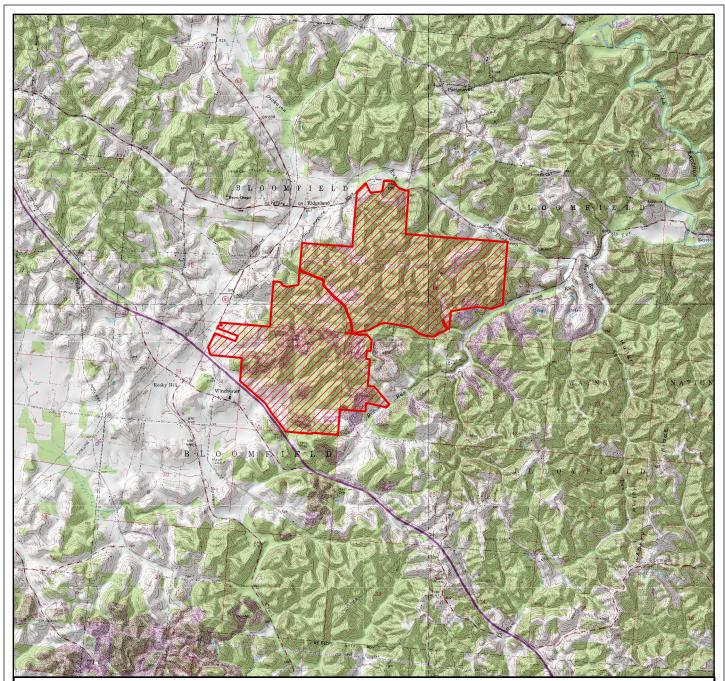
## **ATTACHMENT A**

Ohio EPA SWPA

HULL & ASSOCIATES, LLC DUBLIN, OHIO



#### **Drinking Water Source Protection Areas and Sole Source** Aquifers near the Dixon Run Solar Project Area **Bloomfield Township, Jackson County**



USGS 7.5 Minute Quadrangle Topo Maps: Rio Grande (1977) Map created July 19, 2021



Division of Drinking and Ground Waters

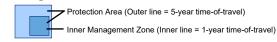
#### **EXPLANATION**

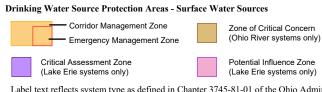




The sole source aquifers displayed on this map represent the area as designated by U.S. EPA. The boundaries used by other programs may differ from the boundaries shown on this map.

#### **Drinking Water Source Protection Areas - Ground Water Sources**





Label text reflects system type as defined in Chapter 3745-81-01 of the Ohio Administrative

Community Water System Non-Transient, Non-Community

Water System

Transient, Non-Community Water System

## **ATTACHMENT B**

Ohio Custom Soil Resource Report for Jackson County, Ohio

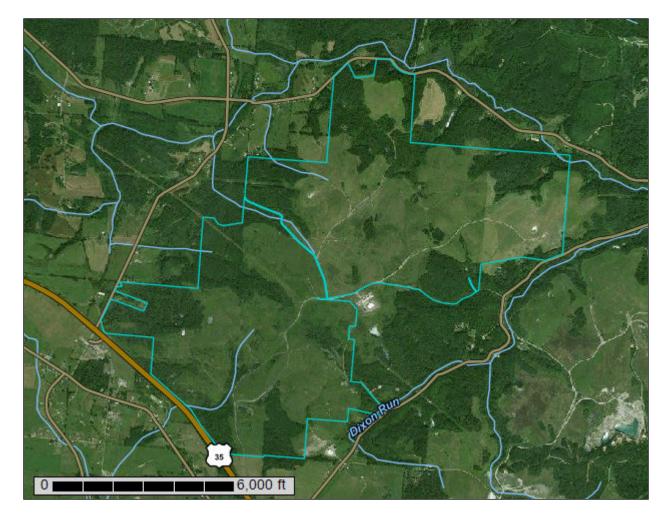
HULL & ASSOCIATES, LLC DUBLIN, OHIO



**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 Jackson County, Ohio



# **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://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

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 Web Soil Survey, the site for official soil survey information.

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# **Contents**

Preface	2
How Soil Surveys Are Made	
Soil Map	
Soil Map	
Legend	
Map Unit Legend	
Map Unit Descriptions	
Jackson County, Ohio	
AkC—Allegheny loam, 8 to 15 percent slopes	
AkD—Allegheny loam, 15 to 25 percent slopes	
BaD—Barkcamp gravelly loamy sand, 8 to 25 percent slopes	
Bhs4B—Bethesda channery silt loam, 0 to 8 percent slopes,	
unreclaimed.	. 19
Bhs4D—Bethesda channery silt loam, 8 to 25 percent slopes,	
unreclaimed	. 21
Bhs4F—Bethesda channery silt loam, 25 to 70 percent slopes,	
unreclaimed	. 22
Bhv1B—Bethesda silt loam, 0 to 8 percent slopes, reclaimed	
Bhv1D—Bethesda silt loam, 8 to 25 percent slopes, reclaimed	
ChD—Clymer loam, 15 to 25 percent slopes	
CkC—Clymer silt loam, 8 to 15 percent slopes	
CoB—Coolville silt loam, 3 to 8 percent slopes	
Dol1A1—Doles silt loam, 0 to 2 percent slopes	
ErD—Ernest silt loam, 15 to 25 percent slopes	
FaB—Fairpoint silty clay loam, 0 to 8 percent slopes	
FaD—Fairpoint silty clay loam, 8 to 25 percent slopes	
LhW1D2—Latham-Wharton silt loams, 15 to 25 percent slopes, eroded	
Omu1B1—Omulga silt loam, 2 to 6 percent slopes	. 38
Omu1C1—Omulga silt loam, 6 to 12 percent slopes	. 40
Pio1AF—Piopolis silt loam, 0 to 2 percent slopes, frequently flooded	. 42
RcC—Richland silt loam, clayey substratum, 8 to 15 percent slopes	. 44
RgD—Rigley sandy loam, 15 to 25 percent slopes	.45
RgLXD1—Rigley-Latham complex, 15 to 25 percent slopes	. 46
RgLZE1—Rigley-Latham association, steep	.48
RmE—Rigley-Clymer association, steep	. 50
RrG—Rigley-Rock outcrop association, very steep	. 52
RrW1C2—Rarden-Wharton silt loams, 8 to 15 percent slopes, eroded	
ShLZE1—Shelocta-Latham association, steep	.56
SkP1AF—Stokly-Philo silt loams, 0 to 3 percent slopes, frequently	
flooded	
Stn1AO—Stendal silt loam, 0 to 3 percent slopes, occasionally flooded	
WeB—Wellston silt loam, 3 to 8 percent slopes	
WhC—Wharton silt loam, 8 to 15 percent slopes	
Wya3C2—Wyatt silty clay loam, 6 to 12 percent slopes, eroded	.65

Wya3D2—Wyatt silty clay loam, 12 to 18 percent slopes, eroded	66
Soil Information for All Uses	69
Soil Reports	69
Soil Erosion	
Conservation Planning	69
References	76

