DESCRIPTION OF MAP UNITS

1D Hatboro Loam, 0 to 3 percent slopes
This soil is very deep, poorly drained and nearly level, formed in recently deposited micaceous sediments washed from uplands. Hatboro Loam is of small extent occurring in only one location on a narrow flood plain along Four Mile Run. Included with this soil in mapping are small areas of Codorus occurring along the map unit boundary which make up 10 percent of the unit. It is a hydric soil and is significant in the determination of this area as a possible wetland.

2A Codorus-Hatboro complex, 0 to 3 percent slopes
This complex consists of very deep, nearly level soils formed in recently deposited micaceous sediments washed from uplands. This unit is of small extent, found only on narrow flood plains along Four Mile Run. The areas of Codorus and Hatboro are so intermingled and small that they could not be mapped separately.

This unit is about 50 percent moderately well drained Codorus soils, 40 percent poorly drained Hatboro soils, and 10 percent other soils, which include small areas of well drained soils, soils with cobbly and gravelly subsoils and areas immediately adjacent to the stream that have been filled and riprapped to stabilize the stream bank. Because of the inclusion of hydric Hatboro soils, this unit is considered a potential wetland.

3A Urban Land-Codorus complex, 0 to 3 percent slopes
This complex consists of Urban land and nearly level, well drained Codorus soils formed in recently deposited micaceous sediments washed from uplands. The complex is found on flood plains at the lower end of Four Mile Run and at its confluence with Lucky Run.

This map unit is about 75 percent Urban land and 25 percent Codorus soils, which occur together in such an intricate pattern it was not practical to separate them in mapping. Included in this map unit are areas of Codorus soils disturbed by urbanization.

Glenelg Loam

This very deep well drained soil occurs in the Northern Piedmont physiographic region of Arlington County. It is formed in micaceous material weathered mainly from schist and gneiss.

Included in this unit are Urban land and the somewhat excessively drained Manor soils, found on the narrow end of ridges with steep side slopes. Also included are soils with gravelly surface layers occurring on the nearly level portions of the landscape. Inclusions make up about 20 percent of the map units.

6B 3 to 8 percent slopes
This gently sloping unit occurs on ridgetops.

6C 8 to 15 percent slopes
This strongly sloping unit occurs on ridgetops and convex side slopes.

6D Glenelg-Manor complex, 15 to 35 percent slopes
This complex consists of moderately steep, very deep and well drained soils of the Glenelg and Manor series, formed in material weathered mainly from micaceous schist (Manor) and schist or gneiss (Glenelg). It occurs on strongly dissected areas in the Northern Piedmont.

This complex is about 45 percent Glenelg soils and 40 percent Manor soils, which occur together in such intricate patterns that it was not possible to separate them in mapping. Included in this unit are soils with gravelly surface layers and areas of soils that have slopes of more than 35 percent. Also included are small areas of Urban land. Inclusions make up about 15 percent of the map unit.

Glenelg-Urban Land Complex

This complex consists of Urban land and well drained soils of the Glenelg series, formed in micaceous material weathered mainly from schist and gneiss. It occurs in the Northern Piedmont.

The map unit is about 45 percent Glenelg soils, 40 percent Urban land, and 15 percent other soils described below. Glenelg and Urban land are intermingled so that it was not practical to separate them in mapping. Included in this map unit are areas of Glenelg soils disturbed by urbanization.

7A 0 to 3 percent slopes
This unit occurs on broad flats and consists of nearly level soils occupied entirely by public schools or libraries surrounded by recreational complexes consisting of baseball and soccer fields, tracks, and tennis courts. Other soils also included are gently sloping and distrubed areas with slopes greater than three percent occurring along the cuts and fills.

7B 3 to 8 percent slopes
This gently sloping unit occurs on ridgetops. It includes soils disturbed by urbanization which make up 15 percent of the unit.

7C 8 to 15 percent slopes
This moderately sloping unit occurs on ridgetops and side slopes. Areas disturbed by urbanization make up 15 percent of this complex.

7D 15 to 25 percent slopes
This strongly sloping unit occurs on side slopes. Included in the mapping are areas disturbed by urbanization, along with areas of Manor sandy loam. These included areas make up 15 percent of this map unit.

Urban Land-Glenelg Complex

This complex consists of Urban land and well drained soils of the Glenelg series, formed in micaceous material weathered mainly from schist and gneiss. It is found in the Northern Piedmont.

