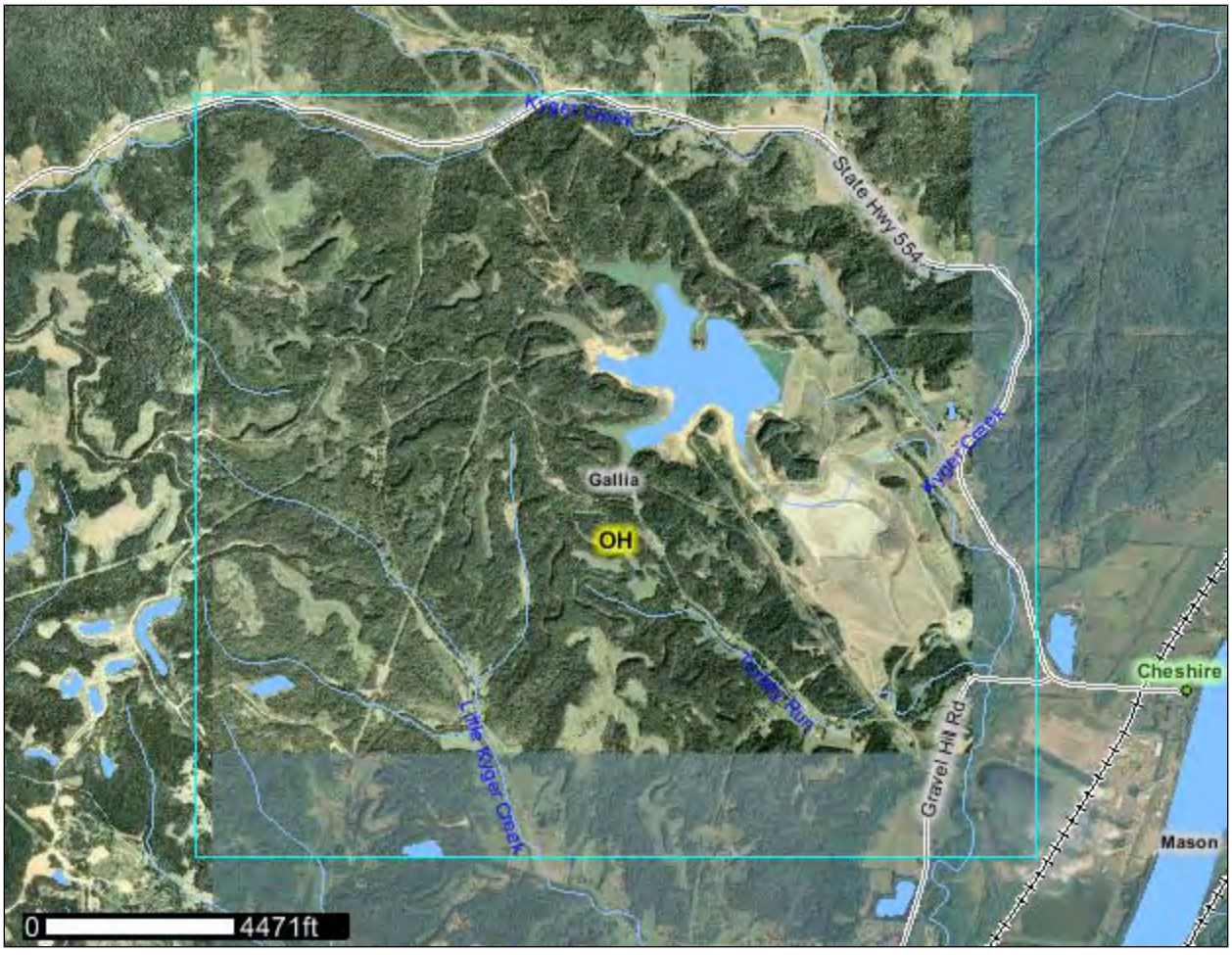
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product 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 participants

Custom Soil Resource Report for Gallia County, Ohio



July 31, 2009

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is 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.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

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.

The National Cooperative Soil Survey is 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 (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various 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 observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

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

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, 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.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

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. Some interpretations are modified 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.

