



Welcome to the Pohick Bay Regional Park Planning Website

The Northern Virginia Regional Park Authority has recently adopted the General Management Plan (GMP) for the entire 1,003 acres at Pohick Bay Regional Park. The GMP will help guide future planning and resource management at Pohick Bay Regional Park.



The GMP for Pohick Bay Regional Park includes the following:

- Identification of park mission, purpose and significance statements
- An inventory and description of the existing recreation facilities
- An inventory and description of the existing natural resources
- A history, inventory and description of the existing cultural resources
- Identification of various park resource management zones and a description of the activities appropriate for each zone

Following the completion of the GMP, a Resource Management Plan (RMP) was developed. The RMP includes goals and objectives for managing the park's resources in each management zone, and provides guidance for managing the park's natural resources.

A key element in the NVRPA park planning process is public involvement. The Regional Park Authority conducted the first official public meeting for this plan June 14, 2000 and the second public meeting on November 8, 2001. The NVRPA Board adopted the plan March 21, 2002.

Copies of the planning document noted above can be obtained by contacting NVRPA's Planning and Development Department at 703-352-5900 or by [clicking here](#). Site maps and aerial photos are only available in reduced scale, black and white.

Questions regarding the Pohick Bay Regional Park Planning Process or this website should be directed to the NVRPA Planning and Development Department at 703-352-5900 or Plandev@nvrpa.org.



**Natural Resources Inventory
and
Existing Conditions Assessment Report
for
Pohick Bay Regional Park**

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INDEX

[EXECUTIVE SUMMARY](#)

[1.0 INTRODUCTION](#)

[1.1 Background](#)

[1.2 Methodology](#)

1.2.1

Environmental
Resources
Inventory

1.2.2 Cultural
Resources
Inventory

1.2.3 GIS Mapping

[2.0 PARK FACILITIES](#)

[2.1 Park Areas and
Recreational Opportunities](#)

[2.2 Park Structures](#)

[2.3 Infrastructure](#)

[3.0 ENVIRONMENTAL
RESOURCES](#)

[3.1 Geology and Soils](#)

3.1.1 Geologic
Setting and
Topography
3.1.2 General Soil
Characteristics
3.1.3
Characteristics of

[TABLES](#)

1. [STRUCTURES/CULTURAL RESOURCES AT
POHICK BAY REGIONAL PARK](#)
2. [SOIL CHARACTERISTICS AND GENERAL
LAND USE POTENTIAL](#)
3. [AMPHIBIANS AND REPTILES OF POHICK
BAY REGIONAL PARK](#)
4. [BIRDS OF POHICK BAY REGIONAL PARK](#)
5. [MAMMALS OF POHICK BAY REGIONAL
PARK](#)

[SUPPLEMENT: CULTURAL RESOURCES
INVENTORY](#)

MAPS

[REGIONAL MAP](#)
[REGIONAL LAND USE PLAN MAP](#)
[SITE BASE MAP](#)
[SITE FEATURES MAP](#)
[SLOPES & SOILS MAP](#)
[HYDROLOGY & WETLANDS MAP](#)
[VEGETATION & WILDLIFE HABITAT MAP](#)
[CULTURAL FEATURES MAP](#)
[SITE CONSTRAINTS & OPPORTUNITIES](#)

Individual Soil Units

3.1.4 Erodibility

3.1.5 Hydric Soils

3.2 Water Resources

3.2.1 Surface

Water Resources
and Hydrology

3.2.2 Resource

Protection Areas

3.2.3

Environmental
Quality Corridors

3.3 Vegetation

3.3.1 Plant

Communities

3.3.2 Invasive

Exotic Plant

Species

3.4 Wildlife

3.5 Endangered and Threatened Species

3.5.1 Bald Eagle

3.5.2 Small

Whorled Pogonia

3.5.3 Wood Turtle

4.0 CULTURAL RESOURCES

5.0 CONSTRAINTS AND OPPORTUNITIES

EXECUTIVE SUMMARY

The Northern Virginia Regional Park Authority contracted with EDAW, Inc. and its subconsultants to prepare an inventory of the natural and cultural resources at Pohick Bay Regional Park, in Fairfax County, Virginia. This Existing Conditions Assessment Report presents the results of the September through November 1999 Environmental Resources Inventory and Cultural Resources Inventory conducted at Pohick Bay Regional Park. The report is accompanied by a Geographical Information System (GIS) database and map series that was developed for the environmental and cultural resource inventories. The Cultural Resources Inventory report is a supplement to this report.

This report is intended to provide the NVRPA a basis from which it can establish a park management plan and make planning decisions for future recreational use and development while avoiding or minimizing negative effects on the environment. The inventories of the park's environmental and cultural resources compiled in the GIS database will serve as a management tool necessary for long-term planning and resource management at Pohick Bay Regional Park.

Pohick Bay Regional Park occupies 1,002 acres on the Mason Neck peninsula. It is bordered by Pohick Creek and Pohick Bay to the north, Gunston Road and private land holdings to the west and south, and Gunston Hall (a state historic site) to the east. The park's recreational features include a golf course, hiking and equestrian trails, boat launch and boat rental, picnic and camping facilities, swimming pools and bathhouse, and mini and disc golf courses. These various recreation facilities and opportunities are interspersed with a variety of wildlife habitat areas.

The Environmental Resources Inventory and the Cultural Resources Inventory were based on reviews of available information from federal, state, and county/regional resource agencies and field reconnaissance. The Environmental Resources Inventory characterized soils, steeply sloping areas, areas susceptible to erosion, hydric soils and wetlands, plant communities and wildlife habitat, invasive exotic plant species, and endangered and threatened species. Surface water bodies, the 100-year floodplain, and resource protection areas were mapped based on GIS data available from Fairfax County. The Cultural Resources Inventory characterized the history of the area and identified archaeological and historic resources within the park.

The topography of the park ranges from nearly level areas in uplands and lowlands to very steep slopes in drainageways. Soils at the site consist of an assortment of unconsolidated stratified river deposit sediments that range from gravelly sands to clays. Thirteen soil mapping units were identified during the Environmental Resources Inventory and described in terms of slope and slope stability, erodibility, suitability for building or road construction, suitability for sewage, and hydric inclusions.

Seven different plant communities were identified for Pohick Bay Regional Park: hardwood forest, mixed forest, pine forest, wetland, open water, upland field, and edge habitat. Hardwood forest communities cover much of the park. Mixed pine communities occur primarily in the southern portion of the park, often as transitional areas between pine forest and hardwood forest communities. Pine forest communities are generally small areas dominated by Virginia pine. There are four classes of wetlands represented on the site: palustrine forested, palustrine scrub-shrub, palustrine emergent, and riverine emergent. Open water habitat is primarily along Pohick Bay. Upland field habitat is present in the vicinity of the golf course. Edge habitats occur throughout the park, primarily in developed areas. Five exotic species were identified as potentially invasive. The variety of plant communities can provide habitat for various wildlife species. The wildlife species observed and likely to occur on the site were identified during the Environmental Resources Inventory. Pohick Bay Regional Park provides habitat suitable for at least three threatened and endangered species: bald eagle, small whorled pogonia, and wood turtle.

