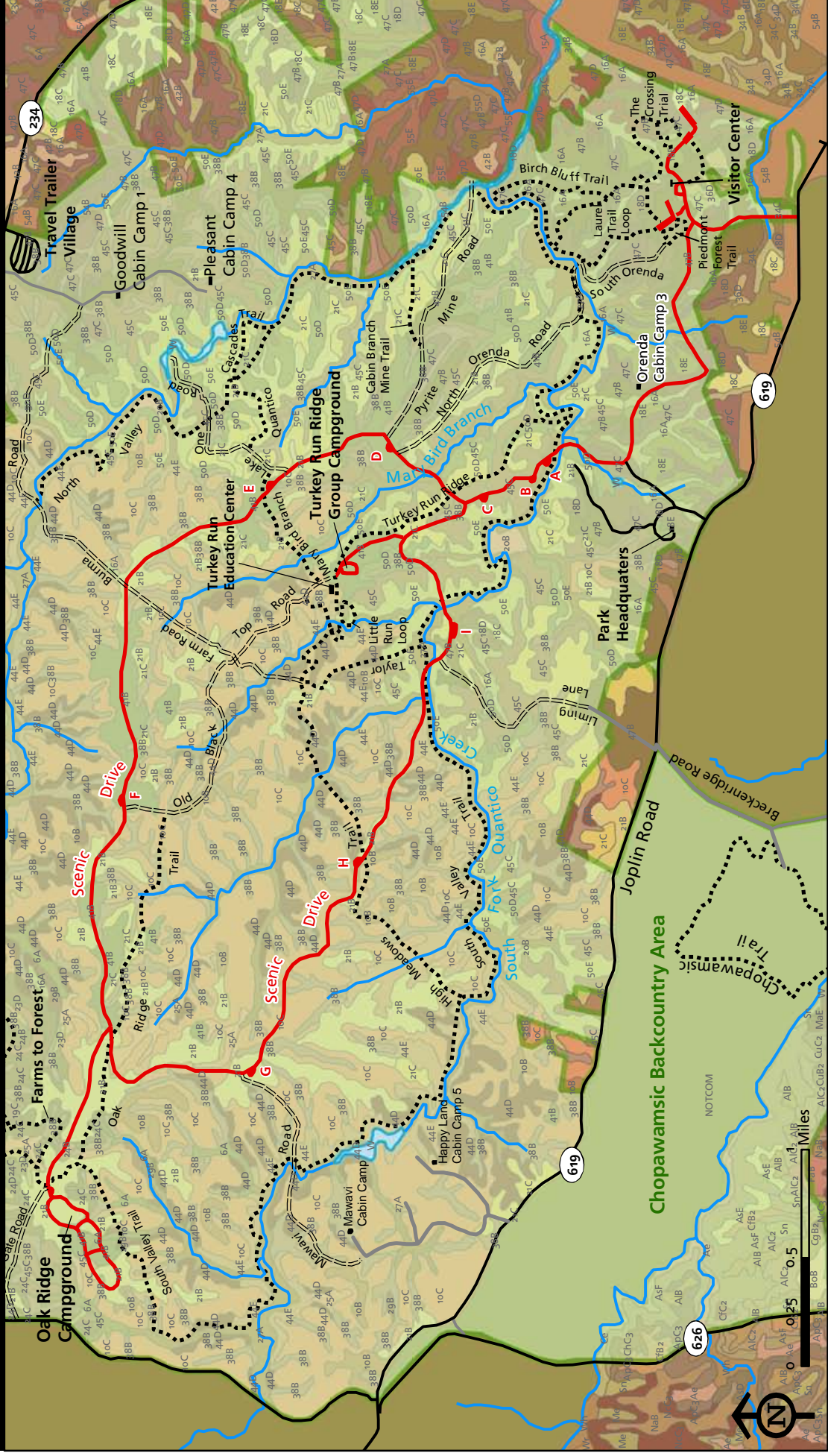


APPENDIX B
Mapping of Soils in Project Area

Prince William Forest Park
Virginia

National Park Service
U.S. Department of the Interior



SSURGO Soil Map,

DSC/November 2008/ 860/20012

Environmental Assessment
Roadway Resurfacing

Map Unit Description (Brief)

Prince William County, Virginia

[Only those map units that have entries for the selected description categories are included in this report]

Map unit: 6A - Baile loam, 0 to 4 percent slopes

Description category: SOI

Baile is a nearly level to moderately sloping, very deep, poorly drained soil. Typically the surface layer is loam about 8 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 3 inches. The land capability classification is 5w. The Virginia soil management group is HH. This soil is hydric.