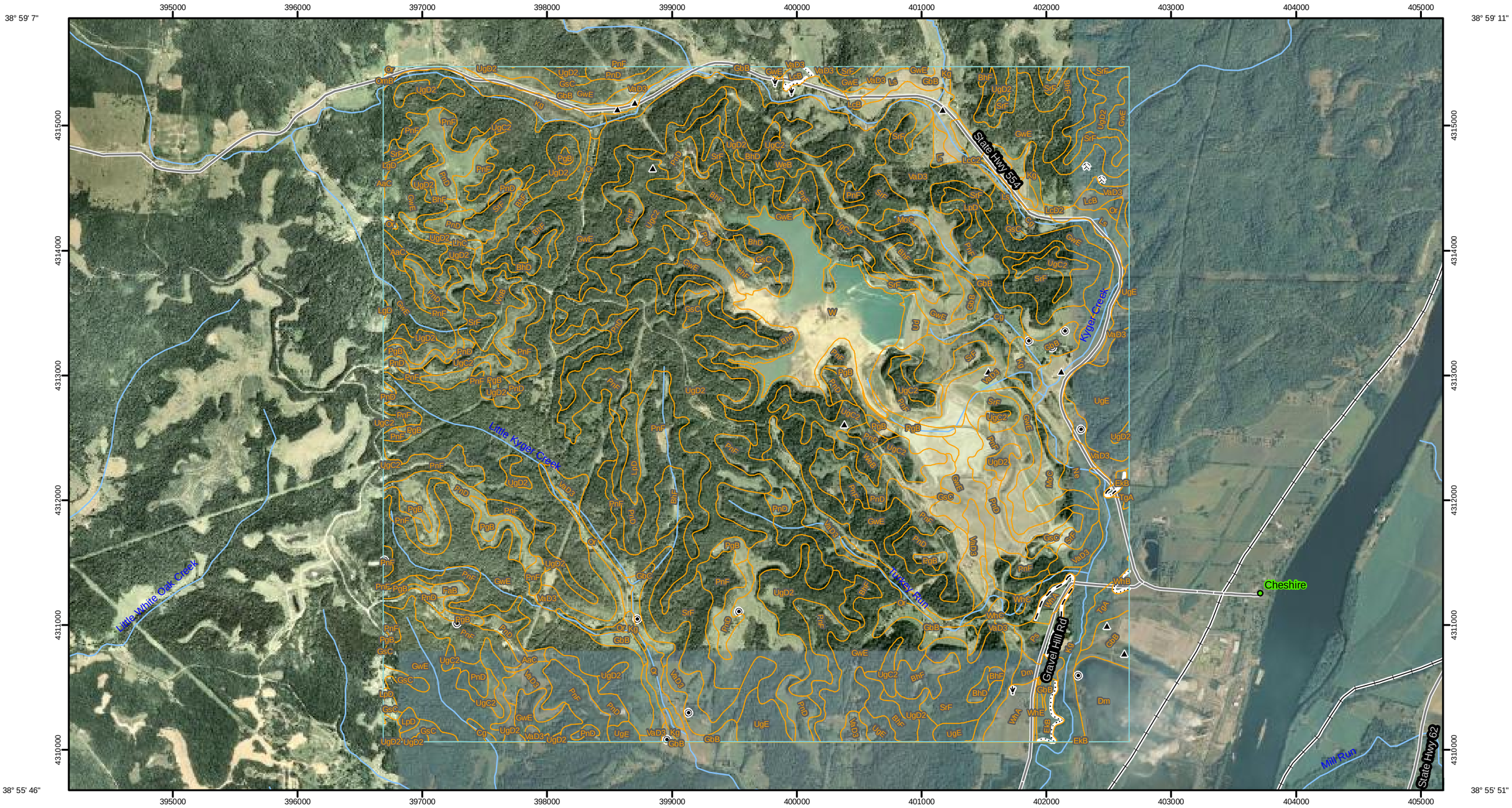
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high 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.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:30,400 if printed on B size (11" x 17") sheet.