The sites cultural resources include archaeological features and historic structures. The Cultural Resources Inventory report, provided as a supplement to this report, includes comprehensive documentation of these resources.

An analysis of all site features characterized during the environmental and cultural resources inventories was conducted to identify areas of constraints and opportunities throughout the park. Although a large portion of the park is constrained by poor soils, steep slopes, wetlands, the 100-year floodplain, resource protection areas, and existing development, there are numerous opportunities for expanding existing passive and active recreation facilities at the park.

[Return to Index](#)

1.0 INTRODUCTION

Pohick Bay Regional Park is a 1,002-acre regional recreation/special multi-use park located in southeastern Fairfax County, Virginia. The park is situated on the historic and ecologically fragile Mason Neck peninsula, and is within one mile of U.S. Route 1 and several miles of suburban development along the Interstate 95/U.S. Route 1 corridor. Pohick Bay Regional Park contains various public recreational facilities and opportunities including: an 18-hole

golf course; an outdoor swimming pool; camping, hiking, and picnicking facilities; a boat launch; and a boat rental facility. These various recreation facilities and opportunities are interspersed with a variety of wildlife habitat areas.

The Northern Virginia Regional Park Authority (NVRPA) recognizes the need to preserve and enhance the natural and cultural heritage of Pohick Bay Regional Park while improving park facilities and recreational opportunities. The purpose of this Existing Conditions Assessment Report is to document and evaluate existing park resources and their condition, providing a basis from which the NVRPA can establish a park management plan for these resources. This report will enable the NVRPA to make planning decisions for future recreational use and development while avoiding or minimizing negative impacts to the environment. In addition, park staff can use this report as a tool for managing the environmental and cultural resources of the park.

This Existing Conditions Assessment Report presents the results of the September through November 1999 Environmental Resources Inventory and Cultural Resources Inventory conducted at Pohick Bay Regional Park. The Cultural Resources Inventory report is a supplement to this report. This narrative is accompanied by a Geographical Information System (GIS) database and map series that was developed from the environmental and cultural resource inventories. The following map sheets are attached to this report.

1. *Regional Map*
2. *Regional Land Use Plan Map*
3. *Site Base Map*
4. *Site Features Map*
5. *Slopes and Soils Map*
6. *Hydrology and Wetlands Map*
7. *Vegetation and Wildlife Habitat Map*
8. *Cultural Features Map*
9. *Site Constraints and Opportunities Map*

1.1 Background

Pohick Bay Regional Park is located in the southeastern part of Fairfax County, Virginia, on the Mason Neck peninsula, which extends southeastward into the Potomac River (see Regional Map). The park is bordered by: Pohick Creek and Pohick Bay to the north; Gunston Road (State Route 242) and private land holdings, including residential development and horse stables, to the west and south; and Gunston Hall, a state historic site, to the east. Mason Neck State Park and National Wildlife Refuge occupy a large portion of the tip of the peninsula. Fort Belvoir Military Reservation and Accotink Bay Wildlife Refuge are located across Pohick Creek to the north. General land use patterns identified in the Comprehensive Land Use Plan for the County (June 26, 1995) are presented in the Regional Land Use Plan Map. [Note:

existing land use patterns and proposed land uses for Fairfax County were not available in digital format at the time of this report.]

The 1,002 acres of Mason Neck that comprise Pohick Bay Regional Park were acquired by the NVRPA in increments from 1961 through 1972. The majority of the existing facilities were developed between 1971 and 1972, and later in 1982. Although several studies of park resources have been conducted in the past, the NVRPA has not previously conducted a comprehensive investigation of environmental and cultural resources within the entire 1,002 acres that comprise the park.

The NVRPA retained the EDAW Team, comprised of EDAW, Inc. (EDAW), Wetland Studies and Solutions, Inc. (WSSI), Larry Johnson (Mr. Johnson), and EHT Tracerics, Inc. (Tracerics), to establish a baseline of environmental and cultural resources at Pohick Bay Regional Park. WSSI and Mr. Johnson performed the Environmental Resources Inventory and Tracerics performed the Cultural Resources Inventory of the park. EDAW compiled the information from the inventories into a GIS database and this Existing Conditions Assessment Report. As a park management tool, the GIS maps can be used to identify relational patterns among park resources. In addition, the GIS database provides a complete record of the resources inventoried and can be easily accessed and easily updated as new information is obtained through observation and detailed investigation. This report and the GIS database can be used as a guide by park planners and managers to direct long-range planning opportunities, while managing the park's environmental and cultural resources.

1.2 Methodology

1.2.1 Environmental Resources Inventory

Immediately following the Notice to Proceed from the NVRPA, the EDAW Team met with the NVRPA Planner and Natural Resource Specialist, and the Pohick Bay Regional Park Park Manager and Assistant Park Manager, to discuss known resources and priority areas at the park. The EDAW Team then reviewed available sources of relevant background information, including the U.S. Geological Survey (USGS) Fort Belvoir, VA-MD quadrangle map, U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) map, Fairfax County soil survey maps, geologic and hydrologic maps, Color Infrared NAPP Imagery, and Fairfax County aerial photography.

Mr. Johnson conducted a field study of Pohick Bay Regional Park to analyze the mapping accuracy of the published soil maps. The field investigation included traversing the site, conducting hand auger test borings in selected areas, and recording soil boring data and site observations.

Mr. Johnson prepared a soil identification map of the park property, correcting soil delineations where actual site conditions deviated significantly from the published Fairfax County soil survey maps. Areas having soils with potentially unstable slopes were studied closely to identify those areas that may have a significant effect on future development plans. Areas exhibiting features of apparent active landslide activity were identified and delineated on the soil map coverage. Potentially highly erodible areas were identified during the study as were specific areas currently exhibiting erosion problems. Hydric soils were identified and delineated, and other soils were evaluated for percentage of hydric soil inclusions.

WSSI reviewed and analyzed the background information and then designed a

pedestrian reconnaissance to thoroughly survey the biological resources at the site. Background information was obtained from the Virginia Department of Conservation and Recreation, Division of Natural Heritage, Virginia Department of Game and Inland Fisheries, Virginia Department of Agriculture and Consumer Services, Northern Virginia Bird Club, Fairfax County digital orthophotographs, NAPP Imagery, NWI maps, Fairfax County soil survey maps, and the Virginia Native Plant Society. The biological survey was conducted September 7 through 10, 1999. Locations for each type of "signature" on the aerial photography were sampled. Areas with high potential for wetland resources, based on topography, mapped hydric soils, and the NWI map, were also investigated. During the pedestrian reconnaissance, wildlife species were observed by sight and sound. Tracks and other signs of wildlife usage (such as beaver lodges) were also noted.

