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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 Madison County, Virginia, and Orange County, Virginia



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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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 Int	erest (AOI)	333	Spoil Area
	Area of Interest (AOI)	٥	Stony Spot
Soils		۵	Very Stony Spot
	Soil Map Unit Polygons	\$2	Wet Spot
~	Soil Map Unit Lines	Δ	Other
	Soil Map Unit Points		Special Line Features
Special I	Point Features Blowout	Water Features	
×	Borrow Pit	\sim	Streams and Canals
00	Clay Spot	Transporta	ition
×		+++	Rails
<u></u>	Closed Depression	~	Interstate Highways
X	Gravel Pit	~	US Routes
00	Gravelly Spot	~	Major Roads
0	Landfill	~	Local Roads
A.	Lava Flow	Backgrour	nd
عليه	Marsh or swamp	all a	Aerial Photography
Ŕ	Mine or Quarry		
0	Miscellaneous Water		
0	Perennial Water		
\sim	Rock Outcrop		
+	Saline Spot		
°.°	Sandy Spot		
-	Severely Eroded Spot		
\diamond	Sinkhole		
≫	Slide or Slip		
ø	Sodic Spot		

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: Madison County, Virginia Survey Area Data: Version 10, Sep 23, 2014

Soil Survey Area: Orange County, Virginia Survey Area Data: Version 11, Sep 28, 2016

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: May 9, 2011—Jun 4, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Madison County, Virginia (VA113)				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
BrE	Bremo silt loam, 15 to 35 percent slopes	5.7	0.8%	
CcC	Catoctin silt loam, 7 to 15 percent slopes	17.9	2.4%	
CcE	Catoctin silt loam, 15 to 45 percent slopes	36.1	4.9%	
Cm	Chewacla silt loam	132.9	17.9%	
CoC	Colfax fine sandy loam, 2 to 10 percent slopes	5.3	0.7%	
Cw	Congaree loam	21.6	2.9%	
EIC	Elioak fine sandy loam, 7 to 15 percent slopes	4.6	0.6%	
EIC2	Elioak fine sandy loam, 7 to 15 percent slopes, eroded	3.8	0.5%	
EID2	Elioak fine sandy loam, 15 to 25 percent slopes, eroded	13.8	1.9%	
EmB	Elioak loam, 2 to 7 percent slopes	3.3	0.4%	
EmC2	Elioak loam, 7 to 15 percent slopes, eroded	61.8	8.3%	
EmD2	Elioak loam, 15 to 25 percent slopes, eroded	4.7	0.6%	
EnD3	Elioak silty clay loam, 15 to 25 percent slopes, severely eroded	3.6	0.5%	
FaB	Fauquier silt loam, 2 to 7 percent slopes	28.1	3.8%	
FcC2	Fauquier silty clay loam, 7 to 15 percent slopes, eroded	163.2	22.0%	
FcD2	Fauquier silty clay loam, 15 to 25 percent slopes, eroded	20.1	2.7%	
GIC2	Glenelg loam, 5 to 15 percent slopes, eroded	47.2	6.4%	
GID2	Glenelg loam, 15 to 25 percent slopes, eroded	6.5	0.9%	
HaD	Hazel loam, 15 to 25 percent slopes	12.6	1.7%	
HaF	Hazel loam, 25 to 55 percent slopes	4.3	0.6%	
HsB	Hiwassee loam, 2 to 7 percent slopes	5.1	0.7%	
HsC2	Hiwassee loam, 7 to 15 percent slopes, eroded	48.5	6.5%	

Madison County, Virginia (VA113)				
Map Unit Symbol Map Unit Name Acres in AOI		Acres in AOI	Percent of AOI	
MvB	Meadowville loam, 2 to 7 percent slopes	45.5	6.1%	
SrC	Starr silt loam, 2 to 10 percent slopes	25.3	3.4%	
W	Water	12.7	1.7%	
ZoC	Zion silt loam, 7 to 15 percent slopes	4.1	0.6%	
Subtotals for Soil Survey Area		738.5	99.7%	
Totals for Area of Interest		741.1	100.0%	

Orange County, Virginia (VA137)				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
Су	Comus fine sandy loam	0.4	0.1%	
W	Water	2.1	0.3%	
Subtotals for Soil Survey Area		2.5	0.3%	
Totals for Area of Interest		741.1	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.