Map unit: 10B - Buckhall loam, 2 to 7 percent slopes

Description category: SOI

Buckhall is a gently sloping to moderately sloping, very deep, well drained soil. Typically the surface layer is loam about 7 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. The Virginia soil management group is V. This soil is not hydric.

Map unit: 10C - Buckhall loam, 7 to 15 percent slopes

Description category: SOI

Buckhall is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is loam about 7 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. The Virginia soil management group is V. This soil is not hydric.

Map unit: 16A - Delanco fine sandy loam, 0 to 4 percent slopes

Description category: SOI

Delanco is a nearly level to moderately sloping, very deep, moderately well drained soil. Typically the surface layer is fine sandy loam about 11 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 2e. The Virginia soil management group is B. This soil is not hydric.

Map Unit Description (Brief)

Prince William County, Virginia

Map unit: 18C - Dumfries sandy loam, 7 to 15 percent slopes

Description category: SOI

Dumfries is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is sandy loam about 10 inches thick. The surface layer has a low content of organic matter. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4s. The Virginia soil management group is T. This soil is not hydric.

Map unit: 18D - Dumfries sandy loam, 15 to 25 percent slopes

Description category: SOI

Dumfries is a moderately steep to steep, very deep, well drained soil. Typically the surface layer is sandy loam about 10 inches thick. The surface layer has a low content of organic matter. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6s. The Virginia soil management group is T. This soil is not hydric.

Map unit: 18E - Dumfries sandy loam, 25 to 50 percent slopes

Description category: SOI

Dumfries is a steep to very steep, very deep, well drained soil. Typically the surface layer is sandy loam about 10 inches thick. The surface layer has a low content of organic matter. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. The Virginia soil management group is T. This soil is not hydric.

Map unit: 21B - Fairfax loam, 2 to 7 percent slopes

Description category: SOI

Fairfax is a gently sloping to moderately sloping, very deep, well drained soil. Typically the surface layer is loam about 8 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. The Virginia soil management group is D. This soil is not hydric.

Map unit: 21C - Fairfax loam, 7 to 15 percent slopes

Description category: SOI

Fairfax is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is loam about 8 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. The Virginia soil management group is D. This soil is not hydric.

Map Unit Description (Brief)

Prince William County, Virginia

Map unit: 24B - Glenelg-Buckhall complex, 2 to 7 percent slopes

Description category: SOI

Glenelg is a gently sloping to moderately sloping, very deep, well drained soil. Typically the surface layer is loam about 5 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. The Virginia soil management group is U. This soil is not hydric.

Buckhall is a gently sloping to moderately sloping, very deep, well drained soil. Typically the surface layer is loam about 7 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. The Virginia soil management group is V. This soil is not hydric.

Map unit: 24C - Glenelg-Buckhall complex, 7 to 15 percent slopes

Description category: SOI

Glenelg is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is loam about 5 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. The Virginia soil management group is U. This soil is not hydric.

Buckhall is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is loam about 7 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. The Virginia soil management group is V. This soil is not hydric.

Map unit: 25A - Glenville loam, 0 to 4 percent slopes

Description category: SOI

Glenville is a nearly level to moderately sloping, very deep, moderately well drained soil. Typically the surface layer is loam about 8 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is slow. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 2w. The Virginia soil management group is W. This soil is not hydric.

Map Unit Description (Brief)

Prince William County, Virginia

Map unit: 27A - Hatboro-Codorus complex, 0 to 2 percent slopes

Description category: SOI

Hatboro is a nearly level to gently sloping, very deep, poorly drained soil. Typically the surface layer is silt loam about 14 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 3 inches. The land capability classification is 3w. The Virginia soil management group is HH. This soil is hydric.

Codorus is a nearly level to gently sloping, very deep, moderately well drained soil. Typically the surface layer is loam about 12 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 18 inches. The land capability classification is 2w. The Virginia soil management group is A. This soil is not hydric.

Map unit: 34C - Lunt loam, 7 to 15 percent slopes

Description category: SOI

Lunt is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is loam about 7 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. The Virginia soil management group is AA. This soil is not hydric.

Map unit: 36D - Marr very fine sandy loam, 7 to 25 percent slopes

Description category: SOI

Marr is a strongly sloping to steep, very deep, well drained soil. Typically the surface layer is very fine sandy loam about 13 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. The Virginia soil management group is T. This soil is not hydric.

