-0.22	3.0-5.9	0.2-0.5	.37	.37			
	66-70	0-7	66-80	20-30	1.40-1.60	0.6-2	0.20-0.22	0.0-2.9	0.2-0.5	.49	.49			
M-W:														
Miscellaneous water.														
W:														
Water.														

Table 21.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
8D2:				
Hickory	0-6	4.5-7.3	14-19	0
	6-51	4.5-7.3	14-18	0
	51-60	5.1-8.4	9.0-19	0-25
8D3:				
Hickory	0-5	4.5-7.3	17-23	0
	5-30	4.5-7.3	12-18	0
	30-40	4.5-7.3	12-18	0
	40-60	5.6-8.4	5.0-15	0-25
8E2:				
Hickory	0-6	4.5-7.3	14-19	0
	6-51	4.5-7.3	14-18	0
	51-60	5.6-8.4	5.0-15	0-25
8F:				
Hickory	0-4	4.5-7.3	14-19	0
	4-12	4.5-7.3	9.0-14	0
	12-53	4.5-7.3	12-19	0
	53-58	5.1-7.8	9.0-19	0-15
	58-63	5.6-8.4	5.0-15	0-25
8G:				
Hickory	0-4	4.5-7.3	14-19	0
	4-12	4.5-7.3	9.0-14	0
	12-40	4.5-7.3	12-19	0
	40-58	5.1-7.8	9.0-19	0-15
	58-63	5.6-8.4	5.0-15	0-25
17A:				
Keomah	0-11	5.1-7.3	10-26	0
	11-18	5.1-7.3	9.0-24	0
	18-33	5.1-6.5	28-41	0
	33-51	5.6-7.3	16-29	0
	51-89	6.1-7.3	8.0-18	0-15
17B:				
Keomah	0-9	5.1-7.3	10-26	0
	9-31	5.1-6.5	28-41	0
	31-51	5.6-7.3	16-29	0
	51-80	6.1-7.3	8.0-18	0-15
19D3:				
Sylvan	0-9	5.6-7.3	17-21	0
	9-28	5.6-7.3	15-22	0
	28-60	6.6-8.4	6.0-18	0-35
30F, 30G:				
Hamburg	0-7	6.6-8.4	4.0-8.0	0-30
	7-60	7.4-8.4	4.0-8.0	12-30
43A:				
Ipava	0-10	5.6-7.3	16-32	0
	10-18	5.6-7.3	25-38	0
	18-31	5.6-7.3	22-39	0
	31-50	6.6-7.8	17-31	0-5
	50-60	7.4-8.4	9.0-22	0-15