Madison County, Virginia

BrE—Bremo silt loam, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: kbxc Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Bremo and similar soils: 85 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bremo

Setting

Landform: Hillslopes Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Convex Parent material: Mixed mafic residuum

Typical profile

H1 - 0 to 7 inches: silt loam H2 - 7 to 12 inches: gravelly silt loam H3 - 12 to 26 inches: very gravelly silt loam H4 - 26 to 36 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent Depth to restrictive feature: 20 to 40 inches to lithic bedrock Natural drainage class: Somewhat excessively drained Runoff class: High Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Hydric soil rating: No

CcC—Catoctin silt loam, 7 to 15 percent slopes

Map Unit Setting

National map unit symbol: kbxj Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Catoctin and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Catoctin

Setting

Landform: Mountain slopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Mountaintop Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from greenstone

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 12 inches: very channery silty clay loam
H3 - 12 to 27 inches: very channery silt loam
H4 - 27 to 37 inches: bedrock

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

CcE—Catoctin silt loam, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: kbxk Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Catoctin and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Catoctin

Setting

Landform: Mountain slopes Landform position (two-dimensional): Backslope Landform position (three-dimensional): Mountainflank Down-slope shape: Linear Across-slope shape: Convex Parent material: Residuum weathered from greenstone

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 12 inches: very channery silty clay loam
H3 - 12 to 27 inches: very channery silt loam
H4 - 27 to 37 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B Hydric soil rating: No

Cm—Chewacla silt loam

Map Unit Setting

National map unit symbol: kby0 Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Chewacla and similar soils: 85 percent *Minor components:* 5 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Chewacla

Setting

Landform: Flood plains Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium

Typical profile

H1 - 0 to 9 inches: silt loam H2 - 9 to 20 inches: silt loam H3 - 20 to 49 inches: silt loam H4 - 49 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Low
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 6 to 18 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: B/D Hydric soil rating: No

Minor Components

Wehadkee

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: Yes

CoC—Colfax fine sandy loam, 2 to 10 percent slopes

Map Unit Setting

National map unit symbol: kby2 Elevation: 150 to 400 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Colfax and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Colfax

Setting

Landform: Hillslopes Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 9 inches: fine sandy loam H2 - 9 to 26 inches: sandy clay loam H3 - 26 to 41 inches: fine sandy loam H4 - 41 to 48 inches: sandy clay loam H5 - 48 to 60 inches: fine sandy loam

Properties and qualities

Slope: 2 to 10 percent
Depth to restrictive feature: 16 to 28 inches to fragipan
Natural drainage class: Somewhat poorly 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 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w

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

Cw—Congaree loam

Map Unit Setting

National map unit symbol: kby6 Elevation: 100 to 500 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Congaree and similar soils: 85 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Congaree

Setting

Landform: Flood plains Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium

Typical profile

H1 - 0 to 11 inches: loam *H2 - 11 to 29 inches:* loam *H3 - 29 to 72 inches:* loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
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 30 to 48 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w Hydrologic Soil Group: C Hydric soil rating: No

EIC—Elioak fine sandy loam, 7 to 15 percent slopes

Map Unit Setting

National map unit symbol: kbyj Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

EIC2—Elioak fine sandy loam, 7 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbyk Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

EID2—Elioak fine sandy loam, 15 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbyl Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Hydric soil rating: No

EmB—Elioak loam, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: kbym Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: All areas are prime farmland

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 2 to 7 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: B Hydric soil rating: No

EmC2—Elioak loam, 7 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbyp Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

EmD2—Elioak loam, 15 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbyq Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Hydric soil rating: No

EnD3—Elioak silty clay loam, 15 to 25 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: kbys Elevation: 330 to 1,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Elioak and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Elioak

Setting

Landform: Hillslopes Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: silty clay loam
H2 - 8 to 40 inches: clay loam
H3 - 40 to 85 inches: fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Hydric soil rating: No

FaB—Fauquier silt loam, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: kbz8 Elevation: 600 to 1,500 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: All areas are prime farmland

Map Unit Composition

Fauquier and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Fauquier

Setting

Landform: Hillslopes Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from greenstone

Typical profile

H1 - 0 to 12 inches: silt loam H2 - 12 to 39 inches: gravelly silty clay H3 - 39 to 69 inches: weathered bedrock H4 - 69 to 73 inches: bedrock

Properties and qualities

Slope: 2 to 7 percent
Depth to restrictive feature: 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: B Hydric soil rating: No

FcC2—Fauquier silty clay loam, 7 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbzb Elevation: 600 to 1,500 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Fauquier and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Fauquier

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from greenstone

Typical profile

H1 - 0 to 5 inches: silty clay loam H2 - 5 to 39 inches: gravelly silty clay H3 - 39 to 69 inches: weathered bedrock H4 - 69 to 73 inches: bedrock

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

FcD2—Fauquier silty clay loam, 15 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbzc Elevation: 600 to 1,500 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Fauquier and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Fauquier

Setting

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

Typical profile

H1 - 0 to 5 inches: silty clay loam H2 - 5 to 39 inches: gravelly silty clay H3 - 39 to 69 inches: weathered bedrock H4 - 69 to 73 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B Hydric soil rating: No

GIC2—Glenelg loam, 5 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbzd Elevation: 300 to 2,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Glenelg and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Glenelg

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: loam *H2 - 8 to 33 inches:* silty clay loam *H3 - 33 to 65 inches:* loam