Map unit: 38B - Meadowville loam, 0 to 5 percent slopes

Description category: SOI

Meadowville is a nearly level to moderately sloping, very deep, well drained soil. Typically the surface layer is loam about 12 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 48 inches. The land capability classification is 2e. The Virginia soil management group is G. This soil is not hydric.

Map Unit Description (Brief)

Prince William County, Virginia

Map unit: 41B - Neabsco loam, 0 to 7 percent slopes

Description category: SOI

Neabsco is a nearly level to moderately sloping, very deep, moderately well drained soil. Typically the surface layer is loam about 8 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is very slow. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The top of the seasonal high water table is at 21 inches. The land capability classification is 2e. The Virginia soil management group is BB. This soil is not hydric.

Map unit: 44D - Occoquan sandy loam, 7 to 25 percent slopes

Description category: SOI

Occoquan is a strongly sloping to steep, deep, well drained soil. Typically the surface layer is sandy loam about 9 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. The Virginia soil management group is DD. This soil is not hydric.

Map unit: 44E - Occoquan sandy loam, 25 to 50 percent slopes

Description category: SOI

Occoquan is a steep to very steep, deep, well drained soil. Typically the surface layer is sandy loam about 9 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. The Virginia soil management group is DD. This soil is not hydric.

Map unit: 45C - Orenda loam, 7 to 15 percent slopes

Description category: SOI

Orenda is a strongly sloping to moderately steep, deep or very deep, well drained soil. Typically the surface layer is loam about 8 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. The Virginia soil management group is KK. This soil is not hydric.

Map unit: 47B - Quantico sandy loam, 2 to 7 percent slopes

Description category: SOI

Quantico is a gently sloping to moderately sloping, very deep, well drained soil. Typically the surface layer is sandy loam about 13 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 2e. The Virginia soil management group is R. This soil is not hydric.

Map Unit Description (Brief)

Prince William County, Virginia

Map unit: 47C - Quantico sandy loam, 7 to 15 percent slopes

Description category: SOI

Quantico is a strongly sloping to moderately steep, very deep, well drained soil. Typically the surface layer is sandy loam about 13 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 3e. The Virginia soil management group is R. This soil is not hydric.

Map unit: 47D - Quantico sandy loam, 15 to 25 percent slopes

Description category: SOI

Quantico is a moderately steep to steep, very deep, well drained soil. Typically the surface layer is sandy loam about 13 inches thick. The surface layer has a moderate content of organic matter. The slowest permeability is moderate. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 4e. The Virginia soil management group is R. This soil is not hydric.

Map unit: 50D - Spriggs silt loam, 15 to 25 percent slopes

Description category: SOI

Spriggs is a moderately steep to steep, moderately deep, well drained soil. Typically the surface layer is silt loam about 8 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 6e. The Virginia soil management group is JJ. This soil is not hydric.

Map unit: 50E - Spriggs silt loam, 25 to 50 percent slopes

Description category: SOI

Spriggs is a steep to very steep, moderately deep, well drained soil. Typically the surface layer is silt loam about 8 inches thick. The surface layer has a moderately low content of organic matter. The slowest permeability is moderate. It has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The land capability classification is 7e. The Virginia soil management group is JJ. This soil is not hydric.

Map unit: 54B - Urban land-Udorthents complex, 0 to 7 percent slopes

Description category: SOI

Urban Land consists of areas where most of the surface is covered by asphalt, concrete, or other impervious surfaces.

Udorthents are areas where the soils have been altered during excavation or covered by earthy fill material.

Selected Soil Interpretations

Prince William County, Virginia

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The table shows only the top five limitations for any given soil. The soil may have additional limitations. This report shows only the major soils in each map unit]

*This soil interpretation was designed as a "limitation" as opposed to a "potential" or "suitability". The numbers in the value column range from 0.01 to 1.00. The larger the value, the greater the potential limitation.

