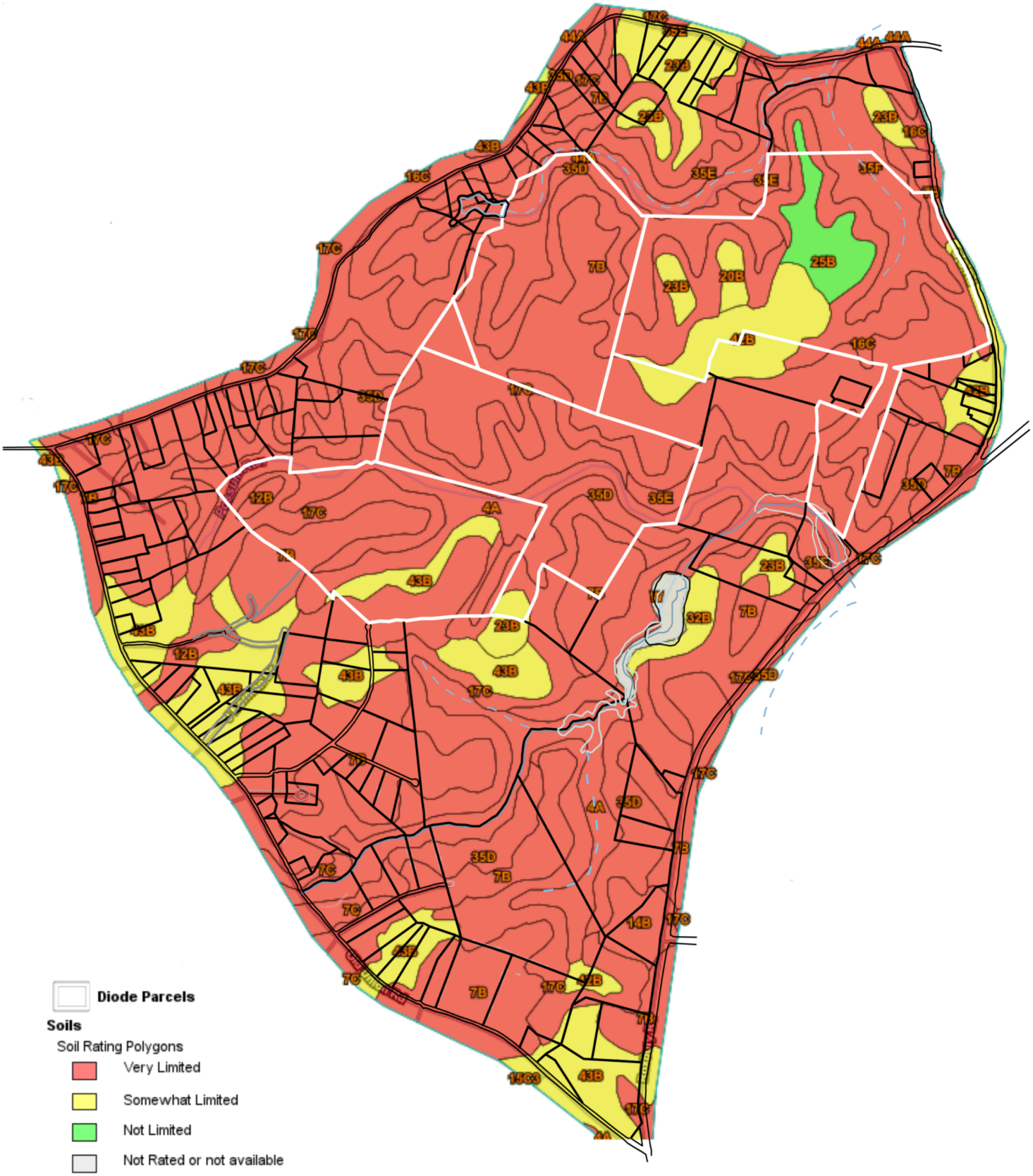
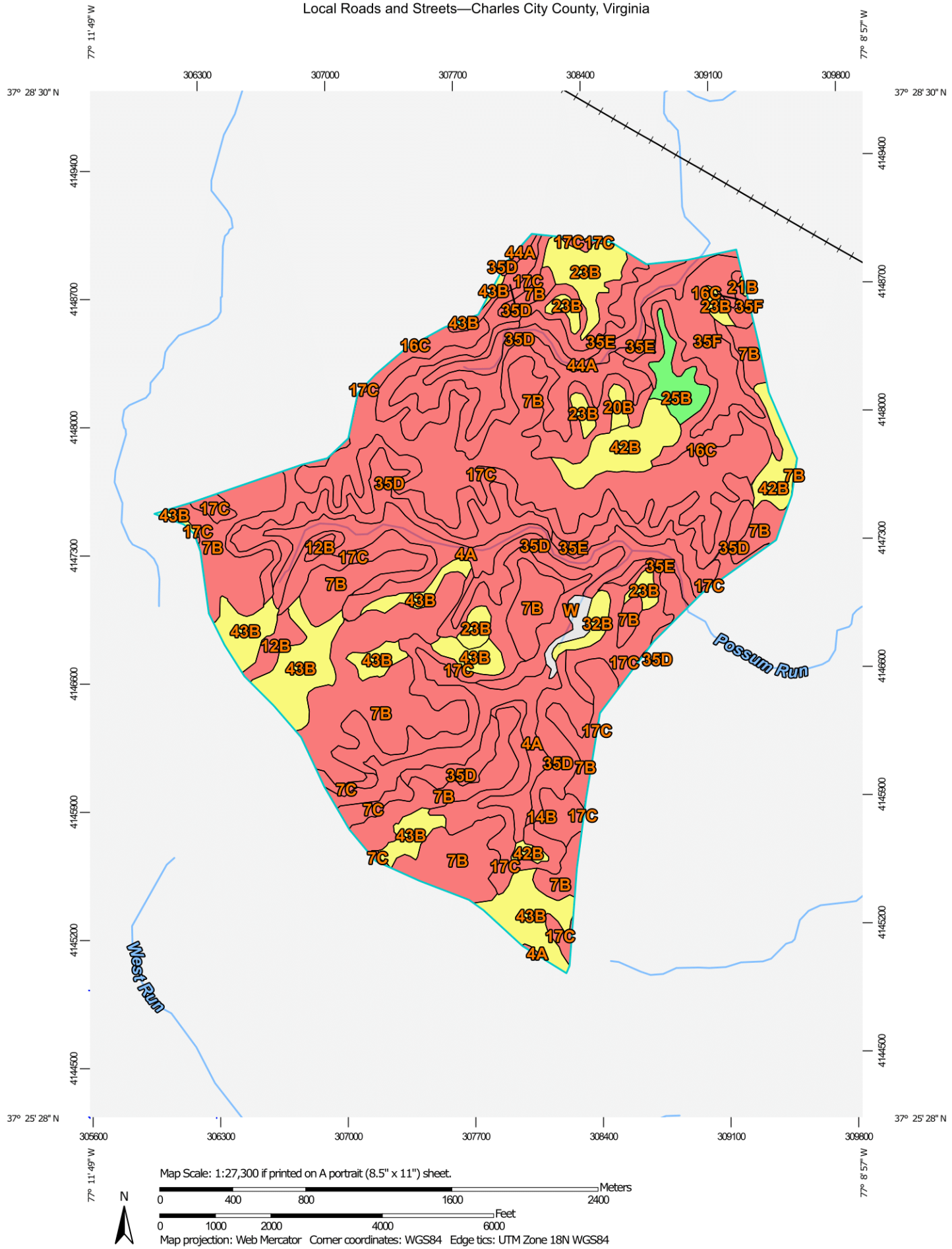
Soil
Maps