EDAW visited the park on September 22, 1999, to identify views and vistas, inventory site structures and facilities, and verify a 1989 trail map of the park. Park structures were digitally photographed and architectural styles were noted. Information pertaining to existing and planned utilities and infrastructure was obtained from utility companies and Fairfax County.

1.2.2 Cultural Resources Inventory

Traceries reviewed existing records and coordinated with park managers and the NVRPA staff to identify important architectural and archeological resources before beginning fieldwork. Primary and secondary research was conducted at the Library of Congress, Virginia State Library, the archives at the Virginia Department of Historic Resources, the Fairfax County Public Library, the archives at Gunston Hall, and the Fairfax County Historical Society, as well as the archives of the NVRPA. Traceries also consulted with the Fairfax County archaeologist. In preparation for fieldwork, the reviewed materials and maps were studied to determine the best survey approach.

The surveyors conducted the on-site survey work on September 22, 1999. Properties were documented to the reconnaissance or intensive level as appropriate or determined with the NVRPA. They were photographed on the exterior and interior where appropriate (and possible), and the appropriate survey forms were completed. Color slides were taken as appropriate throughout the survey effort. All information collected during this task were filed into individual property file folders. The photographs, slides and negatives were labeled according to Virginia Department of Historic Resources (VDHR) standards.

Concurrent with the on-site survey, Phase I archaeology was performed without excavation. A thorough map and literature search was conducted in order to aid the surveyors in the identification of potential archaeological sites. Potential archaeological sites identified by fieldwork were investigated further.

Information collected during the on-site survey and recorded on the field forms was entered into the VDHR-Integrated Preservation Software (IPS) database. Reports generated by IPS were analyzed and properties that were considered potentially eligible for the National Register of Historic Places were evaluated within the context of the entirety of the survey database, historic themes, and historic context.

Potential archaeological sites identified during research and fieldwork were evaluated for their likelihood to yield important information. Information gathered on the potential archaeological sites was synthesized with the information collected regarding historic themes and historic context.

A detailed discussion of the methodology for this investigation, along with the inventory results, is provided in the Cultural Resources Inventory report, which is a supplement to this report.

To view Cultural Resources Inventory in its entirety, see [SUPPLEMENT - CULTURAL RESOURCES INVENTORY](#)

1.2.3 GIS Mapping

EDAW built a base map of Pohick Bay Regional Park from existing digital cartographic data available from the Fairfax County Department of GIS and Mapping Services. Existing data sets were acquired from the County and reviewed for accuracy and used for this particular project. The County data, in Arc/INFO format, formed the baseline data set for the Regional Map, as well as the Site Base Map.

A separate GIS data set was set up specifically for the mapping effort in this project to facilitate future updates and queries regarding park related data. The GIS was organized into Regional and Site level folders and included data from the Fairfax County GIS and Mapping Department, field survey data, as well as data prepared and digitized by EDAW. The following chart shows the organization of thematic data in the GIS.

POHICK BAY REGIONAL PARK GIS DATA		
Regional	Site	
General Land Use	Base Map	Analysis
County Boundaries	Topography	Golf Course Area
Hydrology	Orthophoto	Vegetation
Major Roads	Buildings	Habitat
Parks	Bunkers	Invasive Species
Public Facilities	Major Roads	Slopes >15%
Schools	Marina Structures	Constrained Soils
Streams and Ponds	Parcels	Tree Cover
Streets	Park Boundary	Wetlands
Trails and Bikeways	Parking Areas	Wetlands (Line)
	Ponds	Soil (Points)
	Site Buildings	
	Roads and Trails	
	Streams	
	Tree zones	
	Water (Line)	
	Water (Areas)	
	Fairways	

Whenever possible, GIS data was clipped to the region of interest and converted to the Shapefile format in order to facilitate efficient storage and easier maintenance. Data that was not available in digital format was incorporated into the GIS by scanning images of print maps, geo-registering and rectification and on-screen digitizing methods. The following map themes were generated from such on-screen digitizing methods:

1. Existing Land Use at the Region Level: data was scanned from the Fairfax

County Comprehensive Land Use Plan of 1995 and geo-referenced to match the actual coordinates.

- 2. Regional Trails and Bikeways: data was prepared by digitizing trails from the print map of the Trail System of Fairfax County, Virginia, prepared by the Denver Service Center, Eastern Team in their report titled Paved Recreation Trails of the National Capital Region.*
- 3. Site level trails and roads were digitized on screen from the 1989 Quantico Orienteering Club Map and from the orthophotograph of the area. The trails were updated to current use and status based on comments and verification by the Pohick Bay Regional Park staff.*

A major component of preparing the GIS dataset was the data collected from the field surveys for soils, wetlands, vegetation and habitats, and cultural resources. The base data was provided by WSSI and Mr. Johnson in AutoCAD and MS Excel + MS Word formats. This data was converted into ArcView GIS shapefiles and the relevant attributes attached to each feature. Traceries provided the locational data for cultural features on a USGS topographic map. The data provided by the consultants was then used in an overlay analysis with other baseline data to prepare the site analysis map series.

The GIS dataset is made accessible through a single ArcView project file that includes all maps as separate views and layouts. This project file can be used to edit, browse, print and query the GIS data for the park.

[Return to Index](#)

2.0 PARK FACILITIES

2.1 Park Areas and Recreational Opportunities

Pohick Bay Regional Park can be divided into three main areas. These areas are, from west to east, the Golf Course, Camp Wilson, and the Recreational Facilities Area. Each area has a separate entrance drive off of Gunston Road. Trails provide links within the park between Camp Wilson and the Recreational Facilities Area. A controlled service road links the Golf Course to Camp Wilson.

The Golf Course encompasses an area of approximately 460 acres at the northeastern end of the park. It is an 18-hole, par 72, championship golf course that is open year round. The area includes a driving range and clubhouse with pro shop and snack bar. Access to the golf course is possible via a paved entrance drive off of Gunston Road, approximately 1.3 miles east of U.S. Route 1.

Camp Wilson occupies the central area of the park, consisting of approximately 160 acres. Camp Wilson is a youth group camping area, accessible via a gravel road off of Gunston Road. A locked gate controls vehicle access to the Camp. Numerous hiking and equestrian trails wind through the area. Registration by youth groups at the Ranger Station (located at the Recreational Facilities Area) is required to obtain vehicle access to and camping privileges at Camp Wilson.