The map unit is about 70 percent Urban land, 20 percent Glenelg soils, and 10 percent other soils. Glenelg soils and Urban land occur together in such an intricate pattern it was not practical to separate them in mapping. The other soils included in this map unit are areas of Glenelg soils disturbed by urbanization.

10B 3 to 8 percent slopes
This gently sloping unit occurs on ridgetops.

10C 8 to 15 percent slopes
This moderately sloping unit occurs on ridgetops and side slopes.

10D 15 to 25 percent slopes
This strongly sloping unit occurs on side slopes. Also included are small areas of Manor sandy loam.

Sassafras Gravelly Sandy Loam

The Sassafras series consists of very deep, well-drained soils on upland areas of the Coastal Plain, derived from marine or alluvial sediments. Included in this unit are very deep, well drained soils with strong brown, very gravelly, sandy loam subsoils (Croom).

9B 3 to 8 percent slopes
This gently sloping unit occurs on ridgetops. Also included are very deep, moderately well drained Neabsco soils, small areas with slopes more than 15 percent, and small areas of Urban land. These included soils make up about 15 percent of the map unit.

9C 8 to 15 percent slopes
This moderately sloping unit occurs on ridgetops and side slopes. Also included are very deep, moderately well drained Neabsco soils, small areas with slopes more than 15 percent, and small areas of Urban land. These included soils make up about 15 percent of the map unit.

9D 15 to 25 percent slopes
This strongly sloping unit occurs on side slopes. Also included are small areas with slopes more than 25 percent, and small areas of Urban land, which make up about 15 percent of the map unit.

Sassafras-Urban Land Complex

This complex consists of well drained soils of the Sassafras series derived from marine, alluvial, or fluvial sediments and Urban land. It occurs in upland areas of the Coastal Plain.

The map unit is about 45 percent Sassafras soils and 40 percent Urban land, which occur together in an intricate pattern so that it was not practical to separate them in mapping.

15B 3 to 8 percent slopes
This unit is gently sloping. It includes areas of Neabsco sandy loam and areas disturbed by urbanization, which together make up 15 percent of the complex.

15C 8 to 15 percent slopes
This is a moderately sloping unit. Included within the map unit are areas Neabsco sandy loam, very deep soils with very gravelly sandy loam subsoils, and areas disturbed by urbanization. These areas combine to make up 15 percent of the map unit.

15D 15 to 25 percent slopes
This complex is strongly sloping. Included within the map unit are areas of very deep soils with very gravelly sandy loam subsoils, and areas disturbed by urbanization. These areas combine to make up 15 percent of the map unit.

Urban Land-Sassafras Complex

This complex consists of Urban land and well drained soils of the Sassafras series derived from marine, alluvial, or fluvial sediments of the Coastal Plain. It occurs in upland areas of the Coastal Plain physiographic region..

The map unit is about 70 percent Urban land and 20 to 25 percent Sassafras soils, which interringle together so that it was impractical to separate them in mapping.

11B 3 to 8 percent slopes
This unit is gently sloping. It includes areas of Neabsco sandy loam and areas disturbed by urbanization, which together make up 5 percent of the complex.

11C 8 to 15 percent slopes
This is a moderately sloping unit. Included within the map unit are areas of very deep soils with very gravelly sandy loam subsoils, and areas disturbed by urbanization. These areas combine to make up 10 percent of the map unit.

11D 15 to 25 percent slopes
This complex is strongly sloping. Included within the map unit are areas of very deep soils with very gravelly sandy loam subsoils, and areas disturbed by urbanization. These areas combine to make up 10 percent of the map unit.

Urban Land-Sassafras-Neabsco Complex

This complex consists of well and moderately well drained soils of the Sassafras and Neabsco series, derived from marine, alluvial, or fluvial sediments deposited on uplands of the Coastal Plain.

Sassafras, Neabsco, and Urban land are closely intermingled and impractical to separate in mapping. Included in this map unit are areas of Sassafras and Neabsco soils disturbed during urbanization.

4A 0 to 3 percent slopes
This map unit is nearly level and is occupied entirely by public shools or libraries which are surrounded by recreational complexes consisting of baseball and soccer fields, tracks, and tennis courts. It is made up of about 40 percent Sassafras soils, 35 percent Urban land, and 15 percent Neabsco soils. Also included are areas with slopes greater than three percent occurring along the cuts and fills. These gently sloping and disturbed areas make up 10 percent of this complex.