Soils - Local Roads and Streets

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44A
35D
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20B
42B
12B
4A
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Map Scale: 1:27,300 if printed on A portrait (8.5" x 11") sheet.
N
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Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Charles City County, Virginia
Survey Area Data: Version 19, Aug 28, 2024

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

Local Roads and Streets

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
4A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	Very limited	Bibb (80%)	Depth to saturated zone (1.00)	135.7	7.4%
				Flooding (1.00)		
			Mattan (4%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
			Tomotley (3%)	Depth to saturated zone (1.00)		
			Lawnes (3%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Flooding (1.00)		
7B	Caroline-Emporia complex, 2 to 6 percent slopes	Very limited	Caroline (50%)	Low strength (1.00)	566.6	31.0%
				Shrink-swell (0.50)		
7C	Caroline-Emporia complex, 6 to 10 percent slopes	Very limited	Caroline (50%)	Low strength (1.00)	14.4	0.8%
				Shrink-swell (0.50)		
12B	Craven loam, 2 to 6 percent slopes	Very limited	Craven (80%)	Low strength (1.00)	14.8	0.8%
				Shrink-swell (0.50)		
14B	Craven-Caroline complex, 2 to 6 percent slopes	Very limited	Craven (55%)	Low strength (1.00)	14.1	0.8%
				Shrink-swell (0.50)		
			Caroline (25%)	Low strength (1.00)		
				Shrink-swell (0.50)		
16C	Craven-Remlik complex, 6 to	Very limited	Craven (50%)	Low strength (1.00)	48.8	2.7%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
	10 percent slopes			Shrink-swell (0.50)		
17C	Craven-Uchee complex, 6 to 10 percent slopes	Very limited	Craven (41%)	Low strength (1.00)	381.0	20.9%
				Shrink-swell (0.50)		
20B	Emporia fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Emporia (80%)	Low strength (0.61)	4.9	0.3%
21B	Emporia gravelly fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Emporia (80%)	Low strength (0.63)	0.7	0.0%
				Shrink-swell (0.01)		
23B	Emporia-Kempsville complex, 2 to 6 percent slopes	Somewhat limited	Emporia (50%)	Low strength (0.61)	55.5	3.0%
25B	Kempsville loamy sand, 2 to 6 percent slopes	Not limited	Kempsville (80%)		19.7	1.1%
32B	Nansemond loamy sand, 0 to 4 percent slopes	Somewhat limited	Nansemond (80%)	Depth to saturated zone (0.19)	9.7	0.5%
35D	Nevarc-Remlik complex, 10 to 15 percent slopes	Very limited	Nevarc (45%)	Low strength (1.00)	206.8	11.3%
				Slope (0.84)		
				Shrink-swell (0.42)		
				Depth to saturated zone (0.19)		
35E	Nevarc-Remlik complex, 15 to 25 percent slopes	Very limited	Nevarc (45%)	Slope (1.00)	60.1	3.3%
				Low strength (1.00)		
				Shrink-swell (0.42)		
				Depth to saturated zone (0.19)		
			Remlik (35%)	Slope (1.00)		
35F	Nevarc-Remlik complex, 25 to 60 percent slopes	Very limited	Nevarc (45%)	Slope (1.00)	50.3	2.8%
				Low strength (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Shrink-swell (0.42)		
				Depth to saturated zone (0.19)		
			Remlik (35%)	Slope (1.00)		
42B	Slagle fine sandy loam, 0 to 4 percent slopes	Somewhat limited	Slagle (80%)	Shrink-swell (0.50)	58.5	3.2%
				Depth to saturated zone (0.19)		
				Low strength (0.14)		
43B	Slagle-Emporia complex, 2 to 6 percent slopes	Somewhat limited	Slagle (45%)	Shrink-swell (0.50)	140.6	7.7%
				Depth to saturated zone (0.19)		
				Low strength (0.14)		
			Emporia (35%)	Low strength (0.61)		
44A	Tomotley fine sandy loam, 0 to 2 percent slopes	Very limited	Tomotley (80%)	Depth to saturated zone (1.00)	35.8	2.0%
			Nimmo (5%)	Depth to saturated zone (1.00)		
W	Water	Not rated	Water (100%)		8.7	0.5%
Totals for Area of Interest					**1,826.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	1,528.4	83.7%
Somewhat limited	269.8	14.8%
Not limited	19.7	1.1%
Null or Not Rated	8.7	0.5%
Totals for Area of Interest	**1,826.6**	**100.0%**