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
43B:				
Ipava	0-17	5.6-7.3	20-27	0
	17-58	5.6-7.8	22-27	0-5
	58-60	6.1-8.4	12-19	0-15
50A:				
Virden	0-16	5.6-7.8	24-30	0
	16-49	5.6-7.8	21-27	0
	49-60	5.6-8.4	15-20	0-25
75C:				
Drury	0-7	5.6-7.8	8.0-16	0
	7-43	5.6-7.3	11-16	0
	43-80	6.1-7.8	9.0-12	0-15
75C2:				
Drury	0-6	5.6-7.8	8.0-16	0
	6-31	5.6-7.3	12-16	0
	31-80	5.6-7.8	9.0-12	0-15
79B:				
Menfro	0-8	5.1-7.3	10-16	0
	8-14	5.1-7.3	15-20	0
	14-40	5.1-7.3	16-22	0
	40-80	5.1-7.3	5.0-10	0
79C2:				
Menfro	0-9	5.1-7.3	10-16	0
	9-37	5.1-7.3	16-22	0
	37-80	5.1-7.3	5.0-10	0
79C3:				
Menfro	0-6	5.1-7.3	16-20	0
	6-39	5.1-7.3	16-22	0
	39-80	5.1-7.3	5.0-10	0
79D2:				
Menfro	0-8	5.1-7.3	10-16	0
	8-37	5.1-7.3	16-22	0
	37-80	5.1-7.3	5.0-10	0
79D3:				
Menfro	0-4	5.1-7.3	16-20	0
	4-37	5.1-7.3	16-22	0
	37-80	5.1-7.3	5.0-10	0
79E2:				
Menfro	0-6	5.1-7.3	18-25	0
	6-37	5.1-7.3	16-22	0
	37-80	5.1-7.3	15-20	0
90A:				
Bethalto	0-8	5.6-7.3	16-24	0
	8-14	5.1-7.3	10-18	0
	14-63	5.1-7.8	15-28	0
	63-80	5.6-8.4	12-20	0-15
119D2:				
Elco	0-6	5.6-7.3	14-22	0
	6-28	5.1-7.8	14-22	0
	28-60	5.1-7.8	15-27	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
119D3:				
Elco	0-5	5.6-7.3	16-22	0
	5-26	5.1-7.8	14-22	0
	26-60	5.1-7.8	15-27	0
119E2:				
Elco	0-2	5.6-7.3	14-22	0
	2-9	5.6-7.3	14-22	0
	9-32	5.1-7.8	14-22	0
	32-60	5.1-7.8	15-27	0
175F, 175G:				
Lamont	0-3	5.1-7.3	10-15	0
	3-6	5.1-7.3	10-15	0
	6-80	5.1-7.3	10-15	0
216B:				
Stookey	0-7	4.5-7.3	14-22	0
	7-10	4.5-7.3	14-22	0
	10-65	4.5-6.5	12-18	0
	65-80	5.6-8.4	8.0-16	0-5
216C2:				
Stookey	0-9	4.5-7.3	14-22	0
	9-43	4.5-6.5	12-18	0
	43-79	5.6-8.4	8.0-16	0-5
216C3:				
Stookey	0-5	4.5-7.3	14-22	0
	5-43	4.5-6.5	12-18	0
	43-79	5.6-8.4	8.0-16	0-5
216D2:				
Stookey	0-9	4.5-7.3	14-22	0
	9-43	4.5-6.5	12-18	0
	43-80	5.6-8.4	8.0-16	0-5
216D3:				
Stookey	0-5	4.5-7.3	14-22	0
	5-43	4.5-6.5	12-18	0
	43-79	5.6-8.4	8.0-16	0-5
257A:				
Clarksdale	0-8	5.1-7.3	10-22	0
	8-16	5.1-7.3	9.0-18	0
	16-47	5.1-7.3	21-28	0
	47-67	6.1-8.4	12-19	0-15
	67-80	6.1-8.4	12-18	0-15
257B:				
Clarksdale	0-9	5.1-7.3	10-22	0
	9-29	5.1-7.3	21-28	0
	29-47	5.6-7.3	16-23	0
	47-80	6.1-8.4	12-18	0-15
264D3:				
El Dara	0-3	4.5-7.8	8.0-18	0
	3-47	4.5-7.3	10-17	0
	47-60	4.5-6.0	3.0-15	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
264E2:				
El Dara	0-6	4.5-7.8	8.0-21	0
	6-67	4.5-7.3	11-17	0
	67-79	4.5-6.0	3.0-15	0
264G:				
El Dara	0-5	4.5-7.8	8.0-21	0
	5-8	4.5-7.3	3.0-13	0
	8-45	4.5-7.3	11-16	0
	45-60	4.5-6.0	3.0-15	0
267A:				
Caseyville	0-9	5.1-7.3	16-24	0
	9-16	4.5-6.5	10-18	0
	16-50	4.5-6.5	15-28	0
	50-60	5.6-7.8	12-20	0-15
267B:				
Caseyville	0-7	5.1-7.3	16-24	0
	7-47	4.5-6.5	15-28	0
	47-60	5.6-7.8	12-20	0-15
271C3:				
Timula	0-7	6.1-7.8	8.0-15	0-5
	7-22	6.1-7.8	8.0-15	0-5
	22-60	7.4-8.4	6.0-12	5-35
271D3:				
Timula	0-7	6.6-7.8	8.0-15	1-5
	7-11	6.6-7.8	8.0-15	1-5
	11-60	7.4-8.4	6.0-12	5-35
274F:				
Seaton	0-5	5.6-7.3	8.0-19	0
	5-9	5.6-7.3	8.0-19	0
	9-57	4.5-7.3	11-16	0
	57-80	5.6-8.4	6.0-15	0-35
274G:				
Seaton	0-5	5.6-7.3	8.0-19	0
	5-9	5.6-7.3	8.0-19	0
	9-46	4.5-7.3	11-16	0
	46-80	4.5-7.3	11-16	0
278A:				
Stronghurst	0-8	5.1-7.3	14-22	0
	8-47	5.1-7.3	17-23	0
	47-60	5.6-7.8	12-17	0-15
279B:				
Rozetta	0-7	5.1-7.3	10-22	0
	7-11	4.5-7.3	7.0-17	0
	11-55	4.5-6.0	16-22	0
	55-60	5.6-7.8	12-17	0-15
279C2:				
Rozetta	0-8	5.1-7.3	10-22	0
	8-56	4.5-6.0	16-22	0
	56-80	5.6-7.8	12-17	0-15