N

Meters
0 500 1,000 2,000 3,000

Feet
0 2,000 4,000 8,000 12,000

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads

MAP INFORMATION

Map Scale: 1:30,400 if printed on B size (11" × 17") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Gallia County, Ohio
Survey Area Data: Version 8, Jan 6, 2009

Date(s) aerial images were photographed: 6/30/2004; 8/25/2007; 9/19/2004

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Gallia County, Ohio (OH053)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
AaC	Aaron silt loam, 8 to 15 percent slopes	13.2	0.2%
BhD	Bethesda channery clay loam, 8 to 25 percent slopes	157.2	2.0%
BhF	Bethesda channery clay loam, 40 to 70 percent slopes	340.4	4.3%
Cg	Chagrin silt loam, frequently flooded	257.7	3.2%
Dm	Dumps, mine	80.2	1.0%
EkB	Elkinsville silt loam, 1 to 6 percent slopes	21.9	0.3%
FaB	Fairpoint channery silty clay loam, 1 to 8 percent slopes	7.3	0.1%
GbB	Gallipolis silt loam, 1 to 6 percent slopes	156.5	2.0%
GbC	Gallipolis silt loam, 6 to 15 percent slopes	17.1	0.2%
GsC	Guernsey-Gilpin silt loams, 8 to 15 percent slopes	67.7	0.8%
GwE	Guernsey-Gilpin association, steep	2,116.1	26.5%
Kg	Kyger loamy sand, frequently flooded	188.3	2.4%
LcB	Licking silt loam, 1 to 6 percent slopes	23.9	0.3%
LcC2	Licking silt loam, 6 to 15 percent slopes, eroded	20.2	0.3%
LcD2	Licking silt loam, 15 to 25 percent slopes, eroded	2.3	0.0%
LgD	Lily loam, 15 to 25 percent slopes	3.9	0.0%
LhC	Lily silt loam, 8 to 15 percent slopes	4.1	0.1%
LpD	Lily-Upshur complex, 15 to 25 percent slopes	39.9	0.5%
Ls	Lindside silt loam, occasionally flooded	68.4	0.9%
MoC	Monongahela loam, 8 to 15 percent slopes	46.5	0.6%
Ne	Newark silt loam, frequently flooded	23.4	0.3%
OmB	Omulga silt loam, 1 to 6 percent slopes	0.2	0.0%
Or	Orrville silt loam, frequently flooded	114.3	1.4%
PgB	Pinegrove sandy loam, 1 to 8 percent slopes	143.0	1.8%
PnD	Pinegrove sand, 8 to 25 percent slopes	500.6	6.3%
PnF	Pinegrove sand, 25 to 70 percent slopes	1,076.8	13.5%
Ps	Pits, sand and gravel	22.8	0.3%
SrF	Steinsburg-Rock outcrop association, very steep	514.3	6.4%
TgA	Taggart silt loam, 0 to 3 percent slopes	25.3	0.3%
Ud	Udorthents	17.1	0.2%
UgC2	Upshur-Gilpin complex, 8 to 15 percent slopes, eroded	303.9	3.8%
UgD2	Upshur-Gilpin complex, 15 to 25 percent slopes, eroded	567.2	7.1%

Gallia County, Ohio (OH053)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
UgE	Upshur-Gilpin complex, 25 to 50 percent slopes	150.3	1.9%
VaD3	Vandalia silty clay loam, 15 to 25 percent slopes, severely eroded	565.4	7.1%
W	Water	216.1	2.7%
WeB	Wellston silt loam, 1 to 6 percent slopes	23.3	0.3%
WhA	Wheeling silt loam, 0 to 3 percent slopes	49.4	0.6%
WhB	Wheeling silt loam, 3 to 6 percent slopes	4.3	0.1%
WhC	Wheeling silt loam, 6 to 15 percent slopes	12.5	0.2%
WhE	Wheeling silt loam, 25 to 40 percent slopes	2.4	0.0%
WoB	Woodsfield silt loam, 1 to 6 percent slopes	28.5	0.4%
Totals for Area of Interest		**7,993.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

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. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. 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 important soil properties and qualities.

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, 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. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, 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. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Gallia County, Ohio

AaC—Aaron silt loam, 8 to 15 percent slopes

Map Unit Setting

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition

Aaron and similar soils: 85 percent
Minor components: 15 percent

Description of Aaron

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Typical profile

0 to 12 inches: Silt loam
12 to 39 inches: Silty clay
39 to 53 inches: Channery clay
53 to 55 inches: Weathered bedrock

Minor Components

Upshur

Percent of map unit: 15 percent
Landform: Hills

BhD—Bethesda channery clay loam, 8 to 25 percent slopes

Map Unit Setting

Elevation: 600 to 1,350 feet
Mean annual precipitation: 35 to 45 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 190 days