# **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.

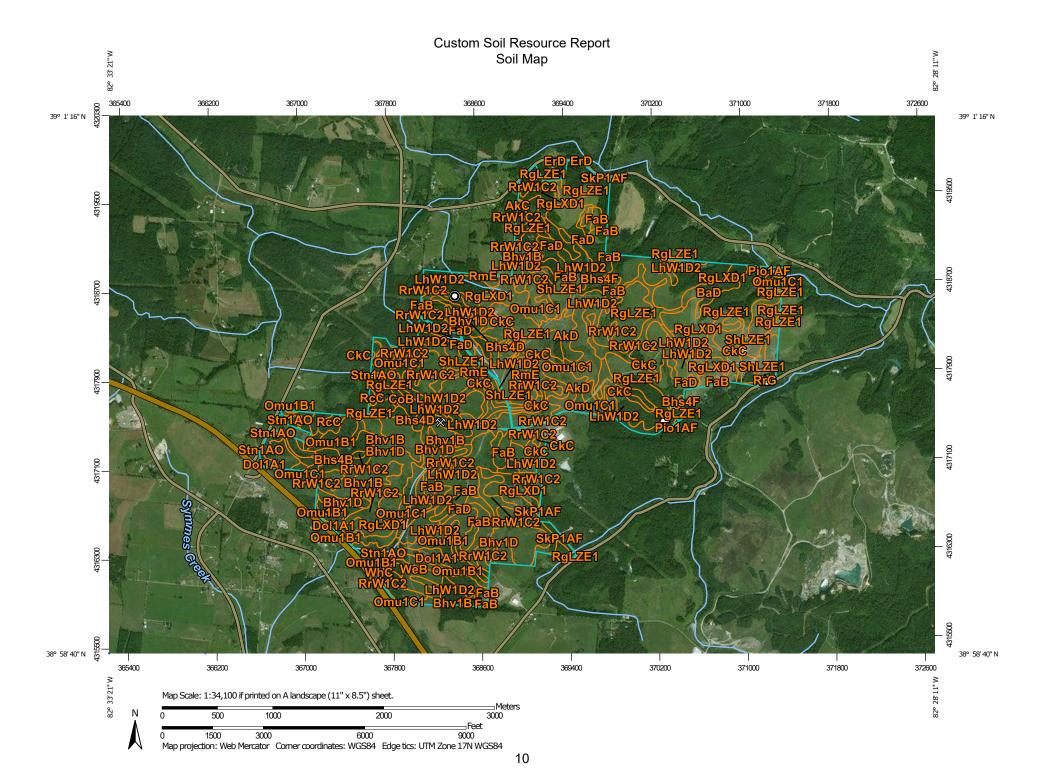
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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.



#### MAP LEGEND

#### Area of Interest (AOI)

Area of Interest (AOI)

#### Soils

Soil Map Unit Polygons

-

Soil Map Unit Lines

Soil Map Unit Points

#### **Special Point Features**

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Blowout

 $\boxtimes$ 

Borrow Pit

366

Clay Spot

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Closed Depression

 $\Diamond$ 

osed Depression

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Gravel Pit

...

**Gravelly Spot** 

0

Landfill Lava Flow

٨.

Marsh or swamp

Ø.

Mine or Quarry

0

Miscellaneous Water

0

Perennial Water
Rock Outcrop

\_\_\_

Saline Spot

. .

Sandy Spot

. .

Severely Eroded Spot

.

Sinkhole

3>

Slide or Slip

Ø

Sodic Spot

#### LEGEND

8

Spoil Area Stony Spot

60

Very Stony Spot

Ø

Wet Spot Other

Δ

Special Line Features

#### Water Features

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Streams and Canals

#### Transportation

Rails

~

Interstate Highways

US Routes

 $\sim$ 

Major Roads

~

Local Roads

#### Background

1

Aerial Photography

#### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15.800.

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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

Soil Survey Area: Jackson County, Ohio Survey Area Data: Version 19, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 5, 2012—Mar 7, 2017

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**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AkC	Allegheny loam, 8 to 15 percent slopes	0.0	0.0%
AkD	Allegheny loam, 15 to 25 percent slopes	42.3	2.0%
BaD	Barkcamp gravelly loamy sand, 8 to 25 percent slopes	17.1	0.8%
Bhs4B	Bethesda channery silt loam, 0 to 8 percent slopes, unreclaimed	4.9	0.2%
Bhs4D	Bethesda channery silt loam, 8 to 25 percent slopes, unreclaimed	37.7	1.8%
Bhs4F	Bethesda channery silt loam, 25 to 70 percent slopes, unreclaimed	17.8	0.9%
Bhv1B	Bethesda silt loam, 0 to 8 percent slopes, reclaimed	79.4	3.8%
Bhv1D	Bethesda silt loam, 8 to 25 percent slopes, reclaimed	133.2	6.4%
ChD	Clymer loam, 15 to 25 percent slopes	2.6	0.1%
CkC	Clymer silt loam, 8 to 15 percent slopes	82.6	4.0%
СоВ	Coolville silt loam, 3 to 8 percent slopes	5.1	0.2%
Dol1A1	Doles silt loam, 0 to 2 percent slopes	13.3	0.6%
ErD	Ernest silt loam, 15 to 25 percent slopes	0.1	0.0%
FaB	Fairpoint silty clay loam, 0 to 8 percent slopes	72.5	3.5%
FaD	Fairpoint silty clay loam, 8 to 25 percent slopes	172.6	8.3%
LhW1D2	Latham-Wharton silt loams, 15 to 25 percent slopes, eroded	415.2	19.9%
Omu1B1	Omulga silt loam, 2 to 6 percent slopes	43.6	2.1%
Omu1C1	Omulga silt loam, 6 to 12 percent slopes	100.2	4.8%
Pio1AF	Piopolis silt loam, 0 to 2 percent slopes, frequently flooded	11.4	0.5%
RcC	Richland silt loam, clayey substratum, 8 to 15 percent slopes	6.5	0.3%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RgD	Rigley sandy loam, 15 to 25 percent slopes	20.1	1.0%
RgLXD1	Rigley-Latham complex, 15 to 25 percent slopes	92.4	4.4%
RgLZE1	Rigley-Latham association, steep	368.9	17.7%
RmE	Rigley-Clymer association, steep	35.5	1.7%
RrG	Rigley-Rock outcrop association, very steep	2.5	0.1%
RrW1C2	Rarden-Wharton silt loams, 8 to 15 percent slopes, eroded	145.9	7.0%
ShLZE1	Shelocta-Latham association, steep	82.5	4.0%
SkP1AF	Stokly-Philo silt loams, 0 to 3 percent slopes, frequently flooded	21.9	1.1%
Stn1AO	Stendal silt loam, 0 to 3 percent slopes, occasionally flooded	20.7	1.0%
WeB	Wellston silt loam, 3 to 8 percent slopes	2.5	0.1%
WhC	Wharton silt loam, 8 to 15 percent slopes	13.2	0.6%
Wya3C2	Wyatt silty clay loam, 6 to 12 percent slopes, eroded	13.1	0.6%
Wya3D2	Wyatt silty clay loam, 12 to 18 percent slopes, eroded	4.5	0.2%
Totals for Area of Interest	·	2,081.8	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.

## **Jackson County, Ohio**

#### AkC—Allegheny loam, 8 to 15 percent slopes

#### **Map Unit Setting**

National map unit symbol: 2t323 Elevation: 540 to 1,260 feet

Mean annual precipitation: 39 to 45 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 174 to 212 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Allegheny and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Allegheny**

#### Setting

Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Fine-loamy alluvium derived from sedimentary rock

#### **Typical profile**

Ap - 0 to 9 inches: loam
Bt1 - 9 to 20 inches: loam
Bt2 - 20 to 33 inches: clay loam
Bt3 - 33 to 45 inches: sandy clay loam
C - 45 to 66 inches: sandy loam

#### Properties and qualities

Slope: 8 to 15 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

(0.57 to 1.98 in/hr)

Depth to water table: About 43 to 63 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: High (about 9.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B Hydric soil rating: No

#### **Minor Components**

#### Monongahela

Percent of map unit: 10 percent Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Linear, convex

Other vegetative classification: Acid Loams (AL3)

Hydric soil rating: No

#### **Omulga**

Percent of map unit: 10 percent Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

#### AkD—Allegheny loam, 15 to 25 percent slopes

#### **Map Unit Setting**

National map unit symbol: 2t324 Elevation: 560 to 1.370 feet

Mean annual precipitation: 40 to 42 inches Mean annual air temperature: 51 to 54 degrees F

Frost-free period: 174 to 196 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Allegheny and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Allegheny**

#### Setting

Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Fine-loamy alluvium derived from sedimentary rock

#### **Typical profile**

Ap - 0 to 9 inches: loam

Bt1 - 9 to 20 inches: loam

Bt2 - 20 to 33 inches: clay loam

Bt3 - 33 to 45 inches: sandy clay loam

C - 45 to 66 inches: sandy loam

#### **Properties and qualities**

Slope: 15 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 to high

(0.57 to 1.98 in/hr)

Depth to water table: About 43 to 63 inches

Frequency of flooding: None Frequency of pondina: None

Available water capacity: High (about 9.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B Hydric soil rating: No

#### **Minor Components**

#### **Omulga**

Percent of map unit: 10 percent Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

#### Wyatt

Percent of map unit: 10 percent Landform: Stream terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-6OH)

Hydric soil rating: No

## BaD—Barkcamp gravelly loamy sand, 8 to 25 percent slopes

#### **Map Unit Setting**

National map unit symbol: kzrj Elevation: 640 to 870 feet

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Barkcamp and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Barkcamp**