Map symbol and soil name	Pct. of map unit	ENG - Local Roads and Streets*		FOR - Potential Erosion Hazard (Off-Road/Off-Trail)*			
		Rating class and limiting features	Value	Rating class and limiting features	Value		
6A:							
Baile	75	Very limited		Slight			
		Depth to saturated zone	1.00				
		Frost action	1.00				
		Low strength	1.00				
		Shrink-swell	0.50				
10B:							
Buckhall	80	Very limited		Slight			
		Low strength	1.00				
		Shrink-swell	0.50				
		Frost action	0.50				
10C:							
Buckhall	80	Very limited		Slight			
		Low strength	1.00				
		Shrink-swell	0.50				
		Frost action	0.50				
		Slope	0.37				
16A:							
Delanco	80	Very limited		Slight			
		Frost action	1.00				
		Low strength	1.00				
		Shrink-swell	0.50				
		Depth to saturated zone	0.48				
		Flooding	0.40				
18C:							
Dumfries	75	Somewhat limited		Slight			
		Frost action	0.50				
		Slope	0.37				
18D:							
Dumfries	75	Very limited		Moderate			
		Slope	1.00	Slope/erodibility	0.50		
		Frost action	0.50				

Selected Soil Interpretations

Prince William County, Virginia

Map symbol and soil name	Pct. of map unit	ENG - Local Roads and Streets*		FOR - Potential Erosion Hazard (Off-Road/Off-Trail)*			
		Rating class and limiting features	Value	Rating class and limiting features	Value		
18E: Dumfries	75	Very limited Slope Frost action	1.00 0.50	Severe Slope/erodibility	0.75		
21B: Fairfax	80	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Slight			
21C: Fairfax	80	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.37	Slight			
24B: Glenelg	45	Somewhat limited Frost action	0.50	Slight			
Buckhall	35	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Slight			
24C: Glenelg	45	Somewhat limited Frost action Slope	0.50 0.37	Slight			
Buckhall	35	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.37	Slight			
25A: Glennville	80	Very limited Frost action Low strength Depth to saturated zone	1.00 1.00 0.48	Slight			

Selected Soil Interpretations

Prince William County, Virginia

Map symbol and soil name	Pct. of map unit	ENG - Local Roads and Streets*		FOR - Potential Erosion Hazard (Off-Road/Off-Trail)*			
		Rating class and limiting features	Value	Rating class and limiting features	Value		
27A:							
Hatboro	45	Very limited		Slight			
		Depth to saturated zone	1.00				
		Frost action	1.00				
		Flooding	1.00				
Codorus	35	Very limited		Slight			
		Frost action	1.00				
		Flooding	1.00				
		Low strength	1.00				
		Depth to saturated zone	0.75				
34C:							
Lunt	80	Very limited		Slight			
		Shrink-swell	1.00				
		Low strength	1.00				
		Frost action	0.50				
		Slope	0.37				
36D:							
Marr	80	Very limited		Moderate			
		Slope	1.00	Slope/erodibility	0.50		
		Frost action	0.50				
38B:							
Meadowville	80	Somewhat limited		Slight			
		Shrink-swell	0.50				
		Frost action	0.50				
41B:							
Neabsco	80	Very limited		Slight			
		Frost action	1.00				
		Depth to saturated zone	0.48				
44D:							
Occoquan	80	Very limited		Moderate			
		Slope	1.00	Slope/erodibility	0.50		
		Frost action	0.50				
44E:							
Occoquan	80	Very limited		Severe			
		Slope	1.00	Slope/erodibility	0.75		
		Frost action	0.50				

Selected Soil Interpretations

Prince William County, Virginia

Map symbol and soil name	Pct. of map unit	ENG - Local Roads and Streets*		FOR - Potential Erosion Hazard (Off-Road/Off-Trail)*			
		Rating class and limiting features	Value	Rating class and limiting features	Value		
45C:							
Orenda	75	Very limited		Slight			
		Low strength	1.00				
		Shrink-swell	0.50				
		Frost action	0.50				
		Slope	0.37				
47B:							
Quantico	75	Very limited		Slight			
		Frost action	1.00				
		Low strength	1.00				
		Shrink-swell	0.50				
47C:							
Quantico	75	Very limited		Slight			
		Frost action	1.00				
		Low strength	1.00				
		Shrink-swell	0.50				
		Slope	0.37				
47D:							
Quantico	75	Very limited		Moderate			
		Slope	1.00	Slope/erodibility	0.50		
		Frost action	1.00				
		Low strength	1.00				
		Shrink-swell	0.50				
50D:							
Spriggs	80	Very limited		Moderate			
		Slope	1.00	Slope/erodibility	0.50		
		Frost action	0.50				
50E:							
Spriggs	80	Very limited		Severe			
		Slope	1.00	Slope/erodibility	0.75		
		Frost action	0.50				
54B:							
Urban land	50	Not rated		Not rated			
Udorthents							
	40	Not rated		Not rated			