The Recreational Facilities Area consists of approximately 382 acres at the southeastern end of the park. This area includes: camping areas and bathhouse facilities; mini and disc golf courses; boat storage areas; a marina area with docks,

boat ramps, snack bar and observation deck, and boat rental; picnic areas; outdoor pools and bathhouse; boat and trailer storage areas; and the Camp Store and Ranger Station. Access to the Recreational Facilities Area is possible by Pohick Bay Drive, a state-maintained road off of Gunston Road. A gatehouse is located on Pohick Bay Drive near its intersection with Gunston Road.

2.2 Park Structures

A variety of structures occur within the park and are used by park visitors and/or park staff. A building survey was conducted in conjunction with the Cultural Resources Inventory. To view Cultural Resources Inventory in its entirety, see [SUPPLEMENT - CULTURAL RESOURCES INVENTORY](#). A list of the structures and cultural features is provided in Table 1 and keyed to the Site Features Map and Cultural Features Map.

2.3 Infrastructure

Infrastructure in the vicinity of Pohick Bay Regional Park includes roads maintained by the Virginia Department of Transportation, water and sewer service provided by Fairfax County, electrical power by Virginia Power, and natural gas by Washington Gas.

The Virginia Department of Transportation maintains Gunston Road and Pohick Bay Drive. The NVRPA maintains all other roads and surfaces within the park. The Virginia Department of Transportation, Office of Planning, has no planned improvements to Gunston Road or Pohick Bay Drive. The closest major roadway improvement planned for the vicinity is a project to widen U.S. Route 1 to six lanes with bike trails and sidewalks from the Stafford County line to the existing six-lane section beginning in Alexandria. This widening project is scheduled for completion in 2010. The Virginia Department of Transportation also plans a "spot improvement" on Old Colchester Road to straighten a 1690-foot stretch of the road south of its intersection with Gunston Road.

Fairfax County has plans to construct a bike trail on the north side of Gunston Road from U.S. Route 1 to Mason Neck State Park; however, the trail is only partially funded and the County has not yet obtained all of the easements necessary to construct the trail. The funding currently available will support the construction of the bike rail from Gunston Hall to Mason Neck State Park.

The Fairfax County Water Authority has a 12-inch water main on the north side of Gunston Road. The water main terminates at 10505 Gunston Road, just east of the Fire Station. Branch lines extend from this main to the Golf Course and Camp Wilson. Fairfax County is constructing a sanitary sewer system to replace failing septic systems in the Gunston Heights and Wiley residential neighborhoods, which are located across Gunston Road from Pohick Bay Regional Park. The new system will provide sewer conveyance from residences to two sewage holding tanks that will be located within the Gunston Heights and Wiley neighborhoods and will be routinely emptied by Fairfax County. The County has no plans to install, improve, or extend water supply or storm sewer lines, or construct any other facilities in the vicinity of Pohick Bay Regional Park. The park relies on septic systems for sewage treatment. Storm drainage is facilitated by ditches and culverts along the park roads and Gunston Road where it parallels the park.

Virginia Power provides electrical service to the Mason Neck area. Maps of powerline right-of-ways and associated facilities were not available from Virginia Power.

Washington Gas and Columbia Gas have natural gas transmission lines in this area of Fairfax County. There is an easement for a Columbia Gas transmission line through the center of Pohick Bay Regional Park. There is a Washington Gas transmission line on Gunston Road that terminates approximately 570 feet east of U.S. Route 1. There are no known improvements or upgrades planned for natural gas lines in this area.'

[Return to Index](#)

3.0 ENVIRONMENTAL RESOURCES

3.1 Geology and Soils

3.1.1 Geologic Setting and Topography

Pohick Bay Regional Park is located in the Atlantic Coastal Plain physiographic province. The site is underlain by unconsolidated sediments of the Potomac Formation, Cenozoic upland gravels, and Quaternary alluvium. The site's topography consists of broad flat ridgetops, steep (14 to 25 percent) to very steep (greater than 25 percent) slopes and generally narrow stream valleys. In the northeastern portion of the site, the stream valleys tend to broaden and flatten. The park elevation ranges from approximately 150 feet above sea level to less than one foot above sea level in the low marshy areas adjoining Pohick Bay.

The Potomac Formation consists of thin to thick-bedded layers of medium to coarse sands, silty sands, silty clays, and gravelly sands. The Potomac Formation gradually becomes thicker in an easterly direction. Bedrock lies below the park property at elevations of approximately 100 to 200 feet below sea level.

3.1.2 General Soil Characteristics

The soil materials consist of an assortment of unconsolidated stratified river deposited sediments that range from gravelly sands to clays. The soils in the park at elevations higher than approximately 125 feet above sea level typically consist of a 2 to 4-foot thick mantle of silty and sandy materials over older river terrace deposits that overlie sedimentary beds of the Potomac Formation. The older river terrace deposits consist of gravelly and cobbly deposits of rounded and subrounded quartzite and quartz.

The soils that are encountered at elevations below approximately 125 feet in the park site consist of alternating strata of sands, silts, and clays. Large stones and boulders can be found in some areas where they were deposited by ancient rivers. A particularly large quartzite boulder is exposed along Pohick Creek in the northern part of the park. The steep slopes that are found in the park are a result of erosion and downcutting of landforms that occurred over a period of many years during past geologic times. The soils in the drainageways and floodplains in the lower areas of the park are a result of the deposition of soils that have eroded from the ridges and hilltops.

The slopes in the park range from nearly level in some upland and lowland areas to greater than 75 percent in very steep areas. The soil map units identify the predominant slope ranges that occur within each unit. Minor inclusions of other slope ranges may occur within these soils because of the complex nature of some sloping areas.

3.1.3 Characteristics of Individual Soil Units

The soils on the site were mapped according to specific characteristics, including texture and gradation, horizonation and depth, types of minerals, chemistry, permeability, and certain engineering characteristics. Soils were also mapped according to slope groups on which the soils naturally occur (see Slopes and Soils Map). The following paragraphs describe each of the soil mapping units identified and delineated at Pohick Bay Regional Park (also see Table 2):

(1A) Mixed Alluvial/Predominantly Non-Hydric

These soils are susceptible to flooding and occur as an alluvial complex in floodplains and drainageways. They are found on nearly level slopes of 0 to 2 percent and are often dissected by numerous older stream channels. The soil materials typically consist of silts and sands and range from soft organic silts and clays to dense gravels, sands, and silts. A high seasonal high water table is often found in the soils at depths of from 1 to 2.5 feet below the surface.