#### Setting

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Mine spoil or earthy fill derived from interbedded sedimentary rock

#### Typical profile

H1 - 0 to 5 inches: gravelly loamy sand H2 - 5 to 60 inches: gravelly loamy sand

#### **Properties and qualities**

Slope: 8 to 25 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00

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 4.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydrologic Soil Group: A

Forage suitability group: Unnamed (G124XYH-1OH)
Other vegetative classification: Unnamed (G124XYH-1OH)

Hydric soil rating: No

#### **Minor Components**

#### Rigley

Percent of map unit: 5 percent

Landform: Hills

#### **Bethesda**

Percent of map unit: 3 percent

Landform: Hills

#### **Fairpoint**

Percent of map unit: 2 percent

Landform: Hills

# Bhs4B—Bethesda channery silt loam, 0 to 8 percent slopes, unreclaimed

#### Map Unit Setting

National map unit symbol: 2xph9 Elevation: 610 to 1,390 feet

Mean annual precipitation: 38 to 43 inches Mean annual air temperature: 49 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Bethesda, unreclaimed, unstable fill, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Bethesda, Unreclaimed, Unstable Fill

#### Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Acid coal extraction mine spoil derived from sandstone and shale

#### Typical profile

A - 0 to 6 inches: channery silt loam
C - 6 to 80 inches: very channery clay loam

#### **Properties and qualities**

Slope: 0 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): Very low to moderately

low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 1.7 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: D

Forage suitability group: Unnamed (G124XYE-3OH)

Other vegetative classification: Unnamed (G124XYE-3OH), Very Rocky, Acid

Soils (RA2)

Hydric soil rating: No

#### **Minor Components**

#### Morristown, unreclaimed, unstable fill

Percent of map unit: 14 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Other vegetative classification: Unnamed (G126XYE-3OH), Limy Hills (LH2)

Hydric soil rating: No

### Typic epiaquents, unreclaimed, unstable fill

Percent of map unit: 1 percent

Landform: Ridges

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear, concave Across-slope shape: Convex, linear, concave

Hydric soil rating: Yes

# Bhs4D—Bethesda channery silt loam, 8 to 25 percent slopes, unreclaimed

#### **Map Unit Setting**

National map unit symbol: 2xphh Elevation: 530 to 1,330 feet

Mean annual precipitation: 38 to 43 inches
Mean annual air temperature: 49 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Bethesda, unreclaimed, unstable fill, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Bethesda, Unreclaimed, Unstable Fill

#### Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Acid coal extraction mine spoil derived from sandstone and shale

#### Typical profile

A - 0 to 6 inches: channery silt loam
C - 6 to 80 inches: very channery clay loam

#### **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): Very low to moderately

low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 1.7 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Forage suitability group: Unnamed (G124XYE-3OH)

Other vegetative classification: Unnamed (G124XYE-3OH), Very Rocky, Acid

Soils (RA2)

Hydric soil rating: No

#### **Minor Components**

#### Morristown, unreclaimed, unstable fill

Percent of map unit: 14 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Other vegetative classification: Unnamed (G126XYE-3OH), Limy Hills (LH2)

Hydric soil rating: No

#### Typic epiaquents, unreclaimed, unstable fill

Percent of map unit: 1 percent

Landform: Ridges

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex, linear, concave Across-slope shape: Convex, linear, concave

Hydric soil rating: Yes

# Bhs4F—Bethesda channery silt loam, 25 to 70 percent slopes, unreclaimed

#### **Map Unit Setting**

National map unit symbol: 2xphl Elevation: 530 to 1,350 feet

Mean annual precipitation: 38 to 43 inches
Mean annual air temperature: 49 to 55 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Bethesda, unreclaimed, unstable fill, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Bethesda, Unreclaimed, Unstable Fill

#### Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Acid coal extraction mine spoil derived from sandstone and shale

#### **Typical profile**

A - 0 to 6 inches: channery silt loam
C - 6 to 80 inches: very channery clay loam

#### **Properties and qualities**

Slope: 25 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): Very low to moderately

low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 1.7 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Forage suitability group: Unnamed (G124XYE-3OH)

Other vegetative classification: Unnamed (G124XYE-3OH), Very Rocky, Acid

Soils (RA2)

Hydric soil rating: No

#### **Minor Components**

#### Morristown, unreclaimed, unstable fill

Percent of map unit: 15 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Other vegetative classification: Unnamed (G126XYE-3OH), Limy Hills (LH2)

Hydric soil rating: No

#### Bhv1B—Bethesda silt loam, 0 to 8 percent slopes, reclaimed

#### **Map Unit Setting**

National map unit symbol: 2xph7 Elevation: 620 to 1,330 feet

Mean annual precipitation: 38 to 43 inches
Mean annual air temperature: 49 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Bethesda, reclaimed, unstable fill, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Bethesda, Reclaimed, Unstable Fill

#### Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Acid coal extraction mine spoil derived from sandstone and

siltstone

#### Typical profile

A - 0 to 6 inches: silt loam

C - 6 to 80 inches: very channery clay loam

#### **Properties and qualities**

Slope: 0 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): Very low to moderately

low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 1.6 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: D Hydric soil rating: No

#### **Minor Components**

#### Morristown, reclaimed, unstable fill

Percent of map unit: 14 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Other vegetative classification: Unnamed (G126XYB-4OH), Limy Hills (LH2)

Hydric soil rating: No

#### Typic epiaquents, reclaimed, unstable fill

Percent of map unit: 1 percent

Landform: Ridges

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex, linear, concave Across-slope shape: Convex, linear, concave

Hydric soil rating: Yes

#### Bhv1D—Bethesda silt loam, 8 to 25 percent slopes, reclaimed

#### **Map Unit Setting**

National map unit symbol: 2xphc Elevation: 580 to 1,340 feet

Mean annual precipitation: 38 to 43 inches
Mean annual air temperature: 49 to 55 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Bethesda, reclaimed, unstable fill, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Bethesda, Reclaimed, Unstable Fill

#### Setting

Landform: Hillslopes

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Acid coal extraction mine spoil derived from sandstone and

siltstone

#### Typical profile

A - 0 to 6 inches: silt loam

C - 6 to 80 inches: very channery clay loam

#### **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): Very low to moderately

low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 1.6 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D Hydric soil rating: No

#### **Minor Components**

#### Morristown, reclaimed, unstable fill

Percent of map unit: 14 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Hydric soil rating: No

#### Typic epiaquents, reclaimed, unstable fill

Percent of map unit: 1 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

#### ChD—Clymer loam, 15 to 25 percent slopes

#### Map Unit Setting

National map unit symbol: kzrq Elevation: 620 to 1,020 feet

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Clymer**

#### Setting

Landform: Hills

Parent material: Fine-loamy residuum

#### Typical profile

H1 - 0 to 10 inches: loam H2 - 10 to 39 inches: loam

H3 - 39 to 47 inches: channery sandy clay loam H4 - 47 to 50 inches: unweathered bedrock

#### **Properties and qualities**

Slope: 15 to 25 percent

Depth to restrictive feature: 40 to 84 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00

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 classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B Hydric soil rating: No

# **Minor Components**

### **Brownsville**

Percent of map unit: 10 percent

Landform: Hills

#### Rarden

Percent of map unit: 3 percent

Landform: Hills

### Rock outcrop

Percent of map unit: 2 percent Hydric soil rating: Unranked

# CkC—Clymer silt loam, 8 to 15 percent slopes

# **Map Unit Setting**

National map unit symbol: kzrs Elevation: 640 to 1,020 feet

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Clymer**

### Setting

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Fine-loamy residuum

# **Typical profile**

H1 - 0 to 8 inches: silt loam

H2 - 8 to 38 inches: channery clay loam

H3 - 38 to 61 inches: very channery sandy clay loam

H4 - 61 to 63 inches: unweathered bedrock

# **Properties and qualities**

Slope: 8 to 15 percent

Depth to restrictive feature: 40 to 84 inches to lithic bedrock

Drainage class: Well drained Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00

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 5.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B Hydric soil rating: No

# **Minor Components**

# Rarden

Percent of map unit: 10 percent

Landform: Hills

#### Tilsit

Percent of map unit: 5 percent

Landform: Hills

# CoB—Coolville silt loam, 3 to 8 percent slopes

# **Map Unit Setting**

National map unit symbol: 2x9zt Elevation: 650 to 1,570 feet

Mean annual precipitation: 43 to 46 inches Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 178 to 207 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Coolville**