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
279C3:				
Rozetta---	0-6	5.1-7.3	16-20	0
	6-40	4.5-6.5	16-22	0
	40-60	5.6-7.8	5.0-10	0-15
280B:				
Fayette---	0-9	5.1-7.3	15-20	0
	9-39	4.5-6.0	15-23	0
	39-60	5.1-7.8	15-20	0-15
280C2:				
Fayette---	0-8	5.1-7.3	18-25	0
	8-64	4.5-6.0	15-22	0
	64-80	5.1-7.8	15-20	0-15
280C3:				
Fayette---	0-8	5.1-7.3	25-30	0
	8-48	4.5-6.0	15-22	0
	48-60	5.1-7.8	15-20	0-15
280D2:				
Fayette---	0-6	5.1-7.3	18-25	0
	6-48	4.5-6.0	15-22	0
	48-60	5.1-7.8	15-20	0-15
280D3:				
Fayette---	0-8	5.1-7.3	25-30	0
	8-36	4.5-6.0	15-22	0
	36-60	5.1-7.8	15-20	0-15
283B:				
Downsouth---	0-7	5.1-7.3	15-25	0
	7-11	5.1-7.3	15-25	0
	11-73	5.1-7.3	20-28	0
	73-80	5.6-7.8	12-20	0-15
283C2:				
Downsouth---	0-7	5.1-7.3	15-25	0
	7-60	5.1-7.3	20-28	0
	60-80	5.6-7.8	12-20	0-15
403G:				
Elizabeth---	0-4	6.1-8.4	14-26	0-5
	4-16	6.1-8.4	12-27	0-20
	16-26	---	---	---
441B:				
Wakenda---	0-16	5.6-7.3	12-22	0
	16-76	5.6-7.3	20-30	0
	76-80	5.6-7.3	10-20	0
472D2, 472E2:				
Baylis---	0-7	5.6-6.5	13-22	0
	7-24	4.5-6.5	16-22	0
	24-80	4.5-7.3	21-25	0
477B:				
Winfield---	0-8	5.6-7.3	10-15	0
	8-13	5.6-7.3	12-17	0
	13-33	4.5-6.5	16-21	0
	33-60	5.1-6.5	10-14	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
477C2:				
Winfield--------	0-7	5.6-7.3	10-15	0
	7-33	4.5-6.5	16-22	0
	33-60	5.1-6.5	10-14	0
477C3:				
Winfield--------	0-7	5.6-7.3	14-17	0
	7-33	4.5-6.5	16-22	0
	33-80	5.1-6.5	10-14	0
515C2:				
Bunkum----------	0-7	5.1-7.3	17-23	0
	7-50	4.5-6.5	18-24	0
	50-65	5.1-7.3	12-22	0
	65-85	5.1-7.3	10-20	0
515C3:				
Bunkum----------	0-3	5.1-7.3	17-23	0
	3-50	4.5-6.5	18-24	0
	50-65	5.1-7.3	12-22	0
	65-80	5.1-7.3	10-20	0
515D2:				
Bunkum----------	0-7	5.1-7.3	17-23	0
	7-50	4.5-6.5	18-24	0
	50-65	5.1-7.3	12-22	0
	65-85	5.1-7.3	10-20	0
515D3:				
Bunkum----------	0-3	5.1-7.3	17-23	0
	3-50	4.5-6.5	18-24	0
	50-65	5.1-7.3	12-22	0
	65-80	5.1-7.3	10-20	0
549E2:				
Marseilles------	0-6	5.1-6.5	14-22	0
	6-35	4.5-6.5	14-23	0
	35-60	---	---	---
549F, 549G:				
Marseilles------	0-10	5.1-6.5	14-22	0
	10-35	4.5-6.5	14-23	0
	35-60	---	---	---
559F, 559G:				
Lindley---------	0-6	4.5-7.3	10-16	0
	6-58	4.5-6.5	15-23	0
	58-80	6.1-7.8	10-16	0
605D2:				
Ursa------------	0-6	4.5-7.3	11-22	0
	6-56	4.5-7.3	21-27	0
	56-80	5.6-8.4	15-27	0-5
605D3:				
Ursa------------	0-4	4.5-7.3	22-26	0
	4-45	4.5-7.3	21-27	0
	45-79	5.6-8.4	15-27	0-5
605E2:				
Ursa------------	0-6	4.5-7.3	11-22	0
	6-43	4.5-7.3	21-27	0
	43-60	5.6-7.8	15-27	0-5

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
606F, 606G:				
Goss	0-7	4.5-6.5	6.0-15	0
	7-11	4.5-6.0	10-15	0
	11-80	4.5-6.0	18-40	0
630B2:				
Navlys	0-9	5.6-7.3	14-20	0
	9-27	5.6-7.3	15-23	0
	27-60	6.6-8.4	11-17	0-35
630C2:				
Navlys	0-6	5.6-7.3	14-20	0
	6-27	5.6-7.3	15-23	0
	27-60	6.6-8.4	11-17	0-35
630C3:				
Navlys	0-6	5.6-7.3	16-20	0
	6-31	5.6-7.3	15-23	0
	31-60	6.6-8.4	11-17	0-35
651D2:				
Keswick	0-8	4.5-7.3	20-25	0
	8-47	4.5-6.0	30-50	0
	47-60	4.5-7.8	30-36	0-15
651D3:				
Keswick	0-5	4.5-7.3	25-30	0
	5-37	4.5-6.0	30-50	0
	37-60	4.5-7.8	30-36	0-15
651E2:				
Keswick	0-8	4.5-7.3	20-25	0
	8-47	4.5-6.0	30-50	0
	47-60	4.5-7.8	30-36	0-15
652C2:				
Passport	0-5	5.1-7.3	11-22	0
	5-45	4.5-7.3	11-23	0
	45-84	5.1-7.3	15-22	0
652C3:				
Passport	0-3	5.1-7.3	17-23	0
	3-35	4.5-7.3	11-23	0
	35-80	5.1-7.3	15-22	0
652D2:				
Passport	0-5	5.1-7.3	11-22	0
	5-45	4.5-7.3	11-23	0
	45-84	5.1-7.3	15-22	0
652D3:				
Passport	0-3	5.1-7.3	11-22	0
	3-35	4.5-7.3	11-23	0
	35-84	5.1-7.3	15-22	0
699A:				
Timewell	0-18	5.1-7.3	18-24	0
	18-40	4.5-6.0	21-25	0
	40-67	5.6-7.3	15-25	0
	67-80	5.6-8.4	12-18	0-10