Description

ENG - Engineering

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

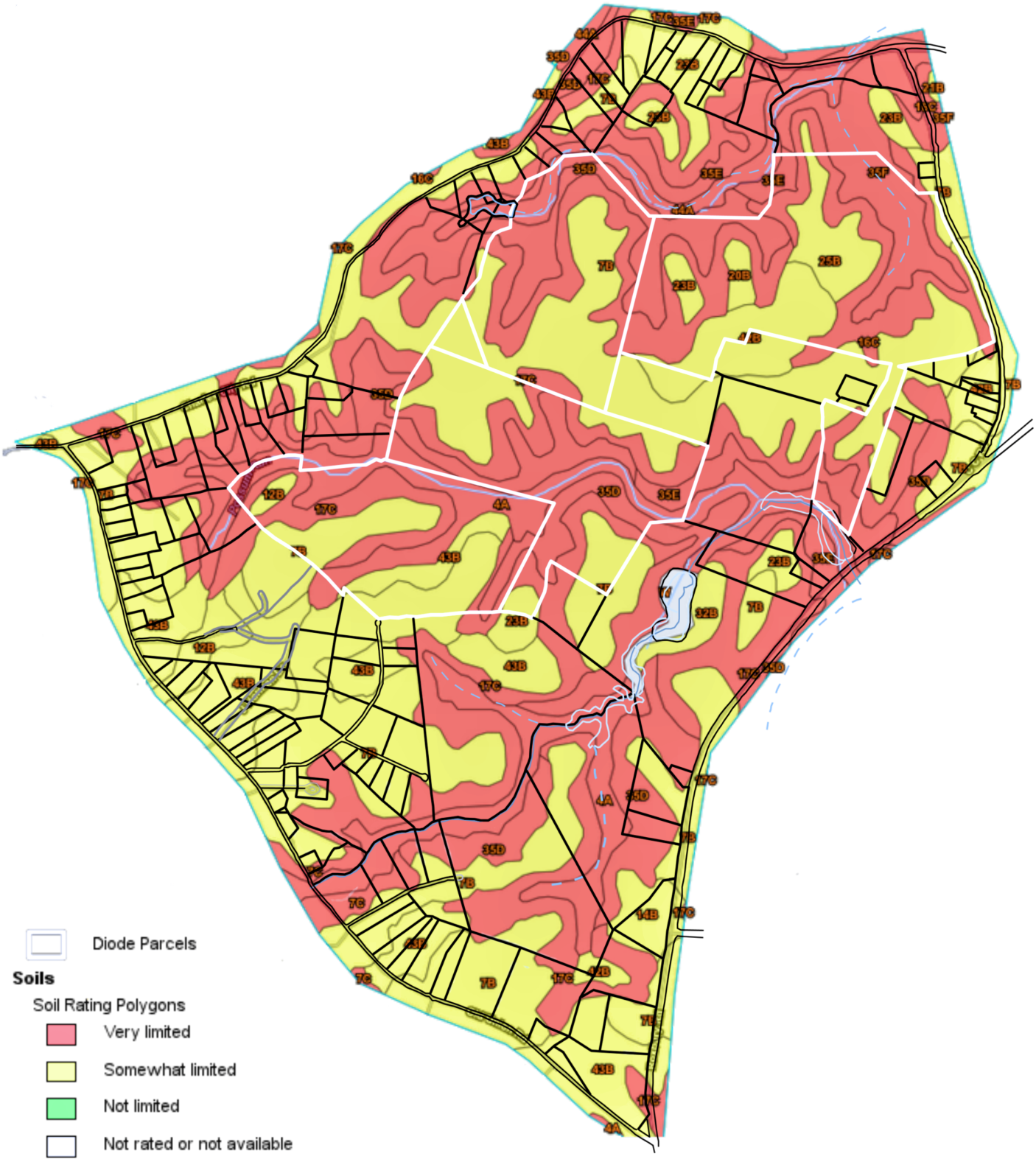
Rating Options

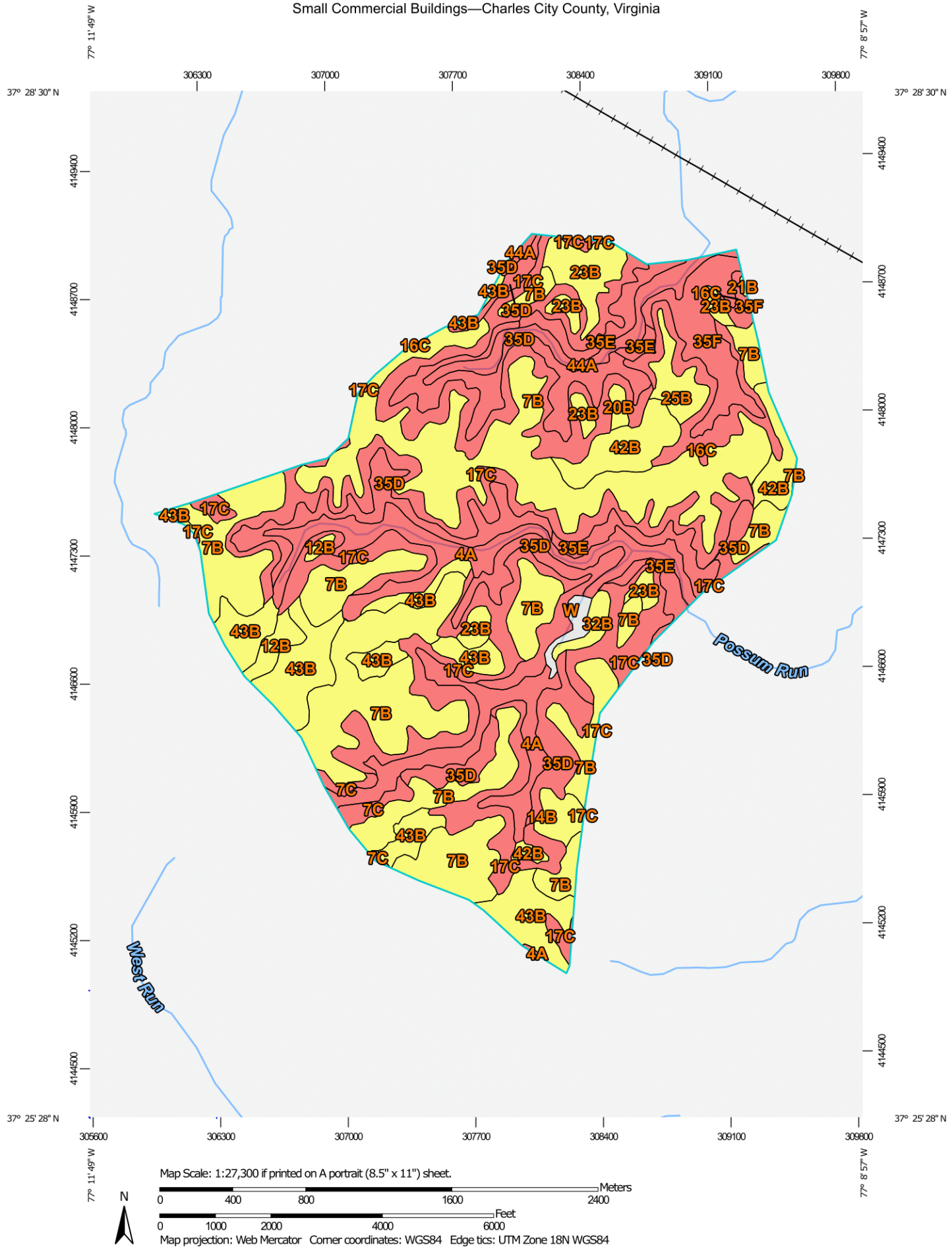
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soils - Suitability for Small Commercial Buildings

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Feet
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Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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)

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

Soil Survey Area: Charles City County, Virginia
Survey Area Data: Version 19, Aug 28, 2024