# Setting

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest, interfluve, nose slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Loess over residuum weathered from shale

# **Typical profile**

Oe - 0 to 1 inches: moderately decomposed plant material

Ap - 1 to 8 inches: silt loam
BE - 8 to 11 inches: silt loam
Bt1 - 11 to 15 inches: silty clay loam
Bt2 - 15 to 20 inches: silty clay loam
2Bt3 - 20 to 25 inches: silty clay
2Bt4 - 25 to 34 inches: silty clay
2Bt5 - 34 to 41 inches: silty clay
2BC - 41 to 49 inches: silty clay loam
2Cr - 49 to 59 inches: bedrock

# **Properties and qualities**

Slope: 3 to 8 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): Moderately low (0.01 to

0.14 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Moderate (about 7.5 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C/D Hydric soil rating: No

### **Minor Components**

#### Tilsit

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve, nose slope, crest

Down-slope shape: Linear, concave Across-slope shape: Linear, concave

Hydric soil rating: No

### Gilpin

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest, interfluve, nose slope

Down-slope shape: Convex

Across-slope shape: Linear Hydric soil rating: No

# Upshur

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest, interfluve, nose slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Dol1A1—Doles silt loam, 0 to 2 percent slopes

# **Map Unit Setting**

National map unit symbol: 2n8gy

Elevation: 620 to 890 feet

Mean annual precipitation: 34 to 45 inches Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Prime farmland if drained

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Doles**

# Setting

Landform: Terraces

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Linear

Parent material: Silty loess over silty colluvium over old alluvium

# **Typical profile**

Ap - 0 to 8 inches: silt loam

Bt - 8 to 24 inches: silt loam

Btx - 24 to 58 inches: silt loam

C - 58 to 79 inches: silty clay loam

# **Properties and qualities**

Slope: 0 to 2 percent

Depth to restrictive feature: 20 to 30 inches to fragipan

Drainage class: Somewhat poorly drained

Runoff class: Low

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 6 to 12 inches

Frequency of flooding: None Frequency of pondina: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 4.5 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Forage suitability group: Unnamed (G124XYC-1OH)
Other vegetative classification: Unnamed (G124XYC-1OH)

Hydric soil rating: No

# **Minor Components**

# Omulga

Percent of map unit: 5 percent

Landform: Terraces

Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYF-3OH)

Hydric soil rating: No

#### Vincent

Percent of map unit: 5 percent

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

### **Tygart**

Percent of map unit: 3 percent Landform: Stream terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYC-1OH), Wetlands (W2)

Hydric soil rating: No

# Bonnie

Percent of map unit: 2 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave

Other vegetative classification: Unnamed (G124XYC-3OH)

Hydric soil rating: Yes

# ErD—Ernest silt loam, 15 to 25 percent slopes

# **Map Unit Setting**

National map unit symbol: kzs0 Elevation: 610 to 900 feet

Mean annual precipitation: 37 to 45 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Ernest**

# Setting

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Fine-loamy colluvium derived from interbedded sedimentary rock

### Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 31 inches: channery silt loam H3 - 31 to 62 inches: channery silt loam

H4 - 62 to 70 inches: loam

# **Properties and qualities**

Slope: 15 to 25 percent

Depth to restrictive feature: 24 to 36 inches to fragipan

Drainage class: Moderately well drained

Runoff class: Very high

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 4.6 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C Hydric soil rating: No

### **Minor Components**

#### **Brownsville**

Percent of map unit: 10 percent

Landform: Hills

#### Wharton

Percent of map unit: 5 percent

Landform: Hills

### Richland

Percent of map unit: 5 percent

Landform: Hills

# FaB—Fairpoint silty clay loam, 0 to 8 percent slopes

# **Map Unit Setting**

National map unit symbol: 2wdph Elevation: 650 to 1,300 feet

Mean annual precipitation: 38 to 42 inches Mean annual air temperature: 49 to 53 degrees F

Frost-free period: 120 to 190 days

Farmland classification: Not prime farmland

### **Map Unit Composition**

Fairpoint, unstable fill, and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Fairpoint, Unstable Fill**

# Setting

Landform: Ridges

Landform position (two-dimensional): Shoulder, summit, backslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Nonacid coal extraction mine spoil derived from limestone,

sandstone, and shale

# **Typical profile**

A - 0 to 4 inches: silty clay loam

C - 4 to 60 inches: very channery silt loam

### **Properties and qualities**

Slope: 0 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): Very low to moderately

low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 2.5 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: D

Forage suitability group: Unnamed (G126XYH-1OH)

Other vegetative classification: Unnamed (G126XYH-1OH), Limy Hills (LH2)

Hydric soil rating: No

# **Minor Components**

# Bethesda, unstable fill

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Hydric soil rating: No

# Barkcamp, unstable fill

Percent of map unit: 0 percent

Landform: Ridges

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Hydric soil rating: No

#### Water

Percent of map unit: 0 percent

# FaD—Fairpoint silty clay loam, 8 to 25 percent slopes

# Map Unit Setting

National map unit symbol: 2wdpw Elevation: 630 to 1,300 feet

Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 49 to 53 degrees F

Frost-free period: 120 to 190 days

Farmland classification: Not prime farmland

### **Map Unit Composition**

Fairpoint, unstable fill, and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Fairpoint, Unstable Fill**

### Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Parent material: Nonacid coal extraction mine spoil derived from limestone,

sandstone, and shale

# Typical profile

A - 0 to 4 inches: silty clay loam

C - 4 to 60 inches: very channery silt loam

# **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): Very low to moderately

low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Very low (about 2.5 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D

Forage suitability group: Unnamed (G126XYH-1OH)

Other vegetative classification: Unnamed (G126XYH-1OH), Limy Hills (LH2)

Hydric soil rating: No

# **Minor Components**

# Bethesda, unstable fill

Percent of map unit: 5 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Hydric soil rating: No

# Barkcamp, unstable fill

Percent of map unit: 0 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear Across-slope shape: Convex, linear

Hydric soil rating: No

### Rock outcrop

Percent of map unit: 0 percent

# LhW1D2—Latham-Wharton silt loams, 15 to 25 percent slopes, eroded

# **Map Unit Setting**

National map unit symbol: 2n8hs Elevation: 790 to 1,100 feet

Mean annual precipitation: 34 to 45 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 145 to 195 days

Farmland classification: Not prime farmland

# Map Unit Composition

Latham and similar soils: 45 percent Wharton and similar soils: 35 percent Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Latham**

# 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

# Typical profile

A - 0 to 8 inches: silt loam

Bt - 8 to 34 inches: silty clay

Cr - 34 to 38 inches: bedrock

# **Properties and qualities**

Slope: 18 to 25 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: Very high

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 4.8 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D Hydric soil rating: No

# **Description of Wharton**

# 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

# **Typical profile**

A - 0 to 10 inches: silt loam

Bt - 10 to 32 inches: channery silty clay loam

C - 32 to 66 inches: silty clay

# Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: 40 to 120 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: Very high

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 7.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C Hydric soil rating: No

# **Minor Components**

# Weikert

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Tilsit

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Clifty

Percent of map unit: 5 percent Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

### **Brownsville**

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYB-2OH)

Hydric soil rating: No

# Omu1B1—Omulga silt loam, 2 to 6 percent slopes

# **Map Unit Setting**

National map unit symbol: 2n8h2 Elevation: 620 to 1,500 feet

Mean annual precipitation: 34 to 45 inches
Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 200 days

Farmland classification: All areas are prime farmland

### **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

### **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: Silty loess over silty colluvium over old alluvium

# **Typical profile**

Ap - 0 to 9 inches: silt loam
Bt - 9 to 27 inches: silt loam
2Btx - 27 to 49 inches: silt loam
2B't - 49 to 67 inches: silty clay loam
3C - 67 to 79 inches: silty clay loam

### **Properties and qualities**

Slope: 2 to 6 percent

Depth to restrictive feature: 18 to 36 inches to fragipan

Drainage class: Moderately well drained

Runoff class: Low

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 5.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Forage suitability group: Unnamed (G124XYF-3OH)
Other vegetative classification: Unnamed (G124XYF-3OH)