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
785G:				
Lacrescent	0-21	6.6-7.8	15-27	0-5
	21-38	6.6-8.4	5.0-16	0-5
	38-60	7.4-8.4	4.0-11	0-5
835G:				
Earthen Dam.				
856E2:				
Stookey	0-9	4.5-7.3	14-22	0
	9-60	4.5-6.5	12-18	0
	60-80	5.6-8.4	8.0-16	0-5
Timula	0-7	6.1-7.8	8.0-15	0-5
	7-22	6.1-7.8	8.0-15	0-5
	22-60	7.4-8.4	6.0-12	5-35
856F, 856G:				
Stookey	0-6	4.5-7.3	14-22	0
	6-9	4.5-7.3	14-22	0
	9-60	4.5-6.5	12-18	0
	60-80	5.6-8.4	8.0-16	0-5
Timula	0-7	6.1-7.8	8.0-15	0-5
	7-22	6.1-7.8	8.0-15	0-5
	22-60	7.4-8.4	6.0-12	5-35
864:				
Pits, quarries.				
865:				
Pits, gravel.				
1070A:				
Beaucoup	0-21	5.6-7.8	26-33	0
	21-42	5.6-7.8	16-25	0-5
	42-60	6.1-7.8	9.0-20	0-15
3028A:				
Jules	0-8	7.4-8.4	8.0-16	15-35
	8-60	7.4-8.4	5.0-12	15-40
3070A, 3070L:				
Beaucoup	0-16	5.6-7.8	26-33	0
	16-64	5.6-7.8	16-25	0-5
	64-80	6.1-8.4	9.0-20	0-15
3071L:				
Darwin	0-16	6.1-7.8	32-37	0
	16-62	6.1-7.8	27-40	0
	62-80	6.6-8.4	18-34	0-15
3092A, 3092L:				
Sarpy	0-10	6.6-7.8	2.0-8.0	0-2
	10-60	6.6-7.8	2.0-8.0	0-2
3302L:				
Ambraw	0-17	5.6-7.3	20-27	0
	17-43	5.6-7.3	12-23	0
	43-80	6.1-8.4	6.0-20	0-20

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
3331A:				
Haymond---	0-7	5.6-7.8	4.0-15	0
	7-69	5.6-7.8	10-16	0
	69-80	6.1-7.8	3.0-16	0
3331L:				
Haymond---	0-7	5.6-7.8	4.0-15	0
	7-68	5.6-7.8	4.0-15	0
	68-79	6.1-7.8	4.0-15	0
3333A:				
Wakeland---	0-10	5.6-7.3	4.0-12	0
	10-50	5.6-7.8	6.0-12	0
	50-80	5.6-7.8	4.0-12	0
3333L:				
Wakeland---	0-8	5.6-7.3	4.0-12	0
	8-68	5.6-7.8	4.0-12	0
	68-80	5.6-7.8	4.0-12	0
3404A, 3404L:				
Titus---	0-13	6.1-7.3	28-35	0
	13-67	6.1-7.8	21-29	0
	67-79	6.1-7.8	12-19	0-5
3415A, 3415L:				
Orion---	0-7	5.6-7.8	7.0-20	0
	7-22	5.6-7.8	7.0-20	0
	22-60	5.6-7.8	10-35	0
	60-80	5.6-7.8	5.0-15	0
3428A, 3428L:				
Coffeen---	0-17	5.6-7.8	13-22	0
	17-33	5.6-7.3	6.0-15	0
	33-60	5.6-7.3	3.0-13	0
3475A, 3475L:				
Elsah---	0-6	5.6-7.3	8.0-16	0
	6-12	5.6-7.3	5.0-12	0
	12-60	6.6-7.3	3.0-12	0
3877L:				
Blake---	0-14	7.4-8.4	20-25	5-30
	14-60	7.4-8.4	20-30	5-30
Slacwater---	0-12	7.4-8.4	10-20	0-10
	12-80	7.4-8.4	5.0-22	5-30
7037B:				
Worthen---	0-30	5.6-7.3	15-21	0
	30-63	5.6-7.8	11-14	0
	63-80	6.1-8.4	9.0-14	0-25
7075B:				
Drury---	0-7	5.6-7.8	8.0-16	0
	7-43	5.6-7.3	11-15	0
	43-80	6.1-7.8	9.0-12	0-15