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

Small Commercial Buildings

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
4A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	Very limited	Bibb (80%)	Flooding (1.00)	135.7	7.4%
				Depth to saturated zone (1.00)		
			Mattan (4%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Organic matter content (1.00)		
			Tomotley (3%)	Depth to saturated zone (1.00)		
			Lawnes (3%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
7B	Caroline-Emporia complex, 2 to 6 percent slopes	Somewhat limited	Caroline (50%)	Shrink-swell (0.50)	566.6	31.0%
				Slope (0.00)		
			Emporia (30%)	Slope (0.00)		
7C	Caroline-Emporia complex, 6 to 10 percent slopes	Very limited	Caroline (50%)	Slope (1.00)	14.4	0.8%
				Shrink-swell (0.50)		
			Emporia (30%)	Slope (1.00)		
12B	Craven loam, 2 to 6 percent slopes	Somewhat limited	Craven (80%)	Shrink-swell (0.50)	14.8	0.8%
				Slope (0.00)		
14B	Craven-Caroline complex, 2 to 6 percent slopes	Somewhat limited	Craven (55%)	Shrink-swell (0.50)	14.1	0.8%
				Slope (0.00)		
			Caroline (25%)	Shrink-swell (0.50)		
				Slope (0.00)		
16C	Craven-Remlik complex, 6 to 10 percent slopes	Very limited	Craven (50%)	Slope (1.00)	48.8	2.7%
				Shrink-swell (0.50)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Remlik (30%)	Slope (1.00)		
17C	Craven-Uchee complex, 6 to 10 percent slopes	Very limited	Craven (41%)	Slope (1.00)	381.0	20.9%
				Shrink-swell (0.50)		
			Uchee (39%)	Slope (1.00)		
20B	Emporia fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Emporia (80%)	Slope (0.00)	4.9	0.3%
21B	Emporia gravelly fine sandy loam, 2 to 6 percent slopes	Somewhat limited	Emporia (80%)	Shrink-swell (0.01)	0.7	0.0%
				Slope (0.00)		
23B	Emporia-Kempsville complex, 2 to 6 percent slopes	Somewhat limited	Emporia (50%)	Slope (0.00)	55.5	3.0%
			Kempsville (30%)	Slope (0.00)		
25B	Kempsville loamy sand, 2 to 6 percent slopes	Somewhat limited	Kempsville (80%)	Slope (0.00)	19.7	1.1%
32B	Nansemond loamy sand, 0 to 4 percent slopes	Somewhat limited	Nansemond (80%)	Depth to saturated zone (0.39)	9.7	0.5%
35D	Nevarc-Remlik complex, 10 to 15 percent slopes	Very limited	Nevarc (45%)	Slope (1.00)	206.8	11.3%
				Shrink-swell (0.42)		
				Depth to saturated zone (0.39)		
			Remlik (35%)	Slope (1.00)		
35E	Nevarc-Remlik complex, 15 to 25 percent slopes	Very limited	Nevarc (45%)	Slope (1.00)	60.1	3.3%
				Shrink-swell (0.42)		
				Depth to saturated zone (0.39)		
			Remlik (35%)	Slope (1.00)		
35F	Nevarc-Remlik complex, 25 to 60 percent slopes	Very limited	Nevarc (45%)	Slope (1.00)	50.3	2.8%
				Shrink-swell (0.42)		
				Depth to saturated zone (0.39)		
			Remlik (35%)	Slope (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
42B	Slagle fine sandy loam, 0 to 4 percent slopes	Somewhat limited	Slagle (80%)	Shrink-swell (0.50)	58.5	3.2%
				Depth to saturated zone (0.39)		
43B	Slagle-Emporia complex, 2 to 6 percent slopes	Somewhat limited	Slagle (45%)	Shrink-swell (0.50)	140.6	7.7%
				Depth to saturated zone (0.39)		
				Slope (0.00)		
			Emporia (35%)	Slope (0.00)		
44A	Tomotley fine sandy loam, 0 to 2 percent slopes	Very limited	Tomotley (80%)	Depth to saturated zone (1.00)	35.8	2.0%
			Nimmo (5%)	Depth to saturated zone (1.00)		
W	Water	Not rated	Water (100%)		8.7	0.5%
Totals for Area of Interest					**1,826.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	932.8	51.1%
Somewhat limited	885.1	48.5%
Null or Not Rated	8.7	0.5%
Totals for Area of Interest	**1,826.6**	**100.0%**

Description

ENG - Engineering

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

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Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