Hydric soil rating: No

# **Minor Components**

# Wyatt

Percent of map unit: 4 percent

Landform: Terraces

Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-6OH)

Hydric soil rating: No

### Gallia

Percent of map unit: 3 percent

Landform: Terraces

Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

#### **Doles**

Percent of map unit: 2 percent

Landform: Terraces

Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYC-1OH)

Hydric soil rating: No

#### Vincent

Percent of map unit: 2 percent

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

#### Westmoreland

Percent of map unit: 2 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

# **Allegheny**

Percent of map unit: 1 percent Landform: Stream terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Convex

Other vegetative classification: Unnamed (G124XYA-1OH), Acid Loams (AL3)

Hydric soil rating: No

#### Wharton

Percent of map unit: 1 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-6OH)

Hydric soil rating: No

# Omu1C1—Omulga silt loam, 6 to 12 percent slopes

### Map Unit Setting

National map unit symbol: 2n8h3 Elevation: 620 to 1,500 feet

Mean annual precipitation: 34 to 45 inches
Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 200 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Omulga**

# Setting

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Silty loess over silty colluvium over old alluvium

# **Typical profile**

Ap - 0 to 6 inches: silt loam
Bt - 6 to 29 inches: silt loam
2Btx - 29 to 50 inches: silt loam
2B't - 50 to 65 inches: silt loam
3C - 65 to 79 inches: silty clay loam

# **Properties and qualities**

Slope: 6 to 12 percent

Depth to restrictive feature: 18 to 36 inches to fragipan

Drainage class: Moderately well drained

Runoff class: Medium

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Forage suitability group: Unnamed (G124XYF-3OH)
Other vegetative classification: Unnamed (G124XYF-3OH)

Hydric soil rating: No

# **Minor Components**

# Wyatt

Percent of map unit: 4 percent

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Linear Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-6OH)

Hydric soil rating: No

### **Allegheny**

Percent of map unit: 3 percent Landform: Stream terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Other vegetative classification: Unnamed (G124XYA-1OH), Acid Loams (AL3)

Hydric soil rating: No

#### Gallia

Percent of map unit: 3 percent

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Riser, tread

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

### Westmoreland

Percent of map unit: 2 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

#### Wharton

Percent of map unit: 2 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-6OH)

Hydric soil rating: No

#### Vincent

Percent of map unit: 1 percent

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

# Pio1AF—Piopolis silt loam, 0 to 2 percent slopes, frequently flooded

### Map Unit Setting

National map unit symbol: 2n8hb

Elevation: 490 to 820 feet

Mean annual precipitation: 34 to 45 inches
Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Prime farmland if drained and either protected from flooding

or not frequently flooded during the growing season

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Piopolis**

# Setting

Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Fine-silty alluvium

# **Typical profile**

A - 0 to 6 inches: silt loam

Bg - 6 to 40 inches: silty clay loam Cg - 40 to 80 inches: silty clay loam

# **Properties and qualities**

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Very low

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 0 to 12 inches

Frequency of flooding: FrequentNone

Frequency of ponding: Occasional

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 10.4 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D Hydric soil rating: Yes

### **Minor Components**

### Piopolis, ponded for long duration

Percent of map unit: 7 percent Landform: Flood plains Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

#### Stendal

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave

Hydric soil rating: No

#### Orrville

Percent of map unit: 3 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave

Hydric soil rating: No

# RcC—Richland silt loam, clayey substratum, 8 to 15 percent slopes

# **Map Unit Setting**

National map unit symbol: kzsk Elevation: 620 to 890 feet

Mean annual precipitation: 37 to 45 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Richland**

### Setting

Landform: Hills

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Fine-loamy colluvium

### Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 44 inches: channery clay loam

H3 - 44 to 60 inches: silty clay

# **Properties and qualities**

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high

(0.01 to 0.20 in/hr)

Depth to water table: About 36 to 72 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Moderate (about 7.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B Hydric soil rating: No

# **Minor Components**

# **Omulga**

Percent of map unit: 7 percent

Landform: Terraces

### Wyatt

Percent of map unit: 7 percent

Landform: Terraces

# Somewhat poorly drained soils

Percent of map unit: 6 percent

# RgD—Rigley sandy loam, 15 to 25 percent slopes

# **Map Unit Setting**

National map unit symbol: kzsm Elevation: 620 to 1.020 feet

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Rigley**

#### Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Coarse-loamy colluvium derived from sandstone

#### Typical profile

H1 - 0 to 7 inches: sandy loam H2 - 7 to 44 inches: sandy loam

H3 - 44 to 60 inches: extremely channery sandy loam

# **Properties and qualities**

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

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: Moderate (about 7.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A Hydric soil rating: No

### **Minor Components**

#### Wharton

Percent of map unit: 5 percent

Landform: Hills

### Rarden

Percent of map unit: 5 percent

Landform: Hills

# **Brownsville**

Percent of map unit: 5 percent

Landform: Hills

# RgLXD1—Rigley-Latham complex, 15 to 25 percent slopes

# **Map Unit Setting**

National map unit symbol: 2n8j3 Elevation: 790 to 1,100 feet

Mean annual precipitation: 34 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 155 to 195 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

Rigley and similar soils: 45 percent Latham and similar soils: 40 percent Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Rigley**

# Setting

Landform: Hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Coarse-loamy colluvium derived from sandstone

# **Typical profile**

A - 0 to 8 inches: loam

Bt - 8 to 40 inches: sandy loam

C - 40 to 60 inches: channery sandy loam

# **Properties and qualities**

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 7.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A Hydric soil rating: No

# **Description of Latham**

# 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

# Typical profile

A - 0 to 5 inches: silt loam

Bt - 5 to 38 inches: channery silty clay

Cr - 38 to 40 inches: bedrock

#### **Properties and qualities**

Slope: 15 to 25 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: Very high

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 5.2 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D Hydric soil rating: No

# **Minor Components**

#### **Brownsville**

Percent of map unit: 10 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYB-2OH)

Hydric soil rating: No

# Wharton

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# RgLZE1—Rigley-Latham association, steep

### **Map Unit Setting**

National map unit symbol: 2n8j5 Elevation: 660 to 1.400 feet

Mean annual precipitation: 34 to 45 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 155 to 200 days

Farmland classification: Not prime farmland

### **Map Unit Composition**

Rigley and similar soils: 45 percent Latham and similar soils: 30 percent Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Rigley**

# Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Coarse-loamy colluvium derived from sandstone

# Typical profile

A - 0 to 8 inches: loam

Bt - 8 to 40 inches: sandy loam

C - 40 to 60 inches: very channery sandy loam

# **Properties and qualities**

Slope: 25 to 50 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 7.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A Hydric soil rating: No

# **Description of Latham**

# 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

### Typical profile

A - 0 to 5 inches: silt loam

Bt - 5 to 32 inches: silty clay loam

Cr - 32 to 37 inches: bedrock

### **Properties and qualities**

Slope: 25 to 35 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: Very high

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 4.4 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D Hydric soil rating: No

# **Minor Components**

### **Brownsville**

Percent of map unit: 7 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYB-2OH)

Hydric soil rating: No

#### Wharton

Percent of map unit: 6 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

#### **Shelocta**

Percent of map unit: 6 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

### Clymer

Percent of map unit: 6 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# RmE—Rigley-Clymer association, steep

# **Map Unit Setting**

National map unit symbol: kzsp Elevation: 610 to 1,020 feet

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

Rigley and similar soils: 50 percent Clymer and similar soils: 25 percent Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Rigley**

# Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Coarse-loamy colluvium derived from sandstone

# Typical profile

H1 - 0 to 7 inches: sandy loam H2 - 7 to 44 inches: sandy loam

H3 - 44 to 60 inches: extremely channery sandy loam

# Properties and qualities

Slope: 25 to 40 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

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: Moderate (about 7.0 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Forage suitability group: Unnamed (G124XYA-3OH)
Other vegetative classification: Unnamed (G124XYA-3OH)

Hydric soil rating: No

# **Description of Clymer**

# Setting

Landform: Hills

Parent material: Fine-loamy residuum

# Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 36 inches: channery sandy clay loam
H3 - 36 to 45 inches: channery sandy loam
H4 - 45 to 47 inches: unweathered bedrock

# **Properties and qualities**

Slope: 25 to 40 percent

Depth to restrictive feature: 40 to 84 inches to lithic bedrock

Drainage class: Well drained Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00