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
7242A:				
Kendall	0-9	5.1-7.3	14-20	0
	9-14	5.1-7.3	11-16	0
	14-54	4.5-7.3	16-22	0
	54-60	5.1-7.8	9.0-19	0-15
	60-80	5.6-8.4	6.0-16	0-15
7430B:				
Raddle	0-15	5.6-7.3	11-22	0
	15-60	5.6-7.3	12-18	0
7815B:				
Udorthents	0-60	5.1-7.8	10-25	0-10
8070A:				
Beaucoup	0-15	5.6-7.8	26-33	0
	15-48	5.6-7.8	16-25	0
	48-60	6.1-7.8	9.0-20	0-5
	60-80	6.1-8.4	6.0-20	0-25
8071A:				
Darwin	0-12	6.1-7.8	32-37	0
	12-40	6.1-7.8	27-40	0
	40-60	6.6-8.4	18-34	0-15
8092A:				
Sarpy	0-9	6.6-7.8	2.0-6.0	0-2
	9-60	6.6-7.8	2.0-6.0	0-2
8162A:				
Gorham	0-10	5.1-7.8	24-35	0
	10-40	6.1-7.8	16-26	0
	40-44	6.1-7.8	6.0-19	0
	44-80	6.1-7.8	3.0-10	0-10
8180A:				
Dupo	0-7	5.6-7.8	8.0-15	0
	7-36	5.6-7.8	6.0-12	0
	36-85	5.6-7.8	21-29	0-5
8183A:				
Shaffton	0-12	5.1-7.3	25-30	0
	12-32	4.5-6.0	20-25	0
	32-36	4.5-6.0	10-15	0
	36-51	5.1-6.5	25-30	0
	51-60	6.1-7.3	5.0-10	0
8217A:				
Twomile	0-10	4.5-7.3	6.0-12	0
	10-26	4.5-7.3	6.0-12	0
	26-58	4.5-6.5	12-19	0
	58-80	4.5-7.3	6.0-22	0
8284A:				
Tice	0-14	6.1-7.8	20-27	0
	14-80	5.1-7.3	16-23	0
8288A:				
Petrolia	0-11	5.6-7.8	20-25	0
	11-33	6.1-7.3	15-20	0
	33-80	5.1-7.8	10-20	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
8302A:				
Ambraw----------	0-16	5.6-7.3	15-27	0
	16-33	5.1-7.3	19-29	0
	33-41	5.1-7.3	15-23	0
	41-70	5.6-8.4	11-19	0-20
8331A:				
Haymond---------	0-14	5.6-7.8	4.0-15	0
	14-44	5.6-7.8	10-16	0
	44-80	6.1-7.8	3.0-16	0
8333A:				
Wakeland--------	0-10	5.6-7.3	4.0-12	0
	10-50	5.6-7.8	4.0-12	0
	50-80	5.6-7.8	4.0-12	0
8349B:				
Zumbro----------	0-11	5.6-7.8	7.0-17	0-5
	11-33	5.6-7.8	3.0-13	0-5
	33-42	6.1-7.8	0.0-9.0	0-5
	42-80	6.1-7.8	0.0-7.0	0-5
8395A:				
Ceresco---------	0-14	6.1-7.8	10-25	0
	14-42	6.1-7.8	5.0-15	0
	42-60	6.6-8.4	5.0-10	0
8396A:				
Vesser----------	0-10	5.6-7.3	20-30	0
	10-22	5.1-6.5	10-20	0
	22-37	5.1-6.5	10-25	0
	37-60	5.1-6.5	10-25	0
8404A:				
Titus-----------	0-13	6.1-7.3	25-32	0
	13-68	6.1-7.8	21-29	0
	68-80	6.1-7.8	12-19	0-5
8415A:				
Orion-----------	0-6	5.6-7.8	7.0-20	0
	6-25	5.6-7.8	7.0-20	0
	25-60	5.6-7.8	10-35	0
8428A:				
Coffeen---------	0-15	5.6-7.8	13-22	0
	15-42	5.6-7.3	6.0-15	0
	42-60	5.6-7.3	3.0-13	0
8451A:				
Lawson----------	0-14	6.1-7.8	11-28	0
	14-33	6.1-7.8	11-29	0
	33-80	6.1-7.8	11-23	0
8452A:				
Riley-----------	0-13	5.6-7.8	21-29	0
	13-27	5.6-7.8	10-25	0
	27-60	5.6-7.8	1.0-10	0-20
8634A:				
Blyton----------	0-11	5.6-7.3	4.0-12	0
	11-25	5.6-7.8	6.0-14	0
	25-64	5.6-7.8	4.0-12	0