The soil permeability is variable and is dependent on the percent of sand silt and clay. Bearing capacity may be low because of soft soils and seasonal saturation. Septic drainfields and infiltration trenches are poorly suited because of wetness and flooding potential. Stream bank erosion within these soils may result in undercutting of embankments and deepening of channels. This soil is predominantly not hydric; however, hydric inclusions up to 5 percent may occur in ponding or seepage areas. Waters of the United States as defined by the U. S. Army Corps of Engineers typically occur in channels within these soil areas. Severe channel erosion has occurred in the past and is continuing to occur in many areas of these soils on the park property. The shrink-swell potential of these soils is low.

(1HA) Mixed Alluvial/Predominantly Hydric

These soils are susceptible to flooding and occur as an alluvial complex in floodplains and drainageways. They are found on nearly level slopes of 0 to 2 percent and are often dissected by numerous older stream channels. The soil materials typically consist of silts and sands and range from soft organic silts and clays to dense gravels, sands, and silts. A high seasonal high water table is often found in the soils at depths of from 0 to 1.0 feet below the surface.

The soil permeability is usually low. Bearing capacity is usually low because of soft soils and seasonal saturation. Septic drainfields and infiltration trenches are poorly suited because of wetness and flooding potential. Stream bank erosion within these soils may result in undercutting of embankments and deepening of channels. This is predominantly a hydric soil. Waters of the United States as defined by the U. S. Army Corps of Engineers typically occur in channels within these soil areas. The shrink-swell potential of these soils is low to moderate.

(6) Hyattsville

These soils occur in drainageways and foot slopes at the base of hills and consist of colluvium and local alluvium that has been washed from the surrounding hill slopes. The slopes range from 2 to 7 percent. These soils are subject to local flooding during periods of heavy rainfall. The soil materials consist of clays, silts, sands, and gravels. The high seasonal water table is 1 to 2 feet below the ground surface. Permeability is moderate. Bearing capacity is marginal because of soft soil substrata and seasonal groundwater saturation. Suitability for septic drainfields is poor because of the high seasonal ground water table. Severe channel erosion has occurred in the past and is continuing to occur in some areas of this soil unit. The shrink-swell potential of these soils is low.

(34B) Woodstown

These soils occur in sandy sediments on slopes ranging from 2 to 7 percent. They are located on low river terraces adjacent to Pohick Creek and Pohick Bay. The soil materials consist primarily of sandy loams to sandy clay loams overlying dense subsurface soils. The seasonal high water table is typically 1.5 to 2.5 feet below the surface. Low-lying areas of these soils are subject to flooding. Permeability is moderately rapid in the surface and moderately slow in the subsurface. Bearing capacity is marginal because of soft soil and seasonal saturation. Suitability for septic drainfields is poor because of the seasonal water table. The shrink-swell potential of these soils is low.

(37B, 37C) Beltsville

These soils consist of a silt loam or loam mantle in the higher elevations of the park that overlie a compact soil layer (fragipan) at depths of 2.0 to 2.5 feet. The slopes range from 2 to 14 percent. The 37B soils have slopes of 2 to 7 percent and the 37C soils have slopes of 7 to 14 percent. The permeability of the dense layer is very slow, resulting in a perched seasonal high water table at 1.5 to 2.5 feet below the ground surface during wet periods. The bearing capacity of the soils is adequate for residential structures. Septic drainfields are poorly suited in most areas of the soils because of slow permeability and perched water table conditions. The shrink-swell potential of these soils is low.

(45B) Matapeake

These soils consist of silty materials in the uplands of the park. The slopes range from 2 to 7 percent. A dense silty clay loam layer may be present 2 to 3 feet below the surface in some areas. The seasonal high water table is typically greater than 6 feet below the ground surface. Permeability is moderate to moderately slow. The bearing capacity of the soils is adequate for residential structures. Suitability for septic drainfields is marginal because of slow permeability in some areas. The shrink-swell potential of these soils is low.

(46B) Mattapex

These soils consist of silty materials in the uplands of the park. The slopes range from 2 to 7 percent. A dense layer (fragipan) is usually present at depths of 2 to 3 three feet below the ground surface. The permeability of the dense layer is very slow, resulting in a perched seasonal high water table at 2.5 to 3.0 feet below the ground surface during wet periods. Permeability is moderate to moderately slow. The bearing capacity of the soils is adequate for residential structures. Suitability for septic drainfields is poor because of slow permeability and seasonal high groundwater. The shrink-swell potential of these soils is low to moderate.

(49B, 49C) Lunt

These soils consist of sandy materials in uplands and lower slopes of the park. The slopes range from 2 to 14 percent. The 49B soils have slopes of 2 to 7 percent and the 49C soils have slopes of 7 to 14 percent. The upper 2 to 3 feet of the soils consist predominantly of sandy and sandy clay loam materials with good to moderate internal drainage. Permeability is moderate to slow. The seasonal high water table is typically greater than 4 feet below the ground surface. The bearing capacity of the soils is adequate for residential structures. However, Lunt soils in close proximity to areas of soil unit (118) "marine clays" should be analyzed for foundation support and slope stability. Suitability for septic drainfields is good in the sandy subsoil and poor where clays are encountered.

(54B, 54C) Sassafras

These soils consist of sandy materials in uplands of the park. The slopes range from 2 to 14 percent. The 54B soils have slopes of 2 to 7 percent and the 54C soils have slopes of 7 to 14 percent. The upper 3 feet of the soils consist predominantly of sandy and sandy clay loam materials with good internal drainage. Permeability is moderate to moderately rapid. The seasonal high water table is typically greater than 6 feet below the ground surface. The bearing capacity of the soils is adequate for residential structures. Suitability for septic drainfields is generally good because of good permeability and lack of high seasonal ground water. The shrink-swell potential of these soils is low.

(64C, 64D, 64E, 64F) Silty, Sandy, and Clayey Sediments of the Potomac Formation

These soils occur primarily along steep hillsides below upland areas. The slopes range from 14 to greater than 70 percent. The 64C soils have slopes of 7 to 14 percent, 64D soils have slopes of 14 to 25 percent, 64 E soils have slopes of 25 to 50 percent, and 64F soils have slopes of 50 to greater than 70 percent. The soils consist predominantly of silty and sandy materials, but typically contain layers of sand, gravel and moderately to highly plastic clays. The permeability ranges from very slow to moderately rapid. The seasonal high water table is typically greater than 6 feet below the ground surface except in areas where springs or seeps are encountered. These areas have potentially unstable slopes where clays are predominant in the soil strata. In addition, the steeply sloping areas are problematic for building or road construction because of topographic considerations. A geotechnical study should be undertaken in all areas of these soil

units prior to construction activities. The suitability for septic drainfields is marginal to poor because of slow permeability and steep slopes. The shrink-swell potential of these soils is low to high.