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 4.6 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B Hydric soil rating: No

# **Minor Components**

#### Rarden

Percent of map unit: 10 percent

Landform: Hills

#### **Brownsville**

Percent of map unit: 10 percent

Landform: Hills

#### Wharton

Percent of map unit: 5 percent

Landform: Hills

# Sandstone escarpments

Percent of map unit:

# RrG—Rigley-Rock outcrop association, very steep

# **Map Unit Setting**

National map unit symbol: kzsr Elevation: 620 to 1,070 feet

Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

Rigley and similar soils: 60 percent

Rock outcrop: 15 percent Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Rigley**

# Setting

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Coarse-loamy colluvium derived from sandstone

# **Typical profile**

H1 - 0 to 6 inches: sandy loam H2 - 6 to 41 inches: sandy loam

H3 - 41 to 60 inches: extremely channery sandy loam

# **Properties and qualities**

Slope: 40 to 70 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

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: Moderate (about 7.0 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Forage suitability group: Unnamed (G124XYH-1OH)
Other vegetative classification: Unnamed (G124XYH-1OH)

Hydric soil rating: No

# **Minor Components**

# Wharton

Percent of map unit: 5 percent

Landform: Hills

### Moderately deep, somewhat excessively drained soils

Percent of map unit: 5 percent

#### **Shelocta**

Percent of map unit: 5 percent

Landform: Hills

# Shallow, excessively drained soils

Percent of map unit: 5 percent

#### **Brownsville**

Percent of map unit: 5 percent

Landform: Hills

# RrW1C2—Rarden-Wharton silt loams, 8 to 15 percent slopes, eroded

# **Map Unit Setting**

National map unit symbol: 2n8hq Elevation: 790 to 1,020 feet

Mean annual precipitation: 35 to 45 inches Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 145 to 180 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

Rarden and similar soils: 45 percent Wharton and similar soils: 40 percent Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Rarden**

# Setting

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Residuum weathered from clayey shale

# Typical profile

A - 0 to 6 inches: silt loam

Bt - 6 to 34 inches: silty clay

Cr - 34 to 50 inches: bedrock

# **Properties and qualities**

Slope: 8 to 15 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: High

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 4.4 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D Hydric soil rating: No

# **Description of Wharton**

# Setting

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Residuum weathered from interbedded sedimentary rock

# **Typical profile**

A - 0 to 6 inches: silt loam Bt - 6 to 46 inches: clay loam Cr - 46 to 50 inches: bedrock

# **Properties and qualities**

Slope: 8 to 15 percent

Depth to restrictive feature: 40 to 100 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: High

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.7 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C Hydric soil rating: No

# **Minor Components**

# Clymer

Percent of map unit: 10 percent

Landform: Hills

Landform position (two-dimensional): Shoulder, summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

### Rigley

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYA-1OH)

Hydric soil rating: No

# ShLZE1—Shelocta-Latham association, steep

# Map Unit Setting

National map unit symbol: 2n8jp Elevation: 790 to 1,100 feet

Mean annual precipitation: 34 to 54 inches Mean annual air temperature: 48 to 59 degrees F

Frost-free period: 145 to 200 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

Shelocta and similar soils: 50 percent Latham and similar soils: 25 percent Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Shelocta**

# 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

# **Typical profile**

A - 0 to 11 inches: silt loam

Bt - 11 to 42 inches: channery silty clay loam C - 42 to 68 inches: channery silty clay loam

#### **Properties and qualities**

Slope: 25 to 40 percent

Depth to restrictive feature: 48 to 120 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 8.9 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B Hydric soil rating: No

# **Description of Latham**

# 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

# **Typical profile**

A - 0 to 8 inches: silt loam

Bt - 8 to 34 inches: channery silty clay

Cr - 34 to 38 inches: bedrock

# **Properties and qualities**

Slope: 25 to 40 percent

Depth to restrictive feature: 20 to 40 inches to paralithic bedrock

Drainage class: Moderately well drained

Runoff class: Very high

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 4.8 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D Hydric soil rating: No

# **Minor Components**

# **Blairton**

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Weikert

Percent of map unit: 4 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Coolville

Percent of map unit: 4 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Convex

Other vegetative classification: Fertile Loams (FL3)

Hydric soil rating: No

#### **Brownsville**

Percent of map unit: 4 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYB-2OH)

Hydric soil rating: No

# Gilpin

Percent of map unit: 4 percent

Landform: Hills

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Clifty

Percent of map unit: 4 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

# SkP1AF—Stokly-Philo silt loams, 0 to 3 percent slopes, frequently flooded

### **Map Unit Setting**

National map unit symbol: 2n8h9 Elevation: 540 to 3,000 feet

Mean annual precipitation: 34 to 45 inches Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 160 to 200 days

Farmland classification: Prime farmland if drained and either protected from flooding

or not frequently flooded during the growing season

# **Map Unit Composition**

Stokly and similar soils: 55 percent Philo and similar soils: 30 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Stokly**

# Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave

Parent material: Coarse-loamy alluvium

# **Typical profile**

Ap - 0 to 8 inches: silt loam
Bw - 8 to 36 inches: loam
Cg - 36 to 80 inches: sandy loam

# Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches Drainage class: Somewhat poorly drained

Runoff class: Low

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 12 inches Frequency of flooding: FrequentNone

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 8.9 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Forage suitability group: Unnamed (G124XYC-3OH)
Other vegetative classification: Unnamed (G124XYC-3OH)

Hydric soil rating: No

# **Description of Philo**

# Setting

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

#### Typical profile

A - 0 to 8 inches: silt loam Bw - 8 to 36 inches: loam

C - 36 to 80 inches: stratified fine sandy loam to loam

# **Properties and qualities**

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

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 24 inches

Frequency of flooding: FrequentNone

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 8.5 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Forage suitability group: Unnamed (G124XYA-5OH)
Other vegetative classification: Unnamed (G124XYA-5OH)

Hydric soil rating: No

# **Minor Components**

# Pope

Percent of map unit: 8 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Convex

Other vegetative classification: Unnamed (G124XYA-5OH)

Hydric soil rating: No

#### Bonnie

Percent of map unit: 7 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave

Other vegetative classification: Unnamed (G124XYC-3OH)

Hydric soil rating: Yes

# Stn1AO—Stendal silt loam, 0 to 3 percent slopes, occasionally flooded

#### Map Unit Setting

National map unit symbol: 2n8jb Elevation: 490 to 900 feet

Mean annual precipitation: 38 to 46 inches
Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 170 to 210 days

Farmland classification: Prime farmland if drained

### **Map Unit Composition**

Stendal and similar soils: 85 percent *Minor components:* 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Stendal**

#### Settina

Landform: Flood plains

Down-slope shape: Linear Across-slope shape: Concave Parent material: Fine-silty alluvium

#### Typical profile

Ap - 0 to 10 inches: silt loam Bg - 10 to 40 inches: silt loam Cg - 40 to 80 inches: silt loam

# **Properties and qualities**

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches Drainage class: Somewhat poorly drained

Runoff class: Very high

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 12 inches Frequency of flooding: OccasionalNone

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 11.1 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D Hydric soil rating: No

# **Minor Components**

### Cuba

Percent of map unit: 7 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

# **Piopolis**

Percent of map unit: 5 percent Landform: Flood plains Down-slope shape: Concave Across-slope shape: Concave Hydric soil rating: Yes

#### **Gallipolis**

Percent of map unit: 3 percent

Landform: Terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Moist Loams (ML3)

Hydric soil rating: No

# WeB-Wellston silt loam, 3 to 8 percent slopes

# **Map Unit Setting**

National map unit symbol: 2tggz Elevation: 600 to 2,260 feet

Mean annual precipitation: 39 to 52 inches Mean annual air temperature: 49 to 53 degrees F

Frost-free period: 165 to 205 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Wellston**

# Setting

Landform: Ridges

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex, linear

Parent material: Fine-silty loess derived from sedimentary rock over residuum

weathered from sandstone and siltstone

# Typical profile

A - 0 to 2 inches: silt loam
E - 2 to 7 inches: silt loam
BE - 7 to 10 inches: silt loam
Bt1 - 10 to 15 inches: silt loam
Bt2 - 15 to 21 inches: silt loam
Bt3 - 21 to 25 inches: silty clay loam
2BC - 25 to 36 inches: channery loam