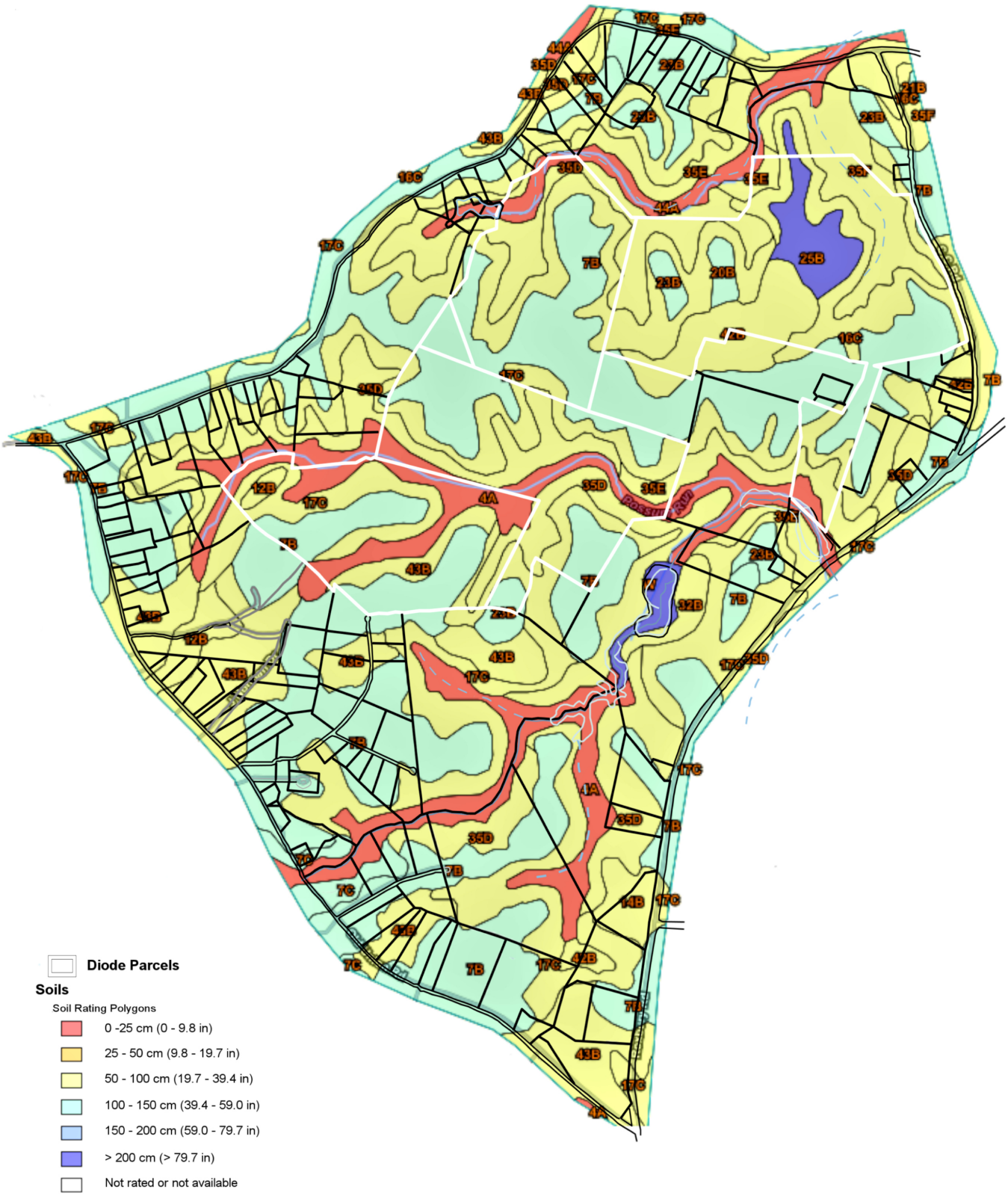
Rating Options

Aggregation Method: Dominant Condition

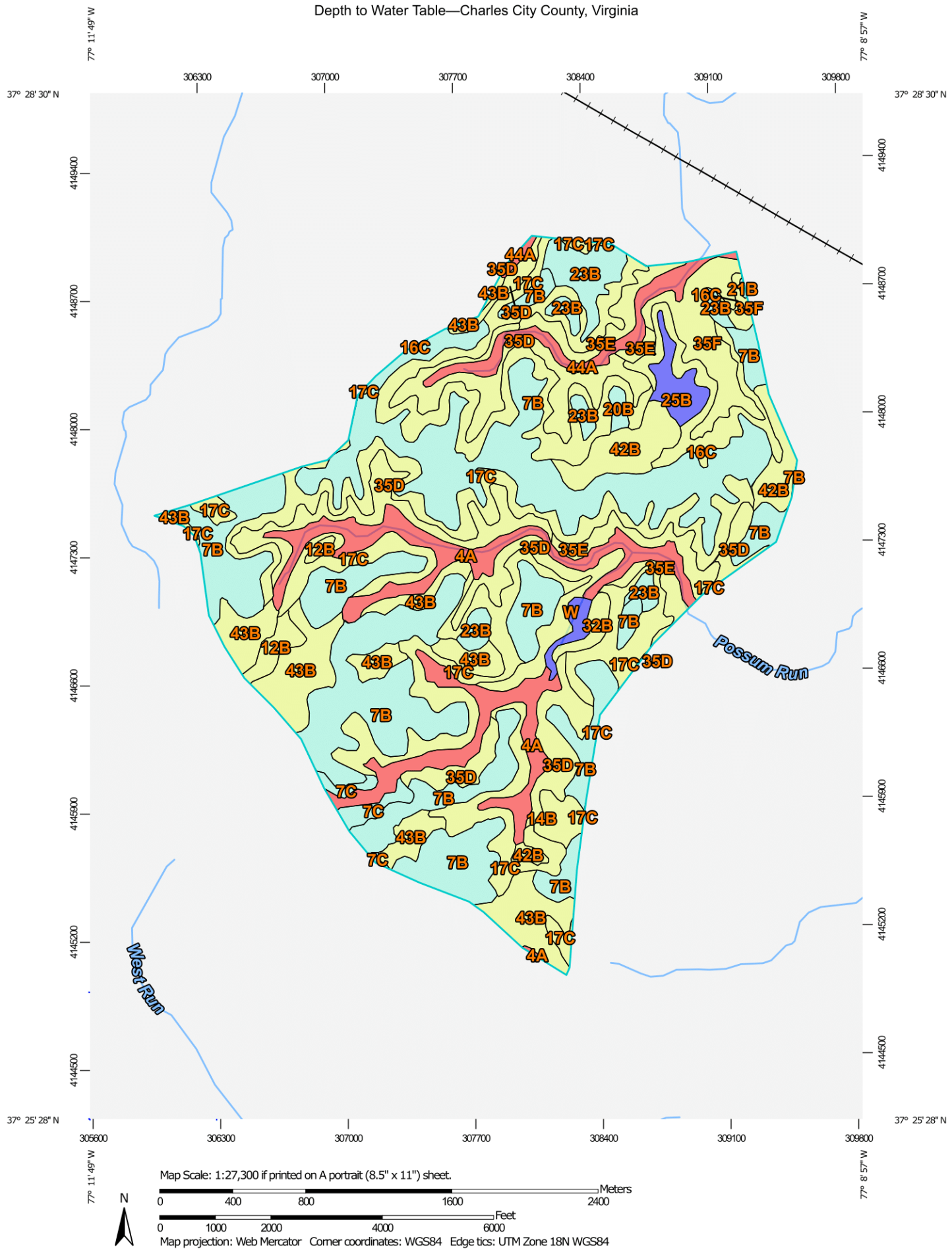
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soils Map - Depth to Water Table



Depth to Water Table—Charles City County, Virginia



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Soil Rating Lines

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Soil Rating Points

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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)

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

Soil Survey Area: Charles City County, Virginia
Survey Area Data: Version 19, Aug 28, 2024

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

Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
4A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	23	135.7	7.4%
7B	Caroline-Emporia complex, 2 to 6 percent slopes	130	566.6	31.0%
7C	Caroline-Emporia complex, 6 to 10 percent slopes	130	14.4	0.8%
12B	Craven loam, 2 to 6 percent slopes	76	14.8	0.8%
14B	Craven-Caroline complex, 2 to 6 percent slopes	76	14.1	0.8%
16C	Craven-Remlik complex, 6 to 10 percent slopes	76	48.8	2.7%
17C	Craven-Uchee complex, 6 to 10 percent slopes	76	381.0	20.9%
20B	Emporia fine sandy loam, 2 to 6 percent slopes	107	4.9	0.3%
21B	Emporia gravelly fine sandy loam, 2 to 6 percent slopes	107	0.7	0.0%
23B	Emporia-Kempsville complex, 2 to 6 percent slopes	107	55.5	3.0%
25B	Kempsville loamy sand, 2 to 6 percent slopes	>200	19.7	1.1%
32B	Nansemond loamy sand, 0 to 4 percent slopes	61	9.7	0.5%
35D	Nevarc-Remlik complex, 10 to 15 percent slopes	61	206.8	11.3%
35E	Nevarc-Remlik complex, 15 to 25 percent slopes	61	60.1	3.3%
35F	Nevarc-Remlik complex, 25 to 60 percent slopes	61	50.3	2.8%
42B	Slagle fine sandy loam, 0 to 4 percent slopes	61	58.5	3.2%
43B	Slagle-Emporia complex, 2 to 6 percent slopes	61	140.6	7.7%

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
44A	Tomotley fine sandy loam, 0 to 2 percent slopes	15	35.8	2.0%
W	Water	>200	8.7	0.5%
Totals for Area of Interest			**1,826.6**	**100.0%**