(87) Wickham

These soils occur in silty and clayey sediments on slopes ranging from 2 to 7 percent on a low river terrace adjacent to Pohick Bay. The soil materials consist primarily of silts and clays. The seasonal high water table is typically greater than 5 feet below the surface. Low-lying areas of these soils are subject to flooding. Permeability is moderately slow. Bearing capacity is adequate for residential type construction. Suitability for septic drainfields is marginal because of slow permeability. The shrink-swell potential of these soils is low.

(89) Tidal Marsh

These soils occur in low nearly level areas along Pohick Creek. They are periodically inundated, or partially submerged by tidal activity. Flooding may occur following storm events. An organic material layer in the surface overlies highly variable, stratified sandy, silty and clayey sediments. The seasonal high water table is at or above the surface for extended periods of time. Permeability is generally low to moderate. Bearing capacity is poor because of very soft and saturated soils. Septic drainfields are poorly suited because of wetness and flooding. The shrink-swell potential of these soils is low to moderate.

(118 D) Clayey and Silty Sediments of the Potomac Formation "Marine Clays"

These soils consist predominantly of clayey and silty sediments the Potomac Formation and are known locally as "marine clays." The slopes typically range from 14 to greater than 25 percent, but may include steeper or flatter areas. The soils consist predominantly of silty and clayey materials, but typically contain thin sand strata. The clays that occur within these soils typically have low strengths and are unstable on slopes. The clays typically have a predominance of montmorillonite clays that exhibit high shrink-swell potential during changes in soil moisture content. Many buildings and roads in Fairfax County have incurred damage as a result of instability of these clays. Several land slippage areas of the park were identified during this study. The permeability is usually very slow. The seasonal high water table is typically greater than 6 feet below the ground surface except in areas where springs or seeps are encountered. A geotechnical study should be undertaken in all areas of these soil units prior to construction activities. The suitability for septic drainfields is poor because of slow permeability. The shrink-swell potential of these soils is high.

3.1.4 Erodibility

The steep, dissected topography of Pohick Bay Regional Park has developed during centuries of natural erosional downcutting of geologic deposits. In addition, past farming and logging activities have resulted in

a period of increased erosion in upland and steeply sloping areas. Many of the sediments that occur in the floodplains and drainageways can be traced to erosion that occurred since land settlement. Many of these soils have become relatively stable since the cessation of agricultural activities. However, some erosion continues to occur in certain areas of the park. The types of erosional areas in the park include: (1) areas of stream channel and drainageway downcutting; (2) areas of embankment erosion along steep areas adjoining Pohick Bay, especially on slopes greater than 50 percent; and (3) park trails with erosion in steeply sloping areas. Trails with erosion problems are monitored regularly and stabilized with waterbars where necessary.

The majority of the soils within the park are potentially erodible without adequate vegetative or other protection. Unprotected slopes of greater than approximately 15 percent are especially susceptible to erosion losses. Soil erodibility is affected by texture (relative proportion of sand, silt, and clay), rock content, permeability, structure, and slope (natural or man-made).

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3.1.5 Hydric Soils

Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-deprived) conditions in the upper part are identified as hydric soils. Hydric soils are one of three criteria used to delineate wetlands. The hydric soils at Pohick Bay Regional Park were encountered in lowland areas adjoining Pohick Creek and Pohick Bay and within flood plain areas or where springs or seeps occur. The percent of hydric soil inclusions in other non-hydric soils were estimated during this study (see Table 2).

3.2 Water Resources

3.2.1 Surface Water Resources and Hydrology

Pohick Bay Regional Park lies within the Pohick Creek watershed. The park borders on Pohick Creek where it widens into Pohick Bay and then joins Accotink Creek/Bay to form Gunston Cove, which opens into the Potomac River. Gunston Road approximates the drainage divide between the Pohick Creek and the drainage basin of the Occoquan River to the south.

The park is drained by a number of unnamed streams that flow in a generally northeasterly direction into Pohick Creek and Pohick Bay (see Hydrology and Wetlands Map). These unnamed streams are all indicated as intermittent (i.e., non-solid blue lines) on the USGS topographic map of the area, except for the stream which flows across Hole #14 and out of the pond on the "Back Nine" of the Golf Course. This stream is indicated as perennial (i.e., solid blue line).

Information from the Fairfax County Department of GIS and Mapping Services identifies the 100-year floodplain along nearly the entire shoreline boundary of Pohick Bay Regional Park (see Hydrology and Wetlands Map). Several minor springs or seeps were found to occur in floodplain areas or on steep slopes at the head of a drainage way.

3.2.2 Resource Protection Areas

The Potomac River is a major tributary to the Chesapeake Bay, and jurisdictions within the Potomac River watershed are subject to the requirements of the Chesapeake Bay Preservation Act of 1988 (CBPA). The CBPA requires counties, cities, and towns of Tidewater Virginia to designate and map Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) in order to protect the water quality of the Chesapeake Bay.

Fairfax County's Chesapeake Bay Preservation Ordinance (Chapter 118 of the Code of the County of Fairfax, Virginia) divides the County into RPAs and RMAs. Development and land disturbing activities (with a few exceptions) are prohibited in RPAs. RMAs are regulated to protect RPAs and water resources from degradation resulting from development and land disturbing activity. The regulatory requirements in RMAs are expressed in the form of performance criteria. These performance criteria range from general issues (i.e., minimize impervious area, minimize land disturbance areas, and maximize preservation of indigenous vegetation) to specific requirements for nutrient pollutant removal from stormwater runoff, maintenance agreements for stormwater management systems that incorporate best management practices, erosion and sedimentation controls, and septic field sizing and maintenance.

The Fairfax County Ordinance defines RPAs in Section 118-1-7(b) of the Ordinance as:

- a. A tidal wetland;
- b. A tidal shore;
- c. A tributary stream;
- d. A non-tidal wetland connected by surface flow and contiguous to a tidal wetland or tributary stream;
- e. A buffer area as follows:
 - (i) Any land within a major floodplain; and
 - (ii) Any land within 100 feet of a feature listed in Sections 118-1-7(b)(1)-(4).

The Fairfax County Ordinance defines RMAs in Section 118-1-7(c) to encompass the entire County by stating, "RMAs shall include any area not designated as an RPA."

Tidal wetlands and a tidal shore are present in Pohick Bay and Gunston Cove. By definition of the Fairfax County Ordinance, these features are core components of the RPA. There exist significant areas of non-tidal wetlands that are connected by surface flow and are contiguous to these tidal wetlands, the tidal shore, or the tributary stream (see Section 3.3.1). These non-tidal wetlands are also core components of the RPA.

The RPA extends 100 feet landward of these RPA core components or to the limits of the major 100-year floodplain, whichever is greater in extent. The location of the RPA at Pohick Bay Regional Park, according to the Fairfax County Department of GIS and Mapping Services, is presented in the Hydrology and Wetlands

Map.