Map Unit Composition

Bethesda and similar soils: 90 percent
Minor components: 10 percent

Description of Bethesda

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coal extraction mine spoil

Properties and qualities

Slope: 8 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability (nonirrigated): 6s

Typical profile

0 to 6 inches: Channery clay loam
6 to 63 inches: Extremely channery silty clay loam

Minor Components

Pinegrove

Percent of map unit: 10 percent
Landform: Hills

BhF—Bethesda channery clay loam, 40 to 70 percent slopes

Map Unit Setting

Elevation: 600 to 1,350 feet
Mean annual precipitation: 35 to 45 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 190 days

Map Unit Composition

Bethesda and similar soils: 80 percent
Minor components: 20 percent

Description of Bethesda

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coal extraction mine spoil

Properties and qualities

Slope: 40 to 70 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Typical profile

0 to 6 inches: Channery clay loam
6 to 63 inches: Extremely channery silty clay loam

Minor Components

Soils on benches, with slopes of 5 to 15 percent

Percent of map unit: 20 percent

Cg—Chagrin silt loam, frequently flooded

Map Unit Setting

Elevation: 640 to 1,040 feet
Mean annual precipitation: 32 to 45 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 133 to 182 days

Map Unit Composition

Chagrin and similar soils: 85 percent
Minor components: 15 percent

Description of Chagrin

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: High (about 10.2 inches)

Interpretive groups

Land capability (nonirrigated): 2w

Typical profile

0 to 8 inches: Silt loam
8 to 46 inches: Loam
46 to 77 inches: Stratified gravelly fine sand to silt loam

Minor Components

Orrville

Percent of map unit: 10 percent
Landform: Flood plains

Newark

Percent of map unit: 5 percent
Landform: Flood plains

Dm—Dumps, mine

Map Unit Composition

Dumps: 100 percent

EkB—Elkinsville silt loam, 1 to 6 percent slopes

Map Unit Setting

Elevation: 340 to 800 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 150 to 210 days

Map Unit Composition

Elkinsville and similar soils: 90 percent
Minor components: 10 percent

Description of Elkinsville

Setting

Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 11.6 inches)

Interpretive groups

Land capability (nonirrigated): 2e

Typical profile

0 to 10 inches: Silt loam
10 to 40 inches: Silt loam
40 to 54 inches: Loam
54 to 74 inches: Sandy loam

Minor Components

Taggart
Percent of map unit: 5 percent
Landform: Terraces

Peoga
Percent of map unit: 5 percent
Landform: Depressions

FaB—Fairpoint channery silty clay loam, 1 to 8 percent slopes

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Fairpoint and similar soils: 90 percent
Minor components: 10 percent

Description of Fairpoint

Setting
Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coal extraction mine spoil

Properties and qualities
Slope: 1 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.3 inches)

Interpretive groups
Land capability (nonirrigated): 6s

Typical profile
0 to 3 inches: Channery silty clay loam
3 to 80 inches: Very channery silty clay loam

Minor Components

Areas blanketed with natural soil material
Percent of map unit: 5 percent

Pinegrove
Percent of map unit: 5 percent
Landform: Hills

GbB—Gallipolis silt loam, 1 to 6 percent slopes

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Gallipolis and similar soils: 90 percent
Minor components: 10 percent

Description of Gallipolis

Setting
Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 11.0 inches)

Interpretive groups
Land capability (nonirrigated): 2e

Typical profile
0 to 10 inches: Silt loam
10 to 42 inches: Silty clay loam
42 to 60 inches: Silty clay loam
60 to 74 inches: Stratified fine sandy loam to silty clay loam

Minor Components

Taggart
Percent of map unit: 5 percent
Landform: Terraces

Peoga
Percent of map unit: 5 percent
Landform: Depressions

GbC—Gallipolis silt loam, 6 to 15 percent slopes

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Gallipolis and similar soils: 90 percent
Minor components: 10 percent

Description of Gallipolis

Setting
Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 6 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 11.0 inches)

Interpretive groups
Land capability (nonirrigated): 3e

Typical profile
0 to 10 inches: Silt loam
10 to 42 inches: Silty clay loam
42 to 60 inches: Silty clay loam
60 to 74 inches: Stratified fine sandy loam to silty clay loam