Table 21.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Soil reaction	Cation-exchange capacity	Calcium carbonate
	In	*pH*	*meq/100 g*	*Pct*
8674A:				
Dozaville-------	0-18	5.6-7.3	11-22	0
	18-59	5.6-7.3	12-18	0
	59-80	5.6-7.8	4.0-12	0-5
8789A:				
Ambraw----------	0-13	5.6-7.3	20-27	0
	13-35	5.1-7.3	15-23	0
	35-60	5.6-7.8	11-19	0-20
Ceresco---------	0-14	6.1-7.8	10-25	0
	14-42	6.1-7.8	5.0-15	0
	42-60	6.6-8.4	5.0-10	0
Sarpy-----------	0-10	6.6-7.8	2.0-6.0	0-2
	10-60	6.6-7.8	2.0-6.0	0-2
9278A:				
Stronghurst-----	0-7	5.1-7.3	14-22	0
	7-11	5.1-7.3	13-18	0
	11-47	5.1-7.3	17-23	0
	47-60	5.6-7.8	12-17	0-15
9278B:				
Stronghurst-----	0-7	5.1-7.3	14-22	0
	7-11	5.1-7.3	13-18	0
	11-43	5.1-7.3	17-23	0
	43-60	5.6-7.8	12-17	0-15
9279B:				
Rozetta---------	0-9	5.1-7.3	10-22	0
	9-66	4.5-6.0	16-22	0
	66-76	5.6-7.8	12-17	0-15
9279C2:				
Rozetta---------	0-7	5.1-7.3	10-22	0
	7-66	4.5-6.0	16-22	0
	66-70	5.6-7.8	12-17	0-15
M-W:				
Miscellaneous water.				
W:				
Water.				

Table 22.--Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
8D2, 8D3, 8E2, 8F, 8G:										
Hickory	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
17A, 17B:										
Keomah	C	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
19D3:										
Sylvan	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
30F, 30G:										
Hamburg	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
43A, 43B:										
Ipava	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
50A:										
Virden	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
75C, 75C2:										
Drury	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
79B, 79C2, 79C3, 79D2, 79D3, 79E2:										
Menfro	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
90A:										
Bethalto	B	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
119D2, 119D3, 119E2:										
Elco	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	2.0-3.5	2.8-4.5	Perched	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
175F, 175G:										
Lamont	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
216B, 216C2, 216C3, 216D2, 216D3:										
Stookey	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
257A, 257B:										
Clarksdale	C	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
264D3, 264E2, 264G:										
El Dara	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	2.0-3.5	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
267A, 267B:										
Caseyville	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
271C3, 271D3:										
Timula	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
274F, 274G:										
Seaton	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
278A:										
Stronghurst	B	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
279B, 279C2, 279C3:										
Rozetta	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
280B, 280C2, 280C3, 280D2, 280D3:										
Fayette	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
283B, 283C2:										
Downsouth	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	2.0-3.5	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
403G:										
Elizabeth	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
441B:										
Wakenda	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
472D2, 472E2:										
Baylis	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
477B, 477C2, 477C3:										
Winfield	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	2.0-3.5	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
515C2, 515C3, 515D2, 515D3:										
Bunkum	C	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
549E2, 549F, 549G:										
Marseilles	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
559F, 559G:										
Lindley	C	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	4.0-5.5	5.0-6.0	Perched	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
605D2, 605D3, 605E2:										
Ursa	C	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	4.0-5.5	5.0-6.0	Perched	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
606F, 606G:										
Goss	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
630B2, 630C2, 630C3:										
Navlys	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
651D2, 651D3, 651E2:										
Keswick	C	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	2.0-3.5	2.8-6.0	Perched	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
652C2, 652C3, 652D2, 652D3:										
Passport	C	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
699A:										
Timewell	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
785G:										
Lacrescent	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
835G:										
Earthen Dam	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
856E2, 856F, 856G:										
Stookey	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
Timula	B	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
864:										
Pits, quarries	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
865:										
Pits, gravel	---	Jan-Dec	>6.0	>6.0	---	---	---	---	---	None
1070A:										
Beaucoup	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Long	Frequent	Brief	Occasional
		Jul-Oct	0.0-1.0	>6.0	Apparent	0.0-1.0	Long	Frequent	---	None
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-1.0	Long	Frequent	Brief	Occasional
3028A:										
Jules	B	Jan	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	Brief	Frequent
		May-Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3070A:										
Beaucoup	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3070L:										
Beaucoup	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
3071L:										
Darwin	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
3092A:										
Sarpy	A	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3092L:										
Sarpy	A	Jan-Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
3302L:										
Ambraw	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
3331A:										
Haymond	B	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3331L:										
Haymond	B	Jan-Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
3333A:										
Wakeland	C	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3333L:										
Wakeland	C	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	Long	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
3404A:										
Titus	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3404L:										
Titus	B/D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
3415A:										
Orion	C	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
3415L:										
Orion	C	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Long	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
3428A:										
Coffeen	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3428L:										
Coffeen	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Long	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
3475A:										
Elsah	B	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Frequent
3475L:										
Elsah	B	Jan-Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
3877L:										
Blake	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Long	Frequent
		Jun	>6.0	>6.0	---	---	---	---	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Long	Frequent
Slacwater	D	Jan-Jun	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	0.0-1.0	>6.0	Apparent	0.0-0.5	Long	Frequent	Long	Frequent
7037B:										
Worthen	B	Jan-Jun	>6.0	>6.0	---	---	---	---	---	Rare
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	---	Rare
7075B:										
Drury	B	Jan-Jun	>6.0	>6.0	---	---	---	---	---	Rare
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	---	Rare
7242A:										
Kendall	B	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	Rare
		Jun	>6.0	>6.0	---	---	---	---	---	Rare
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	---	Rare
7430B:										
Raddle	B	Jan-Jun	>6.0	>6.0	---	---	---	---	---	Rare
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	---	Rare