2C - 36 to 45 inches: extremely channery loam

2R - 45 to 55 inches: bedrock

# **Properties and qualities**

Slope: 3 to 8 percent

Depth to restrictive feature: 38 to 72 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00

in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: Moderate (about 6.9 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C Hydric soil rating: No

# **Minor Components**

### Zanesville

Percent of map unit: 10 percent

Landform: Ridges

Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest

Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

### Gilpin

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Convex, linear

Hydric soil rating: No

# WhC—Wharton silt loam, 8 to 15 percent slopes

# **Map Unit Setting**

National map unit symbol: 2t5mm Elevation: 620 to 2.160 feet

Mean annual precipitation: 37 to 51 inches
Mean annual air temperature: 47 to 53 degrees F

Frost-free period: 161 to 205 days

Farmland classification: Not prime farmland

# **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Wharton**

### Setting

Landform: Hills

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from shale and siltstone

# **Typical profile**

Ap - 0 to 9 inches: silt loam

Bt1 - 9 to 16 inches: silt loam
Bt2 - 16 to 22 inches: silt loam
Bt3 - 22 to 31 inches: silt loam
BC - 31 to 46 inches: silty clay loam

C - 46 to 69 inches: channery silty clay loam

Cr - 69 to 79 inches: bedrock

### **Properties and qualities**

Slope: 8 to 15 percent

Depth to restrictive feature: 40 to 71 inches to paralithic bedrock

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00

in/hr)

Depth to water table: About 16 to 28 inches

Frequency of flooding: None Frequency of ponding: None

Available water capacity: High (about 9.5 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D Hydric soil rating: No

# **Minor Components**

### Gilpin

Percent of map unit: 10 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex, linear

Hydric soil rating: No

# Ernest

Percent of map unit: 5 percent

Landform: Hillslopes

Landform position (two-dimensional): Footslope Landform position (three-dimensional): Base slope

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: No

#### Rarden

Percent of map unit: 5 percent

Landform: Hills

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# Wya3C2—Wyatt silty clay loam, 6 to 12 percent slopes, eroded

# **Map Unit Setting**

National map unit symbol: 2n8jj Elevation: 650 to 860 feet

Mean annual precipitation: 34 to 45 inches Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 150 to 200 days

Farmland classification: Not prime farmland

### **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Wyatt**

# Setting

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Clayey lacustrine deposits

### Typical profile

Ap - 0 to 6 inches: silty clay loam
Bt - 6 to 50 inches: silty clay
C1 - 50 to 69 inches: clay
C2 - 69 to 80 inches: silty clay

# **Properties and qualities**

Slope: 6 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: High

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 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.6 inches)

### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C/D

Forage suitability group: Unnamed (G124XYA-6OH)
Other vegetative classification: Unnamed (G124XYA-6OH)

Hydric soil rating: No

# **Minor Components**

### **Omulga**

Percent of map unit: 9 percent

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex Across-slope shape: Linear

Other vegetative classification: Unnamed (G124XYF-3OH)

Hydric soil rating: No

# Allegheny

Percent of map unit: 4 percent Landform: Stream terraces

Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Convex

Other vegetative classification: Unnamed (G124XYA-1OH), Acid Loams (AL3)

Hydric soil rating: No

### Vandalia

Percent of map unit: 2 percent

Landform: Hillslopes

Landform position (two-dimensional): Footslope, toeslope Landform position (three-dimensional): Base slope

Down-slope shape: Convex Across-slope shape: Concave

Other vegetative classification: Unnamed (G124XYA-1OH), Fertile Loams (FL3)

Hydric soil rating: No

# Wya3D2—Wyatt silty clay loam, 12 to 18 percent slopes, eroded

#### Map Unit Setting

National map unit symbol: 2n8jk Elevation: 650 to 860 feet

Mean annual precipitation: 34 to 45 inches Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 150 to 190 days

Farmland classification: Not prime farmland

### **Map Unit Composition**

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

Estimates are based on observations, descriptions, and transects of the mapunit.

### **Description of Wyatt**

# Setting

Landform: Terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Riser

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Clayey lacustrine deposits

# **Typical profile**

A - 0 to 5 inches: silty clay loam
Bt - 5 to 40 inches: silty clay
C - 40 to 69 inches: clay
C - 69 to 79 inches: silty clay

### **Properties and qualities**

Slope: 12 to 18 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Very high

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 12 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 5.9 inches)

# Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C/D Hydric soil rating: No

# **Minor Components**

# Gilpin

Percent of map unit: 6 percent

Landform: Hills

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

# **Rock outcrop**

Percent of map unit: 5 percent Hydric soil rating: Unranked

#### Newark

Percent of map unit: 3 percent Landform: Flood plains Down-slope shape: Linear Across-slope shape: Concave

Hydric soil rating: No

# Vandalia

Percent of map unit: 1 percent

Landform: Hillslopes

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave, convex

Across-slope shape: Concave

Other vegetative classification: Fertile Loams (FL3)

Hydric soil rating: No

# Soil Information for All Uses

# **Soil Reports**

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

# Soil Erosion

This folder contains a collection of tabular reports that present soil erosion factors and groupings. The reports (tables) include all selected map units and components for each map unit. Soil erosion factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

# **Conservation Planning**

This report provides those soil attributes for the conservation plan for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. It provides the soil description along with the slope, runoff, T Factor, WEI, WEG, Erosion class, Drainage class, Land Capability Classification, and the engineering Hydrologic Group and the erosion factors Kf, the representative percentage of fragments, sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic surface layer. Further information on these factors can be found in the National Soil Survey Handbook section 618 found at the url http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2\_054223#00 .

Soil properties and interpretations for conservation planning. The surface mineral horizon properties are displayed. Organic surface horizons are not displayed.

					Con	servat	tion Pla	nning–Jackso	n County, Ohio								
Map symbol and soil	Pct. of	Slope	USLE	Runoff	Т,	WEI	WEG	Erosion	Drainage	NIRR	Hydro	Surface					
name	map unit	RV	Slope Length ft.		Fact or					LCC	logic Group	Depths in.	Kf Fact or	Frag- ments RV	Sand RV	Silt RV	Clay RV
AkC—Allegheny loam, 8 to 15 percent slopes																	
Allegheny	80	12.0	98	_	5	56	5	Class 1	Well drained	3e	В	0 - 9	.32	0	46	41	13
AkD—Allegheny loam, 15 to 25 percent slopes																	
Allegheny	80	20.0	49	_	5	56	5	Class 1	Well drained	4e	В	0 - 9	.32	0	46	41	13
BaD—Barkcamp gravelly loamy sand, 8 to 25 percent slopes																	
Barkcamp	90	17.0	150	Low	5	86	2	Class 1	Well drained	8s	Α	0 - 5	.10	29	81	8	10
Bhs4B—Bethesda channery silt loam, 0 to 8 percent slopes, unreclaimed																	
Bethesda, unreclaimed, unstable fill	85	5.0	160	_	5	38	7	Class 1	Well drained	4s	D	0 - 5	.43	22	22	56	22
Bhs4D—Bethesda channery silt loam, 8 to 25 percent slopes, unreclaimed																	
Bethesda, unreclaimed, unstable fill	85	16.5	59	_	5	38	7	Class 1	Well drained	7e	D	0 - 5	.43	22	22	56	22
Bhs4F—Bethesda channery silt loam, 25 to 70 percent slopes, unreclaimed																	
Bethesda, unreclaimed, unstable fill	85	47.5	49	_	5	38	7	Class 1	Well drained	7e	D	0 - 5	.43	22	22	56	22