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

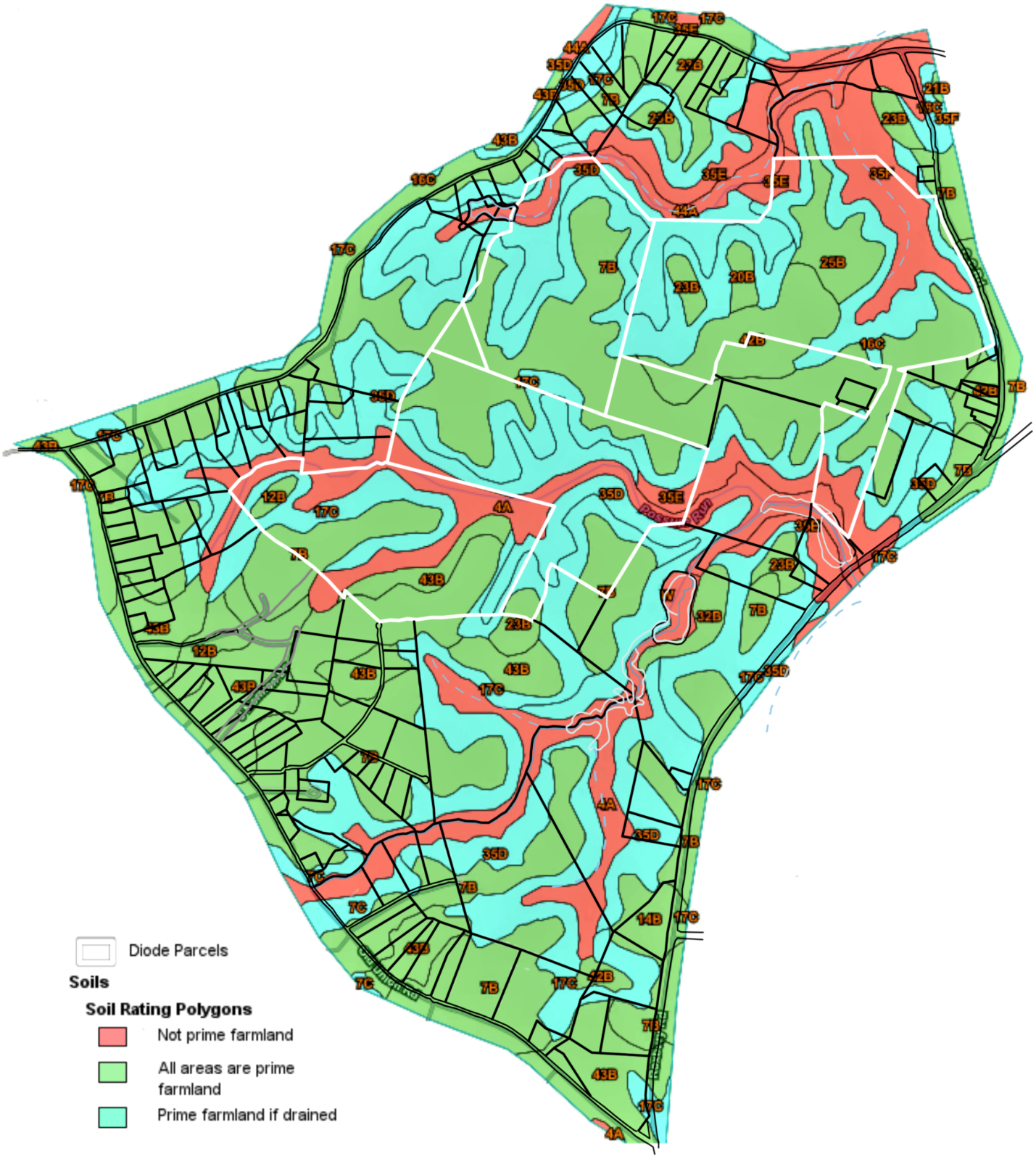
Tie-break Rule: Lower

Interpret Nulls as Zero: No

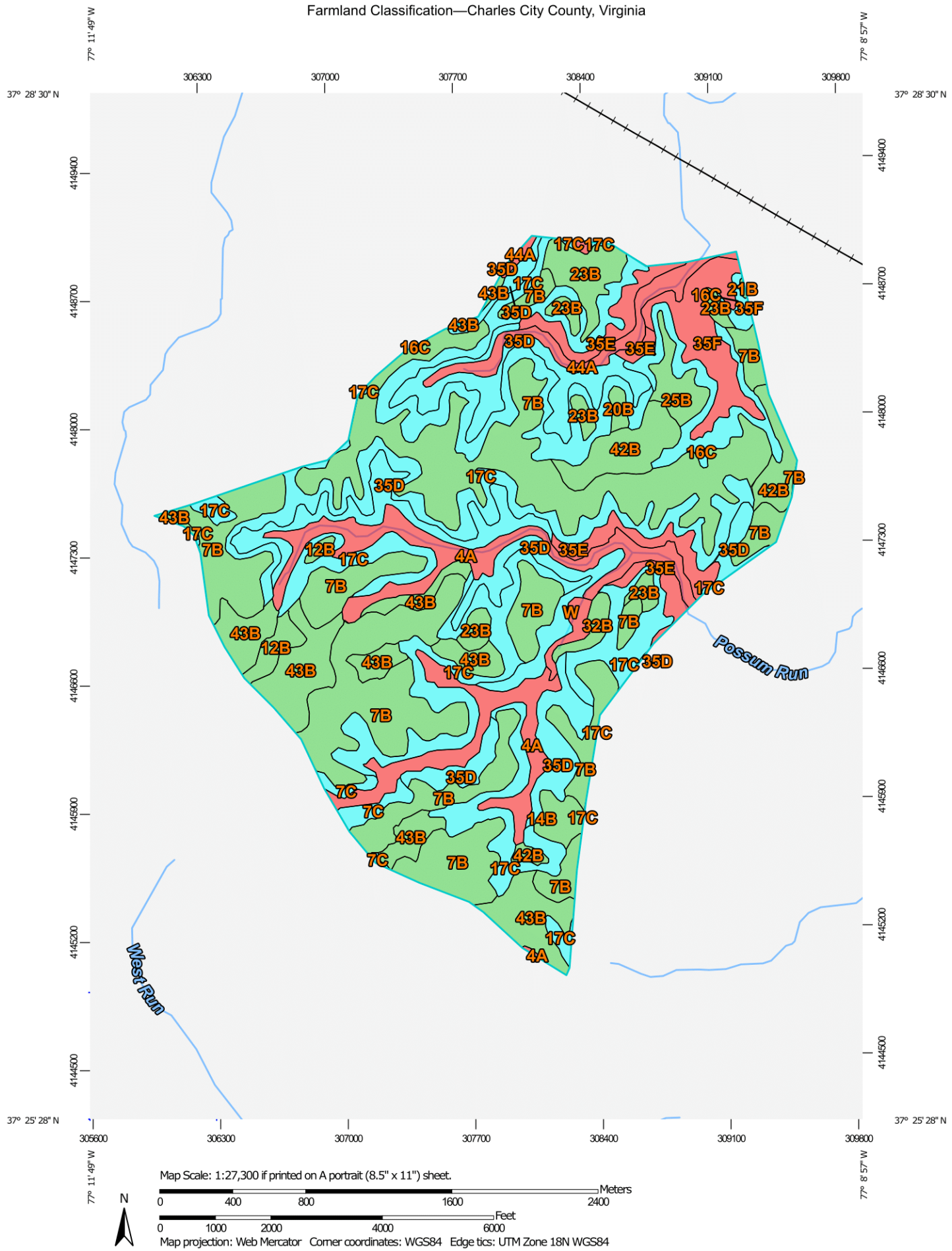
Beginning Month: January

Ending Month: December

Soils - Farmland Classification



Farmland Classification—Charles City County, Virginia



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

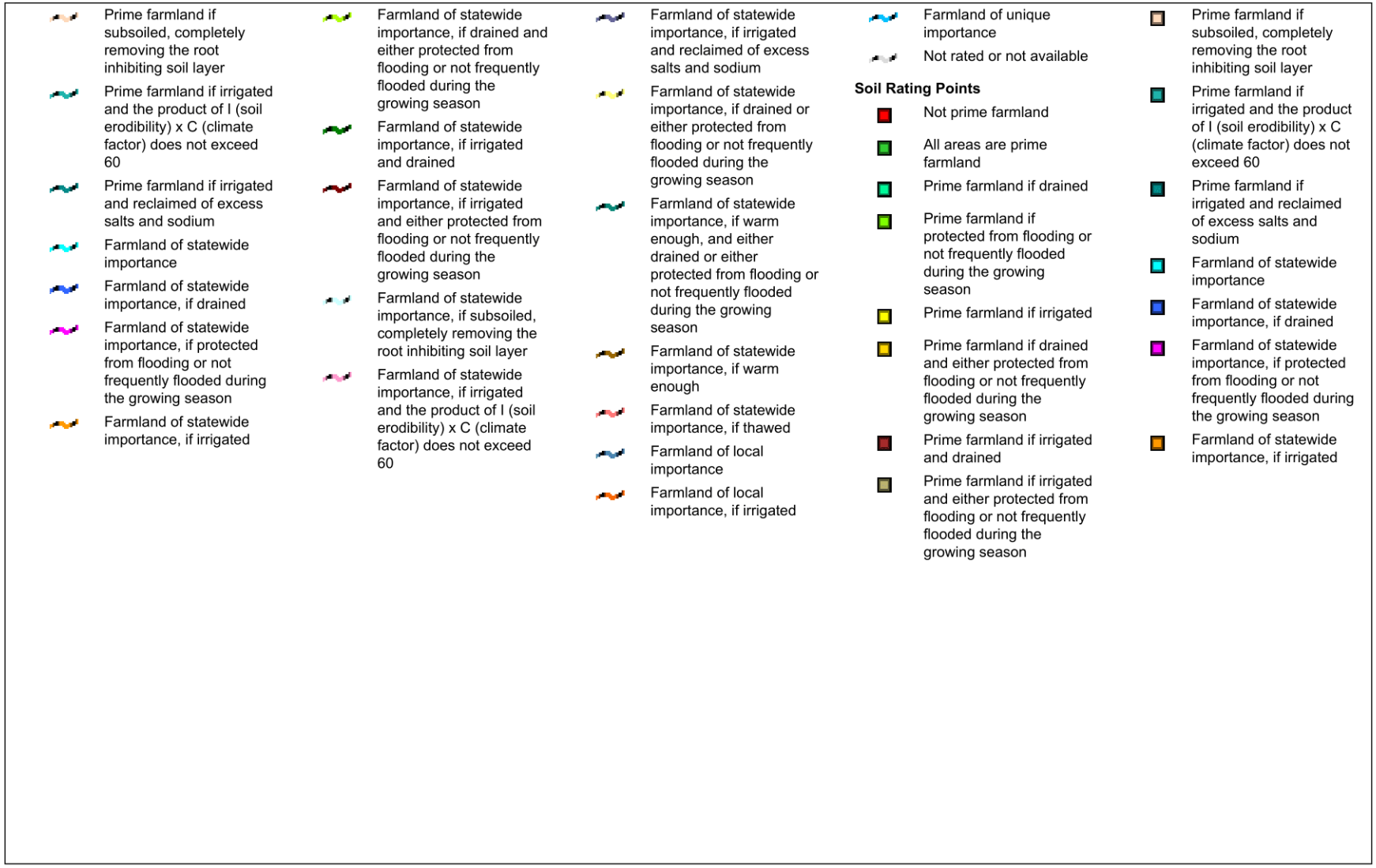
Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Charles City County, Virginia
Survey Area Data: Version 19, Aug 28, 2024

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

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	Not prime farmland	135.7	7.4%
7B	Caroline-Emporia complex, 2 to 6 percent slopes	All areas are prime farmland	566.6	31.0%
7C	Caroline-Emporia complex, 6 to 10 percent slopes	Farmland of statewide importance	14.4	0.8%
12B	Craven loam, 2 to 6 percent slopes	All areas are prime farmland	14.8	0.8%
14B	Craven-Caroline complex, 2 to 6 percent slopes	All areas are prime farmland	14.1	0.8%
16C	Craven-Remlik complex, 6 to 10 percent slopes	Farmland of statewide importance	48.8	2.7%
17C	Craven-Uchee complex, 6 to 10 percent slopes	Farmland of statewide importance	381.0	20.9%