Minor Components

Taggart

Percent of map unit: 10 percent
Landform: Terraces

GsC—Guernsey-Gilpin silt loams, 8 to 15 percent slopes

Map Unit Setting

Elevation: 900 to 1,120 feet
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 144 to 180 days

Map Unit Composition

Guernsey and similar soils: 45 percent
Gilpin and similar soils: 40 percent
Minor components: 15 percent

Description of Guernsey

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Colluvium over residuum

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 50 to 120 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 6.7 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Typical profile

0 to 5 inches: Silt loam
5 to 16 inches: Silty clay loam
16 to 32 inches: Silty clay
32 to 51 inches: Channery silty clay
51 to 53 inches: Weathered bedrock

Description of Gilpin

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.8 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Typical profile

0 to 8 inches: Silt loam
8 to 34 inches: Silty clay loam
34 to 36 inches: Weathered bedrock

Minor Components

Upshur

Percent of map unit: 15 percent
Landform: Hills

GwE—Guernsey-Gilpin association, steep

Map Unit Setting

Elevation: 900 to 1,120 feet
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 144 to 180 days

Map Unit Composition

Guernsey and similar soils: 50 percent
Gilpin and similar soils: 35 percent
Minor components: 15 percent

Description of Guernsey

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Colluvium over residuum

Properties and qualities

Slope: 25 to 50 percent
Depth to restrictive feature: 50 to 120 inches to paralithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 3 inches: Silty clay loam
3 to 18 inches: Silty clay loam
18 to 51 inches: Channery silty clay loam
51 to 72 inches: Channery silty clay loam

Description of Gilpin

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities

Slope: 25 to 50 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.0 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Typical profile

0 to 5 inches: Loam

5 to 35 inches: Channery loam
35 to 37 inches: Weathered bedrock

Minor Components

Vandalia
Percent of map unit: 10 percent
Landform: Hills

Shale and siltstone escarpments
Percent of map unit: 5 percent

Kg—Kyger loamy sand, frequently flooded

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Kyger and similar soils: 90 percent
Minor components: 10 percent

Description of Kyger

Setting
Landform: Flood plains
Parent material: Alluvium

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water capacity: High (about 9.3 inches)

Interpretive groups
Land capability (nonirrigated): 6w

Typical profile
0 to 9 inches: Loamy sand
9 to 18 inches: Stratified gravelly sand to silt loam
18 to 44 inches: Silt loam
44 to 80 inches: Sandy loam

Minor Components

2 to 4 feet of sandy overwash, along streams
Percent of map unit: 10 percent
Landform: Flood plains

LcB—Licking silt loam, 1 to 6 percent slopes

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Licking and similar soils: 90 percent
Minor components: 10 percent

Description of Licking

Setting
Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Lacustrine deposits

Properties and qualities
Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.1 inches)

Interpretive groups
Land capability (nonirrigated): 2e

Typical profile
0 to 7 inches: Silt loam
7 to 21 inches: Silty clay loam
21 to 60 inches: Silty clay
60 to 72 inches: Silty clay

Minor Components

Omulga
Percent of map unit: 5 percent

Landform: Terraces

Gallipolis
Percent of map unit: 5 percent
Landform: Terraces

LcC2—Licking silt loam, 6 to 15 percent slopes, eroded

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Licking and similar soils: 90 percent
Minor components: 10 percent

Description of Licking

Setting
Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Lacustrine deposits

Properties and qualities
Slope: 6 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.1 inches)

Interpretive groups
Land capability (nonirrigated): 4e

Typical profile
0 to 7 inches: Silt loam
7 to 21 inches: Silty clay loam
21 to 60 inches: Silty clay
60 to 72 inches: Silty clay

Minor Components

Omulga
Percent of map unit: 5 percent
Landform: Terraces

Gallipolis
Percent of map unit: 5 percent
Landform: Terraces

LcD2—Licking silt loam, 15 to 25 percent slopes, eroded

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Licking and similar soils: 90 percent
Minor components: 10 percent

Description of Licking

Setting
Landform: Terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits

Properties and qualities
Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.1 inches)

Interpretive groups
Land capability (nonirrigated): 6e

Typical profile
0 to 7 inches: Silt loam
7 to 21 inches: Silty clay loam
21 to 60 inches: Silty clay
60 to 72 inches: Silty clay