In order to determine the precise limits of the RPA within the park, a formal wetland delineation and a floodplain study is required. The remainder of the park is included within an RMA, as are all parts of Fairfax County not included within the RPA.

3.2.3 Environmental Quality Corridors

Fairfax County's Comprehensive Plan includes a policy for Environmental Quality Corridors (EQCs). RPAs and EQCs are similar in definition, except in small (i.e., less than 360-acre) watersheds and in stream valleys with steep slopes (15 percent or greater). The EQC includes:

- All 100-year floodplains.
- All areas of 15 percent or greater slopes adjacent to the 100-year floodplain.
- Where no 100-year floodplain is present, all 15 percent or greater slopes that begin within 50 feet of the stream channel.
- All wetlands connected to stream valleys.
- All land within a corridor that is 50 feet wide plus 4 additional feet for each percent slope measured perpendicular to a stream bank.

The net effect of the EQC policy is a reduction in the buildable area. The actual extent of an EQC and nature of permitted uses within an EQC are negotiated during the land approval process with the County.

3.3 Vegetation

3.3.1 Plant Communities

Seven different plant communities were identified for Pohick Bay Regional Park: hardwood forest, mixed forest, pine forest, wetland, open water, upland field, and edge habitat. Each community type is described below and their approximate extent is depicted on the Vegetation and Wildlife Habitat Map.

Hardwood Forest

Hardwood forest communities cover much of Pohick Bay Regional Park. The hardwood forests within the park are composed of several different associations of dominant tree species. The composition of the tree species making up the forest communities depends on factors such as slope, exposure, soil, and drainage conditions. Three major hardwood forest associations were identified within the park boundaries: Upland Chestnut Oak/White Oak Association, Upland Beech/Tulip Poplar/Sweet Gum Association, Palustrine Forested Wetland

Each of the upland hardwood forest communities is described below in more detail. The forested wetlands on the site are discussed in more detail in the description of wetland plant communities in this section of the report.

Upland Chestnut Oak/White Oak Association: Upland forest

dominated by chestnut oak (*Quercus prinus*) and white oak (*Quercus alba*) is common within Pohick Bay Regional Park. Large, mature trees generally characterize the chestnut oak/white oak association. Although dominated by chestnut oak and white oak, a variety of other tree species grow within this community. Other, non-dominant tree species growing within this community include northern red oak (*Quercus rubra*), southern red oak (*Quercus falcata*), American beech (*Fagus grandifolia*), black gum (*Nyssa sylvatica*), tulip poplar (*Liriodendron tulipifera*), pignut hickory (*Carya glabra*), and Virginia pine (*Pinus virginiana*).

Within the park, the chestnut oak/white oak association occurs primarily on the steep slopes of hillsides and ravines. This association also occurs on the more gentle slopes at the tops of the ravines. Chestnut oak generally outnumbers white oak on the steeper slopes, while white oak predominates in areas with more gentle slopes, particularly near the tops of the ravines and on the ridgetops.

The understory within the chestnut oak/white oak association is variable throughout the park. In some areas, the understory is poorly developed with only scattered shrubs and small trees. In other areas, however, the understory is well developed with dense thickets of shrubs, particularly American holly (*Ilex opaca*) and mountain laurel (*Kalmia latifolia*). Mountain laurel is particularly common on west-facing slopes in the central and eastern portions of the park, while American holly is more common on the gently sloping hillsides near the tops of the ridges.

Beech/Tulip Poplar/Sweet Gum Association: Upland hardwood forest communities in which American beech, tulip poplar, and sweet gum (*Liquidambar styraciflua*) predominate occur primarily on the gentle to moderate, northeasterly facing slopes in the northern portions of the park. Tulip poplar and sweet gum predominate on the low-lying, non-wetland areas adjacent to Pohick Bay and on the relatively broad, flat non-wetland areas bordering the intermittent streams that flow northward across the park. American beech and tulip poplar predominate on moderately sloped hillsides. Tree species that occur in smaller numbers within the beech/tulip poplar/sweet gum association include red maple (*Acer rubrum*), northern red oak, persimmon (*Diospyros virginiana*), pignut hickory, black cherry (*Prunus serotina*), black gum, green ash (*Fraxinus pennsylvanica*), and American sycamore (*Platanus occidentalis*).

The understory vegetation within the beech/tulip poplar/sweet gum association is variable throughout the park. In areas where American beech is a dominant component of the forest canopy, the understory

is sparse and poorly developed with scattered shrubs (predominantly American beech and American holly). The groundcover in these areas is also quite sparse with some lowbush blueberry (*Vaccinium angustifolium*) and few herbaceous species. In low-lying areas such as the floodplain terrace above Pohick Bay where tulip poplar and sweet gum are dominant in the forest canopy, the understory is well developed and includes species such as pawpaw (*Asimina triloba*), ironwood (*Carpinus caroliniana*), American holly, and spicebush (*Lindera benzoin*). A variety of herbaceous species also grow in the areas where tulip poplar and sweet gum predominate. Dense stands of Nepal microstegium (*Eulalia viminea*), an invasive exotic species of grass, are frequent on gentle slopes adjacent to Pohick Bay and the smaller streams that flow northward across the park to Pohick Bay.

Mixed Forest

Mixed pine-hardwood forest communities occur primarily in the southern portions of the park, often as transitional areas between pine forest and hardwood forest communities. Within the park, mixed forests generally occur on the gentle slopes near the tops of ridges. In this landscape position, the soils are generally well drained and the vegetation is characterized by species more typical of drier soil conditions. Common tree species growing in the canopy of the mixed forest communities include Virginia pine, white oak, southern red oak, black oak (*Quercus velutina*), red maple, black gum, tulip poplar, and American beech. Occasional individuals of other species also occur.

The forest structure of the mixed forests is quite variable. Trees within the mixed forest communities are generally younger and not as large as many of the trees within the hardwood forest communities that cover much of the northern portion of the park. This is particularly true in the second-growth mixed forest community that predominates in the Recreational Facilities Area, in the vicinity of the campground and ranger station.

The understory of the mixed forest communities is also variable. In areas where the trees are less mature, the understory is often dense with many shrubs and sapling trees. Dense stands of American holly are common on the ridgetops within the mixed forests in the central portion of the park, while thickets of mountain laurel are common on some of the steep west-facing slopes.

In some areas of the park, particularly in the vicinity of the entrance road to the golf course and at Camp Wilson, Virginia pines have been removed from the forest to prevent them from falling onto roadways, powerlines, and fairways. The open forest canopy resulting from the selective removal of trees allows more light to penetrate to the forest floor. This results in the development of a dense understory of shrubs and smaller trees, providing additional structural and species diversity within the park.