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

GID2—Glenelg loam, 15 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbzf Elevation: 300 to 2,000 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Glenelg and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Glenelg

Setting

Landform: Hillslopes Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Convex Parent material: Residuum weathered from mica schist

Typical profile

H1 - 0 to 8 inches: loam *H2 - 8 to 33 inches:* silty clay loam *H3 - 33 to 65 inches:* loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: High
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Hydric soil rating: No

HaD—Hazel loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: kbzh Elevation: 500 to 1,800 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Hazel and similar soils: 85 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hazel

Setting

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

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 14 inches: loam
H3 - 14 to 38 inches: channery fine sandy loam
H4 - 38 to 48 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Excessively drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Hydric soil rating: No

HaF—Hazel loam, 25 to 55 percent slopes

Map Unit Setting

National map unit symbol: kbzj Elevation: 500 to 1,800 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Hazel and similar soils: 85 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hazel

Setting

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

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 14 inches: loam
H3 - 14 to 38 inches: channery fine sandy loam
H4 - 38 to 48 inches: bedrock

Properties and qualities

Slope: 25 to 45 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Excessively drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Hydric soil rating: No

HsB—Hiwassee loam, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: kbzk Elevation: 400 to 1,200 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: All areas are prime farmland

Map Unit Composition

Hiwassee and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Hiwassee

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Alluvium

Typical profile

H1 - 0 to 9 inches: loam *H2 - 9 to 82 inches:* clay *H3 - 82 to 96 inches:* loam

Properties and qualities

Slope: 2 to 7 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: B Hydric soil rating: No

HsC2—Hiwassee loam, 7 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: kbzm Elevation: 400 to 1,200 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Hiwassee and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Hiwassee

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Alluvium

Typical profile

H1 - 0 to 7 inches: loam *H2 - 7 to 82 inches:* clay *H3 - 82 to 96 inches:* loam

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Hydric soil rating: No

MvB—Meadowville loam, 2 to 7 percent slopes

Map Unit Setting

National map unit symbol: kc0c Elevation: 350 to 1,200 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: All areas are prime farmland

Map Unit Composition

Meadowville and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Meadowville

Setting

Landform: Drainageways Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Triassic residuum

Typical profile

H1 - 0 to 14 inches: loam
H2 - 14 to 46 inches: silty clay loam
H3 - 46 to 52 inches: sandy clay loam
H4 - 52 to 76 inches: fine sandy loam

Properties and qualities

Slope: 2 to 7 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: A Hydric soil rating: No

SrC—Starr silt loam, 2 to 10 percent slopes

Map Unit Setting

National map unit symbol: kc11 Elevation: 400 to 1,400 feet Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Starr and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Starr

Setting

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

Typical profile

H1 - 0 to 13 inches: silt loam H2 - 13 to 52 inches: clay loam H3 - 52 to 72 inches: sandy loam

Properties and qualities

Slope: 2 to 10 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: B Hydric soil rating: No

W-Water

Map Unit Setting

National map unit symbol: kc1d Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

ZoC—Zion silt loam, 7 to 15 percent slopes

Map Unit Setting

National map unit symbol: kc1n Mean annual precipitation: 40 to 50 inches Mean annual air temperature: 55 to 59 degrees F Frost-free period: 172 to 200 days Farmland classification: Not prime farmland

Map Unit Composition

Zion and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Zion

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Convex Parent material: Mixed mafic residuum

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 18 inches: very gravelly silty clay loam
H3 - 18 to 24 inches: clay
H4 - 24 to 29 inches: gravelly clay
H5 - 29 to 39 inches: bedrock

Properties and qualities

Slope: 7 to 15 percent Depth to restrictive feature: 20 to 40 inches to lithic bedrock Natural drainage class: Well drained Runoff class: High

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Capacity of the most limiting layer to transmit water (Ksat): Very low to 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 storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Hydric soil rating: No

Orange County, Virginia

Cy—Comus fine sandy loam

Map Unit Setting

National map unit symbol: 40nw Mean annual precipitation: 31 to 51 inches Mean annual air temperature: 46 to 70 degrees F Frost-free period: 181 to 211 days Farmland classification: All areas are prime farmland

Map Unit Composition

Comus and similar soils: 85 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Comus

Setting

Landform: Flood plains Landform position (three-dimensional): Tread Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium

Typical profile

H1 - 0 to 22 inches: fine sandy loam *H2 - 22 to 73 inches:* fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
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: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2w Hydrologic Soil Group: B Hydric soil rating: No

W—Water

Map Unit Setting National map unit symbol: 40sv Mean annual precipitation: 31 to 51 inches

Mean annual air temperature: 46 to 70 degrees F *Frost-free period:* 181 to 211 days *Farmland classification:* Not prime farmland

Map Unit Composition

Water: 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

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