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
7815B:										
Udorthents	B	Jan	>6.0	>6.0	---	---	---	---	---	Rare
		Feb-Apr	3.0-6.0	4.5-6.0	Perched	---	---	---	---	Rare
		May-Jun	>6.0	>6.0	---	---	---	---	---	Rare
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	---	Rare
8070A:										
Beaucoup	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8071A:										
Darwin	D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-1.0	Brief	Frequent	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8092A:										
Sarpy	A	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8162A:										
Gorham	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8180A:										
Dupo	C	Jan-May	1.0-2.0	1.5-3.5	Perched	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8183A:										
Shaffton	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8217A:										
Twomile	C/D	Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8284A:										
Tice	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8288A:										
Petrolia	C/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
8302A:										
Ambraw	B/D	Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8331A:										
Haymond	B	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8333A:										
Wakeland	C	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8349B:										
Zumbro	A	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8395A:										
Ceresco	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8396A:										
Vesser	C/D	Jan-May	0.0-1.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8404A:										
Titus	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8415A:										
Orion	C	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8428A:										
Coffeen	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8451A:										
Lawson	C	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional

Table 22.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table			Ponding			Flooding	
			Upper limit	Lower limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*		*Ft*				
8452A:										
Riley	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8634A:										
Blyton	B	Jan	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Feb-Apr	2.0-3.5	>6.0	Apparent	---	---	---	Brief	Occasional
		May-Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8674A:										
Dozaville	B	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
8789A:										
Ambraw	B/D	Jan-May	0.0-1.0	>6.0	Apparent	0.0-0.5	Brief	Frequent	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
Ceresco	B	Jan-May	1.0-2.0	>6.0	Apparent	---	---	---	Brief	Occasional
		Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
Sarpy	A	Jan-Jun	>6.0	>6.0	---	---	---	---	Brief	Occasional
		Jul-Oct	>6.0	>6.0	---	---	---	---	---	None
		Nov-Dec	>6.0	>6.0	---	---	---	---	Brief	Occasional
9278A, 9278B:										
Stronghurst	B	Jan-May	0.5-2.0	>6.0	Apparent	---	---	---	---	None
		Jun-Dec	>6.0	>6.0	---	---	---	---	---	None
9279B, 9279C2:										
Rozetta	B	Jan	>6.0	>6.0	---	---	---	---	---	None
		Feb-Apr	4.0-6.0	>6.0	Apparent	---	---	---	---	None
		May-Dec	>6.0	>6.0	---	---	---	---	---	None
M-W:										
Miscellaneous water.										
W:										
Water.										

Table 23.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer		Potential for frost action	Risk of corrosion	
	Kind	Depth to top		Uncoated steel	Concrete
		In			
8D2, 8D3, 8E2, 8F, 8G:					
Hickory	---	---	Moderate	Moderate	Moderate
17A, 17B:					
Keomah	---	---	High	High	Moderate
19D3:					
Sylvan	---	---	High	Moderate	Moderate
30F, 30G:					
Hamburg	---	---	High	Low	Low
43A, 43B:					
Ipava	---	---	High	High	Moderate
50A:					
Virden	---	---	High	High	Moderate
75C, 75C2:					
Drury	---	---	High	Low	Moderate
79B, 79C2, 79C3, 79D2, 79D3, 79E2:					
Menfro	---	---	High	Moderate	Moderate
90A:					
Bethalto	---	---	High	High	Moderate
119D2, 119D3, 119E2:					
Elco	---	---	High	High	Moderate
175F, 175G:					
Lamont	---	---	Moderate	Low	Moderate
216B, 216C2, 216C3, 216D2, 216D3:					
Stookey	---	---	High	Low	Moderate
257A, 257B:					
Clarksdale	---	---	High	High	Moderate
264D3, 264E2, 264G:					
El Dara	---	---	Moderate	High	High
267A, 267B:					
Caseyville	---	---	High	High	Moderate
271C3, 271D3:					
Timula	---	---	High	Low	Low
274F, 274G:					
Seaton	---	---	High	Low	Moderate
278A:					
Stronghurst	---	---	High	High	Moderate