Minor Components

Gallipolis
Percent of map unit: 5 percent
Landform: Terraces

Elkinsville
Percent of map unit: 5 percent
Landform: Terraces

LgD—Lily loam, 15 to 25 percent slopes

Map Unit Setting
Elevation: 700 to 950 feet
Mean annual precipitation: 37 to 49 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 160 to 200 days

Map Unit Composition
Lily and similar soils: 90 percent
Minor components: 10 percent

Description of Lily

Setting
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities
Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock; 20 to 60 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.1 inches)

Interpretive groups
Land capability (nonirrigated): 6e

Typical profile
0 to 7 inches: Loam
7 to 24 inches: Sandy clay loam
24 to 35 inches: Channery sandy loam
35 to 50 inches: Weathered bedrock
50 to 52 inches: Unweathered bedrock

Minor Components

Bedrock escarpment
Percent of map unit: 5 percent

Steinsburg
Percent of map unit: 5 percent
Landform: Hills

LhC—Lily silt loam, 8 to 15 percent slopes

Map Unit Setting
Elevation: 700 to 950 feet
Mean annual precipitation: 37 to 49 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 160 to 200 days

Map Unit Composition
Lily and similar soils: 85 percent
Minor components: 15 percent

Description of Lily

Setting
Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock; 20 to 60 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.6 inches)

Interpretive groups
Land capability (nonirrigated): 3e

Typical profile
0 to 6 inches: Silt loam
6 to 20 inches: Loam
20 to 32 inches: Sandy clay loam
32 to 50 inches: Weathered bedrock

50 to 52 inches: Unweathered bedrock

Minor Components

Zanesville
Percent of map unit: 5 percent
Landform: Hills

Wellston
Percent of map unit: 5 percent
Landform: Hills

Rarden
Percent of map unit: 5 percent
Landform: Hills

LpD—Lily-Upshur complex, 15 to 25 percent slopes

Map Unit Setting
Elevation: 700 to 950 feet
Mean annual precipitation: 37 to 49 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 160 to 200 days

Map Unit Composition
Lily and similar soils: 50 percent
Upshur and similar soils: 35 percent
Minor components: 15 percent

Description of Lily

Setting
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities
Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 60 inches to lithic bedrock; 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 4 inches: Loam
4 to 11 inches: Sandy loam
11 to 32 inches: Sandy clay loam
32 to 40 inches: Weathered bedrock
40 to 42 inches: Unweathered bedrock

Description of Upshur

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 40 to 71 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.7 inches)

Interpretive groups

Land capability (nonirrigated): 6e

Typical profile

0 to 6 inches: Silt loam
6 to 40 inches: Silty clay
40 to 48 inches: Channery silty clay
48 to 50 inches: Weathered bedrock

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Guernsey

Percent of map unit: 5 percent
Landform: Hills

Steinsburg

Percent of map unit: 5 percent
Landform: Hills

Ls—Lindside silt loam, occasionally flooded

Map Unit Setting

Elevation: 300 to 1,500 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 140 to 180 days

Map Unit Composition

Lindside and similar soils: 95 percent
Minor components: 5 percent

Description of Lindside

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water capacity: High (about 10.7 inches)

Interpretive groups

Land capability (nonirrigated): 2w

Typical profile

0 to 8 inches: Silt loam
8 to 30 inches: Silt loam
30 to 80 inches: Stratified gravelly sandy loam to silty clay loam

Minor Components

Orrville

Percent of map unit: 5 percent
Landform: Flood plains

MoC—Monongahela loam, 8 to 15 percent slopes

Map Unit Setting

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition

Monongahela and similar soils: 85 percent
Minor components: 15 percent

Description of Monongahela

Setting

Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 18 to 30 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Typical profile

0 to 8 inches: Loam
8 to 19 inches: Loam
19 to 55 inches: Loam
55 to 72 inches: Sandy clay loam

Minor Components

Allegheny

Percent of map unit: 10 percent
Landform: Terraces

Gallia

Percent of map unit: 5 percent
Landform: Terraces

Ne—Newark silt loam, frequently flooded

Map Unit Setting

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition

Newark and similar soils: 90 percent
Minor components: 10 percent

Description of Newark

Setting

Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: High (about 11.7 inches)