20B	Emporia fine sandy loam, 2 to 6 percent slopes	All areas are prime farmland	4.9	0.3%
21B	Emporia gravelly fine sandy loam, 2 to 6 percent slopes	All areas are prime farmland	0.7	0.0%
23B	Emporia-Kempsville complex, 2 to 6 percent slopes	All areas are prime farmland	55.5	3.0%
25B	Kempsville loamy sand, 2 to 6 percent slopes	All areas are prime farmland	19.7	1.1%
32B	Nansemond loamy sand, 0 to 4 percent slopes	All areas are prime farmland	9.7	0.5%
35D	Nevarc-Remlik complex, 10 to 15 percent slopes	Farmland of statewide importance	206.8	11.3%
35E	Nevarc-Remlik complex, 15 to 25 percent slopes	Not prime farmland	60.1	3.3%
35F	Nevarc-Remlik complex, 25 to 60 percent slopes	Not prime farmland	50.3	2.8%
42B	Slagle fine sandy loam, 0 to 4 percent slopes	All areas are prime farmland	58.5	3.2%
43B	Slagle-Emporia complex, 2 to 6 percent slopes	All areas are prime farmland	140.6	7.7%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
44A	Tomotley fine sandy loam, 0 to 2 percent slopes	Not prime farmland	35.8	2.0%
W	Water	Not prime farmland	8.7	0.5%
Totals for Area of Interest			**1,826.6**	**100.0%**

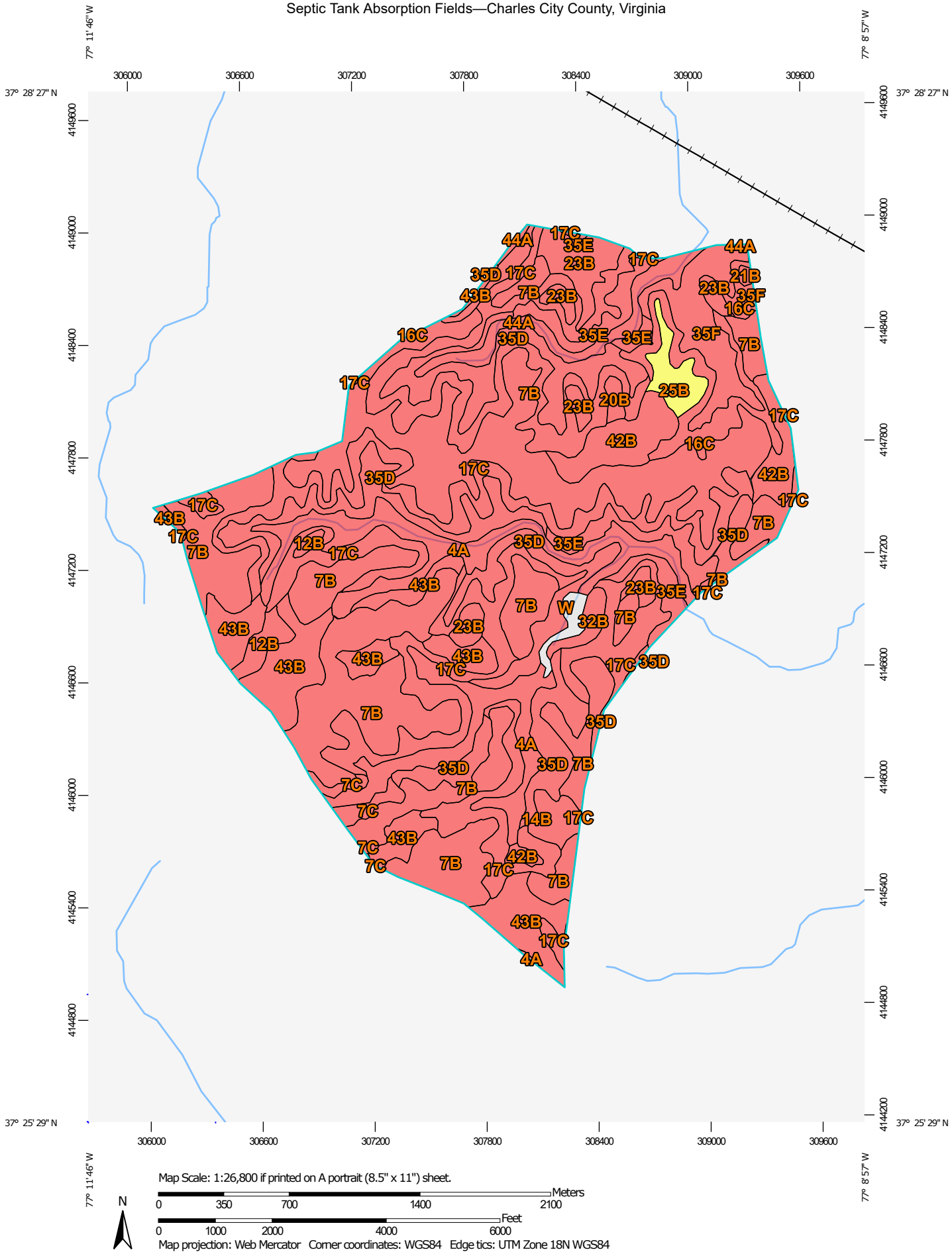
Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower


77° 11' 46" W
77° 8' 57" W
37° 28' 27" N
37° 25' 29" N
306000
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4149000
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4147800
4147200
4146600
4146000
4145400
4144800
4144200
44A
17C
35E
23B
35D
43B
7B
16C
35F
21B
20B
25B
42B
12B
4A
W
32B
14B
Map Scale: 1:26,800 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 350 700 1400 2100
Feet
0 1000 2000 4000 6000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points

- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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)

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

Soil Survey Area: Charles City County, Virginia
Survey Area Data: Version 19, Aug 28, 2024

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

Septic Tank Absorption Fields

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
4A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	Very limited	Bibb (80%)	Flooding (1.00)	135.1	7.4%
				Depth to saturated zone (1.00)		
				Seepage, bottom layer (1.00)		
				Slow water movement (0.50)		
			Mattan (4%)	Flooding (1.00)		
				Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Slow water movement (0.50)		
			Tomotley (3%)	Depth to saturated zone (1.00)		
				Slow water movement (0.68)		
			Lawnes (3%)	Flooding (1.00)		
				Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Slow water movement (0.50)		
7B	Caroline-Emporia complex, 2 to 6 percent slopes	Very limited	Caroline (50%)	Slow water movement (1.00)	562.1	30.9%
				Depth to saturated zone (0.94)		
			Emporia (30%)	Depth to saturated zone (1.00)		
				Slow water movement (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
7C	Caroline-Emporia complex, 6 to 10 percent slopes	Very limited	Caroline (50%)	Slow water movement (1.00)	12.1	0.7%
				Depth to saturated zone (0.94)		
			Emporia (30%)	Depth to saturated zone (1.00)		
				Slow water movement (1.00)		
12B	Craven loam, 2 to 6 percent slopes	Very limited	Craven (80%)	Depth to saturated zone (1.00)	14.7	0.8%
				Slow water movement (1.00)		
14B	Craven-Caroline complex, 2 to 6 percent slopes	Very limited	Craven (55%)	Depth to saturated zone (1.00)	14.2	0.8%
				Slow water movement (1.00)		
			Caroline (25%)	Slow water movement (1.00)		
				Depth to saturated zone (0.94)		
16C	Craven-Remlik complex, 6 to 10 percent slopes	Very limited	Craven (50%)	Depth to saturated zone (1.00)	49.4	2.7%
				Slow water movement (1.00)		
			Remlik (30%)	Seepage, bottom layer (1.00)		
				Depth to saturated zone (0.43)		
17C	Craven-Uchee complex, 6 to 10 percent slopes	Very limited	Craven (41%)	Depth to saturated zone (1.00)	381.0	21.0%
				Slow water movement (1.00)		
			Uchee (39%)	Slow water movement (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Depth to saturated zone (1.00)		
20B	Emporia fine sandy loam, 2 to 6 percent slopes	Very limited	Emporia (80%)	Depth to saturated zone (1.00)	4.9	0.3%
				Slow water movement (1.00)		
21B	Emporia gravelly fine sandy loam, 2 to 6 percent slopes	Very limited	Emporia (80%)	Depth to saturated zone (1.00)	1.6	0.1%
				Slow water movement (1.00)		
23B	Emporia-Kempsville complex, 2 to 6 percent slopes	Very limited	Emporia (50%)	Depth to saturated zone (1.00)	53.5	2.9%
				Slow water movement (1.00)		
25B	Kempsville loamy sand, 2 to 6 percent slopes	Somewhat limited	Kempsville (80%)	Slow water movement (0.50)	19.7	1.1%
32B	Nansemond loamy sand, 0 to 4 percent slopes	Very limited	Nansemond (80%)	Depth to saturated zone (1.00)	9.7	0.5%
				Seepage, bottom layer (1.00)		
			Nimmo (5%)	Depth to saturated zone (1.00)		
				Seepage, bottom layer (1.00)		
				Slow water movement (0.50)		
35D	Nevarc-Remlik complex, 10 to 15 percent slopes	Very limited	Nevarc (45%)	Depth to saturated zone (1.00)	208.6	11.5%
				Slow water movement (1.00)		
				Seepage, bottom layer (1.00)		
				Slope (0.84)		
			Remlik (35%)	Seepage, bottom layer (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Slope (0.84)		
				Depth to saturated zone (0.43)		
35E	Nevarc-Remlik complex, 15 to 25 percent slopes	Very limited	Nevarc (45%)	Depth to saturated zone (1.00)	59.4	3.3%
				Slow water movement (1.00)		
				Slope (1.00)		
				Seepage, bottom layer (1.00)		
			Remlik (35%)	Slope (1.00)		
				Seepage, bottom layer (1.00)		
				Depth to saturated zone (0.43)		
35F	Nevarc-Remlik complex, 25 to 60 percent slopes	Very limited	Nevarc (45%)	Depth to saturated zone (1.00)	51.6	2.8%
				Slow water movement (1.00)		
				Slope (1.00)		
				Seepage, bottom layer (1.00)		
			Remlik (35%)	Slope (1.00)		
				Seepage, bottom layer (1.00)		
				Depth to saturated zone (0.43)		
42B	Slagle fine sandy loam, 0 to 4 percent slopes	Very limited	Slagle (80%)	Depth to saturated zone (1.00)	59.0	3.2%
				Slow water movement (1.00)		
43B	Slagle-Emporia complex, 2 to 6 percent slopes	Very limited	Slagle (45%)	Depth to saturated zone (1.00)	138.5	7.6%
				Slow water movement (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Emporia (35%)	Depth to saturated zone (1.00)		
				Slow water movement (1.00)		
44A	Tomotley fine sandy loam, 0 to 2 percent slopes	Very limited	Tomotley (80%)	Depth to saturated zone (1.00)	33.3	1.8%
				Slow water movement (0.68)		
			Nimmo (5%)	Depth to saturated zone (1.00)		
				Seepage, bottom layer (1.00)		
				Slow water movement (0.50)		
W	Water	Not rated	Water (100%)		8.7	0.5%
Totals for Area of Interest					**1,817.1**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	1,788.6	98.4%
Somewhat limited	19.7	1.1%
Null or Not Rated	8.7	0.5%
Totals for Area of Interest	**1,817.1**	**100.0%**

Description

ENG - Engineering

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to

validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.