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Potential for frost action	Risk of corrosion	
	Kind	Depth to top		Uncoated steel	Concrete
		In			
279B, 279C2, 279C3:					
Rozetta	---	---	High	Moderate	Moderate
280B, 280C2, 280C3, 280D2, 280D3:					
Fayette	---	---	High	Moderate	Moderate
283B, 283C2:					
Downsouth	---	---	High	High	Moderate
403G:					
Elizabeth	Bedrock (lithic)	7-20	Moderate	Low	Low
441B:					
Wakenda	---	---	High	Moderate	Moderate
472D2, 472E2:					
Baylis	---	---	High	Moderate	Moderate
477B, 477C2, 477C3:					
Winfield	---	---	High	High	Moderate
515C2, 515C3, 515D2, 515D3:					
Bunkum	---	---	High	High	Moderate
549E2, 549F, 549G:					
Marseilles	Bedrock (paralithic)	20-40	High	High	Moderate
559F, 559G:					
Lindley	---	---	Moderate	Moderate	Moderate
605D2, 605D3, 605E2:					
Ursa	---	---	Moderate	High	Moderate
606F, 606G:					
Goss	---	---	Moderate	High	Moderate
630B2, 630C2, 630C3:					
Navlys	---	---	High	Moderate	Moderate
651D2, 651D3, 651E2:					
Keswick	---	---	Moderate	High	Moderate
652C2, 652C3, 652D2, 652D3:					
Passport	---	---	High	High	Moderate
699A:					
Timewell	---	---	High	High	Moderate
785G:					
Lacrescent	---	---	Moderate	Low	Low
835G:					
Earthen Dam.					
856E2, 856F, 856G:					
Stookey	---	---	High	Low	Moderate
Timula	---	---	High	Low	Low

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Potential for frost action	Risk of corrosion	
	Kind	Depth to top		Uncoated steel	Concrete
		In			
864:					
Pits, quarries.					
865:					
Pits, gravel.					
1070A:					
Beaucoup	---	---	High	High	Low
3028A:					
Jules	---	---	High	Low	Low
3070A, 3070L:					
Beaucoup	---	---	High	High	Low
3071L:					
Darwin	---	---	High	High	Low
3092A, 3092L:					
Sarpy	---	---	Low	Low	Low
3302L:					
Ambraw	---	---	High	High	Low
3331A, 3331L:					
Haymond	---	---	High	Low	Low
3333A, 3333L:					
Wakeland	---	---	High	High	Low
3404A, 3404L:					
Titus	---	---	High	High	Low
3415A, 3415L:					
Orion	---	---	High	High	Low
3428A, 3428L:					
Coffeen	---	---	High	High	Low
3475A, 3475L:					
Elsah	---	---	Moderate	Low	Low
3877L:					
Blake	---	---	High	High	Low
Slacwater	---	---	High	High	Low
7037B:					
Worthen	---	---	High	Low	Low
7075B:					
Drury	---	---	High	Low	Moderate
7242A:					
Kendall	---	---	High	High	Moderate
7430B:					
Raddle	---	---	High	Low	Low
7815B:					
Udorthents	---	---	High	High	Moderate

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Potential for frost action	Risk of corrosion	
	Kind	Depth to top		Uncoated steel	Concrete
		In			
8070A:					
Beaucoup	---	---	High	High	Low
8071A:					
Darwin	---	---	High	High	Low
8092A:					
Sarpy	---	---	Low	Low	Low
8162A:					
Gorham	---	---	High	High	Low
8180A:					
Dupo	---	---	High	High	Low
8183A:					
Shaffton	---	---	High	High	Moderate
8217A:					
Twomile	---	---	High	High	Moderate
8284A:					
Tice	---	---	High	High	Low
8288A:					
Petrolia	---	---	High	High	Low
8302A:					
Ambraw	---	---	High	High	Low
8331A:					
Haymond	---	---	High	Low	Low
8333A:					
Wakeland	---	---	High	High	Low
8349B:					
Zumbro	---	---	Low	Low	Low
8395A:					
Ceresco	---	---	High	Moderate	Low
8396A:					
Vesser	---	---	High	High	Low
8404A:					
Titus	---	---	High	High	Low
8415A:					
Orion	---	---	High	High	Low
8428A:					
Coffeen	---	---	High	High	Low
8451A:					
Lawson	---	---	High	High	Low
8452A:					
Riley	---	---	High	High	Low
8634A:					
Blyton	---	---	High	Moderate	Low

Table 23.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Potential for frost action	Risk of corrosion	
	Kind	Depth to top		Uncoated steel	Concrete
		In			
8674A:					
Dozaville	---	---	High	Low	Moderate
8789A:					
Ambraw	---	---	High	High	Low
Ceresco	---	---	High	Moderate	Low
Sarpy	---	---	Low	Low	Low
9278A, 9278B:					
Stronghurst	---	---	High	High	Moderate
9279B, 9279C2:					
Rozetta	---	---	High	Moderate	Moderate
M-W:					
Miscellaneous water.					
W:					
Water.					

Accessibility Statement

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