Interpretive groups

Land capability (nonirrigated): 2w

Typical profile

0 to 10 inches: Silt loam
10 to 24 inches: Silt loam
24 to 62 inches: Silty clay loam

Minor Components

Lindside

Percent of map unit: 5 percent
Landform: Flood plains

Piopolis

Percent of map unit: 5 percent
Landform: Depressions

OmB—Omulga silt loam, 1 to 6 percent slopes

Map Unit Setting

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition

Omulga and similar soils: 85 percent
Minor components: 15 percent

Description of Omulga

Setting

Landform: Terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over alluvium over lacustrine deposits

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 18 to 34 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.4 inches)

Interpretive groups

Land capability (nonirrigated): 2e

Typical profile

0 to 8 inches: Silt loam
8 to 26 inches: Silty clay loam
26 to 46 inches: Silt loam
46 to 70 inches: Clay loam
70 to 82 inches: Stratified sandy loam to clay

Minor Components

Licking

Percent of map unit: 5 percent
Landform: Terraces

Doles

Percent of map unit: 5 percent
Landform: Terraces

Allegheny
Percent of map unit: 5 percent
Landform: Terraces

Or—Orrville silt loam, frequently flooded

Map Unit Setting
Elevation: 900 to 1,060 feet
Mean annual precipitation: 30 to 45 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 133 to 182 days

Map Unit Composition
Orrville and similar soils: 85 percent
Minor components: 15 percent

Description of Orrville

Setting
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: High (about 9.5 inches)

Interpretive groups
Land capability (nonirrigated): 2w

Typical profile
0 to 10 inches: Silt loam
10 to 41 inches: Silt loam
41 to 80 inches: Stratified gravelly loamy sand to silt loam

Minor Components

Chagrin
Percent of map unit: 5 percent
Landform: Flood plains

Piopolis
Percent of map unit: 5 percent

Landform: Depressions

Lindside
Percent of map unit: 3 percent
Landform: Flood plains

Pope
Percent of map unit: 2 percent
Landform: Flood plains

PgB—Pinegrove sandy loam, 1 to 8 percent slopes

Map Unit Setting
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition
Pinegrove and similar soils: 90 percent
Minor components: 10 percent

Description of Pinegrove

Setting
Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coal extraction mine spoil

Properties and qualities
Slope: 1 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.8 inches)

Interpretive groups
Land capability (nonirrigated): 7s

Typical profile
0 to 5 inches: Sandy loam
5 to 60 inches: Loamy coarse sand

Minor Components

Bethesda
Percent of map unit: 10 percent

Landform: Hills

PnD—Pinegrove sand, 8 to 25 percent slopes

Map Unit Setting

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition

Pinegrove and similar soils: 90 percent
Minor components: 10 percent

Description of Pinegrove

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coal extraction mine spoil

Properties and qualities

Slope: 8 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.7 inches)

Interpretive groups

Land capability (nonirrigated): 7s

Typical profile

0 to 8 inches: Sand
8 to 60 inches: Channery loamy coarse sand

Minor Components

Steinsburg

Percent of map unit: 5 percent
Landform: Hills

Lily

Percent of map unit: 5 percent
Landform: Hills

PnF—Pinegrove sand, 25 to 70 percent slopes

Map Unit Setting

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 160 to 180 days

Map Unit Composition

Pinegrove and similar soils: 85 percent
Minor components: 15 percent

Description of Pinegrove

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coal extraction mine spoil

Properties and qualities

Slope: 25 to 70 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.7 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Typical profile

0 to 8 inches: Sand
8 to 60 inches: Channery loamy coarse sand

Minor Components

Bethesda

Percent of map unit: 15 percent
Landform: Hills

Ps—Pits, sand and gravel

Map Unit Composition

Pits: 100 percent

SrF—Steinsburg-Rock outcrop association, very steep

Map Unit Setting

Elevation: 300 to 1,400 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 160 to 190 days

Map Unit Composition

Steinsburg and similar soils: 60 percent
Rock outcrop: 15 percent
Minor components: 25 percent

Description of Steinsburg

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum

Properties and qualities

Slope: 50 to 70 percent
Depth to restrictive feature: 24 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Land capability (nonirrigated): 7e

Typical profile

0 to 4 inches: Sandy loam
4 to 17 inches: Channery sandy loam
17 to 26 inches: Very channery sandy loam
26 to 28 inches: Weathered bedrock