4B 3 to 8 percent slopes
This unit is gently sloping and consists of about 70 percent Urban land, 15 percent Sassafras, and 10 percent Neabsco soils. Areas disturbed by cutting and grading make up 5 percent of this unit.

4C 8 to 15 percent slopes
This unit is strongly sloping and consists of about 70 percent Urban land, 15 percent Sassafras, and 10 percent Neabsco soils. Areas disturbed by cutting and grading make up 5 percent of this unit.

16B Urban Land-Woodstown Complex, 3 to 8 percent slopes
This complex consists of Urban land and gently sloping, moderately well drained soils of the Woodstown series, formed from marine, alluvial, or fluvial sediments. It occurs on nearly level terraces and uplands in the Coastal Plain and is found in the Virginia Highlands area of Arlington County.

The map unit is about 70 percent Urban land and 20 percent Woodstown soils, and 10 percent other soils, which are made up of Sassafras soils and areas covered by fill material. Urban land, Woodstown, and other soils occur together in such an intricate pattern that it was impractical to separate them in mapping.

13 Udorthents, loamy
These soils are in areas that have been reworked by machinery and consist of mostly loamy materials placed over various drainage classes on terraces and floodplains occurring along perennial streams in the Piedmont and Coastal Plain. Slope varies but is generally less than 10 percent.

The source of fill material in this unit is variable, consisting of sandy, gravelly, clayey, silty,and micaceous soil material. These reworked areas were created to provide sites for buildings, roads, recreational facilities and flood control. The thickness of the fill is quite variable, but is generally more than 2 feet.

Included with these soils in mapping are soils that are often shaped to some extent but otherwise resemble undisturbed soils surrounding the unit. Also included are some filled areas that have non-soil materials such as concrete rubble in addition to the soil material.

Permeability and available water capacity are quite variable. Internal drainage is highly variable and the probability of ponding and excessive runoff is possible after heavy rainfall.

Most areas have been stabilized and are used for building sites, roads, and recreational development. Some areas are completely covered with buildings and other impervious surfaces. Remaining open areas are generally used for ornamental planting and recreational fields.

12 Urban land-Udorthents complex, 2 to 15 percent slopes
This mapping unit consists of areas where more than 85 percent of the surface is Urban land, covered by buildings, asphalt, concrete, or other impervious materials. The other 15 percent consists of areas of deep to very deep, nearly level to moderately sloping, well and moderately well drained soils. The Urban land and Udorthents are so intermingled it was not practical to map them separately. This complex occurs throughout the survey area but is largely located in the Rosslyn-Ballston and Crystal City areas. This unit is about 85 percent Urban land, 10 percent Udorthents, and 5 percent other soils.

The Udorthents consist of material that has been graded, cut, filled, or otherwise disturbed during urbanization. The disturbed material is loamy and gemerally reflects the soils in the adjacent areas.

Included in this mapping unit are small areas of soils that have not been disturbed. Also included are moderately steep and steep slopes.

It is not practical to examine nor attempt to identify the soil or soil-like material of this unit.

NOT SURVEYED

NOT SURVEYED

NOT SURVEYED

Effects of Urbanization

With the exception of small areas of open space, such as parks and golf courses, the soils of Arlington County have been disturbed to some degree for construction of houses, apartments, offices, shopping centers, other commercial businesses, and the streets and sidewalks associated with them. The soils completely covered by concrete, asphalt, buildings, or other impervious surfaces are designated as Urban land in this survey. Urban land makes up part of a soil complex in most of Arlington County.

Depending on the location, even minor construction may entail fills of varying depth or cuts of as much as half of the original soil profile. Areas of soils disturbed for urbanization occur everywhere in Arlington County. For this reason, it cannot be assumed that the properties and characteristics of most soils in the County are the same as those of the undisturbed soils given in Tables 1 and 2.

Once urbanization has occurred, soil properties can vary widely within several feet. Thus, any proposed land use will require an on-site investigation to determine the potentials and limitations of the underlying soils.