					Con	servat	tion Plai	nning–Jackso	n County, Ohio								
Map symbol and soil	Pct. of		USLE	Runoff	T	WEI	WEG	Erosion	Drainage	NIRR LCC	Hydro			Surfa	ce		
name	map unit	RV	Slope Length ft.		Fact or					LCC	logic Group	Depths in.	Kf Fact or	Frag- ments RV	Sand RV	Silt RV	Clay RV
Bhv1B—Bethesda silt loam, 0 to 8 percent slopes, reclaimed																	
Bethesda, reclaimed, unstable fill	85	4.0	180	_	5	48	6	Class 1	Well drained	3s	D	0 - 5	.49	13	22	56	22
Bhv1D—Bethesda silt loam, 8 to 25 percent slopes, reclaimed																	
Bethesda, reclaimed, unstable fill	85	16.5	59	_	5	48	6	Class 1	Well drained	6e	D	0 - 5	.49	13	22	56	22
ChD—Clymer loam, 15 to 25 percent slopes																	
Clymer	85	20.0	150	High	3	48	6	Class 1	Well drained	4e	В	0 - 9	.24	14	41	37	21
CkC—Clymer silt loam, 8 to 15 percent slopes																	
Clymer	85	12.0	150	Medium	5	48	6	Class 1	Well drained	3e	В	0 - 7	.32	14	26	52	21
CoB—Coolville silt loam, 3 to 8 percent slopes																	
Coolville	85	6.0	150	_	4	56	5	Class 1	Moderately well drained	2e	C/D	1 - 7	.43	0	9	72	19
Dol1A1—Doles silt loam, 0 to 2 percent slopes																	
Doles	85	1.0	150	Low	4	56	5	Class 1	Somewhat poorly drained	2w	C/D	0 - 7	.43	_	9	75	16
ErD—Ernest silt loam, 15 to 25 percent slopes																	
Ernest	80	20.0	150	Very high	4	56	5	Class 1	Moderately well drained	4e	С	0 - 7	.32	14	29	53	17

					Con	servat	tion Plar	nning–Jacksor	County, Ohio									
Map symbol and soil	Pct. of	Slope	USLE	Runoff	T	WEI	WEG	Erosion	Drainage	NIRR	Hydro			Surface				
name	map unit	RV	Slope Length ft.		Fact or					LCC	logic Group	Depths in.	Kf Fact or	Frag- ments RV	Sand RV	Silt RV	Clay RV	
FaB—Fairpoint silty clay loam, 0 to 8 percent slopes																		
Fairpoint, unstable fill	95	4.0	180	_	5	48	6	Class 1	Well drained	3s	D	0 - 3	.43	10	17	54	29	
FaD—Fairpoint silty clay loam, 8 to 25 percent slopes																		
Fairpoint, unstable fill	95	17.0	59	_	5	48	6	Class 1	Well drained	6e	D	0 - 3	.43	10	17	54	29	
LhW1D2—Latham- Wharton silt loams, 15 to 25 percent slopes, eroded																		
Latham	45	22.0	150	Very high	3	48	6	Class 2	Moderately well drained	6e	D	0 - 7	.43	10	21	54	23	
Wharton	35	20.0	150	Very high	5	48	6	Class 2	Moderately well drained	4e	С	0 - 9	.37	7	26	53	20	
Omu1B1—Omulga silt loam, 2 to 6 percent slopes																		
Omulga	85	4.0	150	Low	4	56	5	Class 1	Moderately well drained	2e	С	0 - 9	.43	1	9	76	15	
Omu1C1—Omulga silt loam, 6 to 12 percent slopes																		
Omulga	85	9.0	98	Medium	4	56	5	Class 1	Moderately well drained	3e	С	0 - 5	.43	1	9	76	15	
Pio1AF—Piopolis silt loam, 0 to 2 percent slopes, frequently flooded																		
Piopolis	85	1.0	150	Very low	5	48	6	None - deposition	Very poorly drained	3w	C/D	0 - 5	.43	_	10	67	23	

					Con	servat	ion Plar	nning–Jackso	n County, Ohio									
Map symbol and soil	Pct. of	Slope	USLE	Runoff	T	WEI	WEG	Erosion	Drainage		Hydro		Surface					
name	map unit	RV	Slope Length ft.		Fact or					LCC	logic Group	Depths in.	Kf Fact or	Frag- ments RV	Sand RV	Silt RV	Clay RV	
RcC—Richland silt loam, clayey substratum, 8 to 15 percent slopes																		
Richland	80	12.0	150	Medium	4	48	6	Class 1	Well drained	3e	В	0 - 9	.32	12	26	52	21	
RgD—Rigley sandy loam, 15 to 25 percent slopes																		
Rigley	85	20.0	150	High	4	86	3	Class 1	Well drained	4e	Α	0 - 7	.17	14	67	19	12	
RgLXD1—Rigley-Latham complex, 15 to 25 percent slopes																		
Rigley	45	20.0	150	High	5	56	5	Class 1	Well drained	4e	Α	0 - 7	.32	10	45	41	12	
Latham	40	20.0	150	Very high	3	48	6	Class 1	Moderately well drained	6e	D	0 - 5	.43	10	21	54	23	
RgLZE1—Rigley-Latham association, steep																		
Rigley	45	38.0	150	High	4	56	5	Class 1	Well drained	7e	А	0 - 7	.32	14	45	41	12	
Latham	30	30.0	101	Very high	3	48	6	Class 1	Moderately well drained	6e	D	0 - 5	.43	14	21	54	23	
RmE—Rigley-Clymer association, steep																		
Rigley	50	33.0	150	High	4	48	3	Class 1	Well drained	7e	Α	0 - 7	.17	14	67	19	12	
Clymer	25	33.0	150	Very high	3	86	6	Class 1	Well drained	6e	В	0 - 5	.24	14	41	37	21	
RrG—Rigley-Rock outcrop association, very steep																		
Rigley	60	55.0	150	High	4	86	3	Class 1	Well drained	7e	А	0 - 5	.17	14	67	19	12	

					Con	servat	ion Plar	nning–Jacksor	County, Ohio								
Map symbol and soil	Pct. of	Slope	USLE	Runoff	T Fact	WEI	WEG	Erosion	Drainage	NIRR	Hydro logic		Surface				
name	map unit	RV	Slope Length ft.		or					LCC	Group	Depths in.	Kf Fact or	Frag- ments RV	Sand RV	Silt RV	Clay RV
RrW1C2—Rarden- Wharton silt loams, 8 to 15 percent slopes, eroded																	
Rarden	45	12.0	150	High	3	48	6	Class 2	Moderately well drained	4e	D	0 - 5	.37	2	26	52	22
Wharton	40	12.0	150	High	4	48	6	Class 2	Moderately well drained	Зе	С	0 - 5	.37	7	26	53	20
ShLZE1—Shelocta- Latham association, steep																	
Shelocta	50	33.0	150	High	5	56	5	Class 1	Well drained	7e	В	0 - 11	.32	14	29	53	17
Latham	25	33.0	150	Very high	3	48	6	Class 1	Moderately well drained	6e	D	0 - 7	.43	10	21	54	23
SkP1AF—Stokly-Philo silt loams, 0 to 3 percent slopes, frequently flooded																	
Stokly	55	1.0	98	Low	5	56	5	None - deposition	Somewhat poorly drained	2w	B/D	0 - 7	.37	3	25	60	15
Philo	30	1.0	200	Low	5	56	5	None - deposition	Moderately well drained	2w	B/D	0 - 7	.37	10	30	56	14
Stn1AO—Stendal silt loam, 0 to 3 percent slopes, occasionally flooded																	
Stendal	85	1.0	200	Very high	5	48	6	None - deposition	Somewhat poorly drained	2w	B/D	0 - 9	.37	_	12	66	22

					Con	servat	ion Plar	nning–Jackso	n County, Ohio										
Map symbol and soil	Pct. of	Slope	USLE	Runoff	T	WEI	WEG	Erosion	Drainage		Hydro		Surface						
name	map unit	RV	Slope Length ft.		Fact or					LCC	logic Group	Depths in.	Kf Fact or	Frag- ments RV	Sand RV	Silt RV	Clay RV		
WeB—Wellston silt loam, 3 to 8 percent slopes																			
Wellston	85	5.0	157	_	3	56	5	Class 1	Well drained	2e	С	0 - 1	.43	0	6	80	14		
WhC—Wharton silt loam, 8 to 15 percent slopes																			
Wharton	80	12.0	98	_	5	56	5	Class 1	Moderately well drained	3e	C/D	0 - 9	.32	1	29	53	18		
Wya3C2—Wyatt silty clay loam, 6 to 12 percent slopes, eroded																			
Wyatt	85	9.0	98	High	5	48	6	Class 2	Moderately well drained	4e	C/D	0 - 5	.37	_	15	55	30		
Wya3D2—Wyatt silty clay loam, 12 to 18 percent slopes, eroded																			
Wyatt	85	15.0	101	Very high	5	48	6	Class 2	Moderately well drained	6e	C/D	0 - 5	.37	_	15	55	30		

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