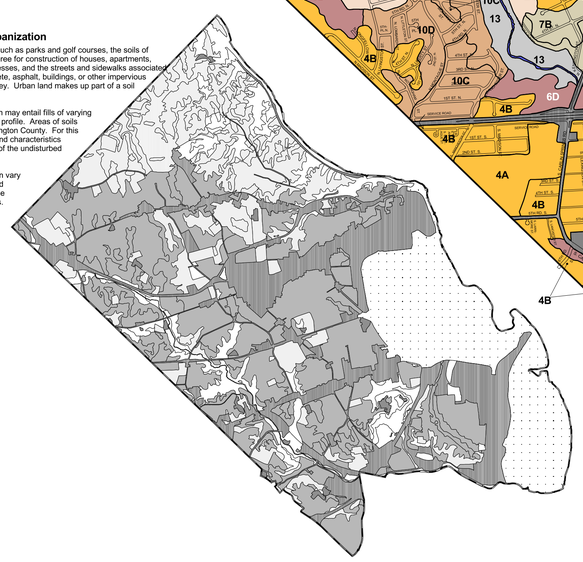

Table 1: Soil Properties

Series	Hatboro	Codorus	Sassafras	Neabsco	Glenelg	Manor	Woodstock	Udorthents
Texture	Loam	Loam	Gr. Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam	Loamy
Hydrologic Soil Group	D	C	B	C	B	B	C	Variable
Permeability-Subsoil	Moderate	Moderate	Mod. slow	Moderate	Moderate	Moderate	Moderate	Variable
-Fragipan	n/a	n/a	n/a	Slow	n/a	n/a	n/a	n/a
-Substratum	Mod. rapid	Mod. rapid	Moderate	Mod. rapid	Moderate	Moderate	Moderate	Variable
Available Water Capacity	Moderate	High	Moderate	Low	Moderate	Moderate	High	Variable
Surface Runoff	Slow	Slow	See Table 2	Medium	See Table 2	Very rapid	Medium	Variable
Erosion Hazard	Slight	Slight	See Table 2	Moderate	See Table 2	Severe	Moderate	Low
Soil Reaction	v. strong acid to neutral	v. strong acid to neutral	v. strong to strong acid	v. strong to strong acid	v. strong to strong acid	v. strong to strong acid	v. strong acid	Variable
Root Zone Depth (in)	10-20	10-20	>60	15-30	>60	>60	>60	>24
Root Zone Restriction	Wetness	Wetness	None	Fragipan	None	None	None	Fill Depth
Depth to Bedrock (in)	>60	>60	>60	>60	>60	>60	>60	Variable
Depth to Water Table (in)	0-6	12-24	>72	15-30	>72	>72	>72	Variable
Type of Water Table	Apparent			Perched				
Flooding Potential	Frequent	Frequent	None	None	None	None	None	Variable
Shrink-Swell Potential	Low	Low	Low	Low	Low	Low	Low	Low
Potential Frost Action	High	High	Moderate	High	Moderate	Moderate	Moderate	Variable
Corrosivity - Steel	High	High	Low	Moderate	Low	Low	Moderate	Variable
-Concrete	Moderate	Moderate	High	Moderate	High	Moderate	High	Variable

Table 2: Surface Runoff and Erosion Hazard for Sassafras and Glenelg Soils

Series	Sassafras	Sassafras-Urban	Urban-Sassafras	Glenelg	Glenelg-Urban	Urban-Glenelg
Surface Runoff						
0-3 percent slopes					Medium	
3-8 percent slopes	Slow	Medium to rapid	Medium to rapid	Medium	Medium to rapid	Medium to rapid
8-15 percent slopes	Medium	Rapid	Rapid	Moderately rapid	Rapid	Rapid
15-25 percent slopes	Rapid	Rapid	Very rapid	Very rapid	Very rapid	
Erosion Hazard						
0-3 percent slopes					Moderate	
3-8 percent slopes	Moderate	Moderate	Moderate	Severe	Moderate	Moderate
8-15 percent slopes	Moderate	Severe	Severe	Severe	Severe	Severe
15-25 percent slopes	Severe	Severe	Severe	Severe	Severe	

SOIL SURVEY
ARLINGTON COUNTY, VIRGINIA
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Soils surveyed and mapped, 1996-97 by Louis Heidel and Fred Garst
USDA Natural Resources Conservation Service
Woodstock VA Service Center
Soils surveyed at scale of 1:7,200.
Final QC and approval by USDA NRCS is in progress.
Map produced, 1998, by William Frost

Base data provided by Arlington County, DPW, Mapping Center.
Planimetric map layers developed from 1974 aerial photography, Virginia State Plane Coordinates, 1927 North American Datum, mapped at scale of 1:600
Street map base updated from 1998 digital orthophotography.

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