Pine Forest

Small areas of coniferous forest dominated by pines occur at several areas within the park. The majority of the pine forests are dominated by Virginia pine (*Pinus virginiana*). However, a planted loblolly pine (*Pinus taeda*) plantation is present along the entrance road to Camp Wilson in the central portion of the park. Pine forests occur on gently sloped hillsides and ridgetops in the southern and western portions of the park in areas of moderately well drained soils. Although the forest canopy within these areas is composed largely of Virginia or loblolly pine, small numbers of hardwood trees are interspersed among the pines in some locations.

The understory within the pine forests is generally well developed in most areas. For the Virginia pine forests, the understory contains a variety of sapling trees and shrubs that are characteristic of moderately well drained ridgetop soils. Common species growing in the understory of the Virginia pine forests include red maple, black gum, southern red oak, white oak, American beech, American holly, and mountain laurel. Within the loblolly pine plantation, the understory includes shrub and sapling sized hardwood tree species, predominantly red maple, sweet gum and tulip poplar. Over time, the hardwood tree species will gradually replace the pines, and the forests will be transformed from pine forests to mixed forests, and eventually to hardwood forests dominated by various species of oaks. The successional process is quite slow and will take many years.

Wetlands

Areas identified as WET on the Vegetation and Wildlife Habitat Map, as well as portions of the hardwood forest, have a high probability for containing Jurisdictional Wetlands and other Waters of United States, including streams and ponds. The Hydrology and Wetlands Map contains a more detailed depiction of areas with a high probability for containing Jurisdictional Wetlands and other Waters of United States. All other areas not indicated as high probability areas have a low probability for the occurrence of Jurisdictional Wetlands and other Waters of the United States. Although in WSSI's opinion the likelihood in these areas is low, Jurisdictional Wetlands may be present in swales, small seepage areas and other isolated depressions.

The current definition of "Waters of the United States" incorporates the following definition of "wetlands," at 33 CFR 328.3(b) of the Federal Register:

The term "wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

The Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1, 1987) requires the identification of three parameters to delineate a wetland: hydrophytic

vegetation, hydric soils, and hydrology. While a wetland delineation to determine precise wetland boundaries was not part of the scope of this study, the approximate location of areas with a high probability for wetlands is noted on the Hydrology and Wetlands Map. Should future development plans propose to impact any of these areas with a high probability for wetlands, WSSI recommends that a formal wetland delineation should be undertaken at that time.

The wetlands present at Pohick Bay Regional Park include both palustrine and riverine wetlands. Palustrine wetlands include all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands in tidal areas where salinity due to ocean-derived salts is below 0.5 percent. At lower elevations, wetlands contained within the channel of Pohick Creek with a regular tidal water regime and salinity greater than 0.5 percent are considered riverine wetlands. Within each wetland system, there are different classes of wetlands. At Pohick Bay Regional Park, there are three different classes of palustrine wetlands and one class of riverine wetlands. The different classes of wetlands present at the park are described in the following paragraphs and their location and approximate extent is depicted on the Hydrology and Wetlands Map.

Palustrine Forested (PFO): These wetlands are dominated by trees, primarily red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), and sweet gum (*Liquidambar styraciflua*), with lesser amounts of sycamore (*Platanus occidentalis*) and black gum (*Nyssa sylvatica*). To the north of Hole #14 on the golf course, there is a small area of forested wetland along Pohick Creek where bald-cypress (*Taxodium distichum*) forms a significant portion of the rather open tree canopy in a location that appears to be perennially flooded. Shrubs, including common winterberry (*Ilex verticillata*), arrowwood (*Viburnum dentatum*), and spicebush (*Lindera benzoin*) and saplings of tree layer species are present in the understory. In lower wetter areas, the herb layer is dominated by primarily lizard's tail (*Saururus cernuus*) and various species of smartweed (*Polygonum*). At higher elevations in these forested wetlands, where there is a lower frequency of standing water, false nettle (*Boehmeria cylindrica*) and Nepal microstegium (*Eulalia viminea*) dominate the herb layer. Palustrine forested wetlands occur throughout Pohick Bay Regional Park, primarily in floodplains along streams, and to a lesser extent, in small headwater basins. Seepage of groundwater, surface water runoff and, in locations adjacent to Pohick Creek, tidal storm surges provide the primary sources of hydrology for these forested wetlands.

Palustrine Scrub-shrub (PSS): This wetland community is dominated by shrubs such as common winterberry (*Ilex verticillata*), silky dogwood (*Cornus amomum*), arrowwood (*Viburnum dentatum*), and buttonbush (*Cephalanthus occidentalis*). Some portions of the scrub-shrub wetlands may have an open canopy formed by widely spaced

trees. Scrub-shrub wetlands are found primarily in the northern portion of the park to the west of Pohick Creek. A small area of scrub-shrub wetland is present adjacent to the fairway of Hole #14 on the golf course. Seepage of groundwater provides their primary source of hydrology, augmented by surface water runoff from the adjacent streams and by seasonal and storm tidal surges.

Palustrine Emergent (PEM) and Riverine Emergent (REM): Persistent or non-persistent herbaceous species dominate these emergent wetland communities. The palustrine emergent wetlands are dominated by persistent herbaceous species including broad-leaf cattail (*Typha latifolia*), soft rush (*Juncus effusus*), and various species of bulrush (*Scirpus*). The riverine emergent wetlands found at lower elevations within the channel of Pohick Creek are dominated by non-persistent species such as spatterdock (*Nuphar luteum*), pickerelweel (*Pontedaria cordata*), arrow arum (*Peltandra virginica*), and wild rice (*Zizania aquatica*). These riverine wetlands are largely unvegetated and consist of mudflats during the non-growing season.

The most extensive emergent wetlands are located on the northern portion of the site to the west of and within the channel of Pohick Creek. Smaller emergent wetlands are found at the mouth of an intermittent stream that flows in to Pohick Creek near the boat rental area and on the golf course adjacent to the fairways for Holes #6 and #16. Seepage of groundwater provides the primary source of hydrology for the upper reaches of the palustrine emergent wetlands adjacent to Pohick Creek and for those along the golf course. At lower elevations, surface water runoff from Pohick Creek and seasonal and storm tidal surges augment their hydrology. For the riverine emergent wetlands, the regular tidal flux of Pohick Creek provides the primary source of hydrology.

In addition to Jurisdictional Wetlands, there is a high probability for other Waters of the United States on this site, in particular ponds and streams. The pond located on the "Back 9" of the golf course was constructed on-line within the channel of a stream depicted as perennial on the USGS quadrangle map of the area. Therefore, this pond is within the Jurisdictional Limits of Section 404 of the Clean Water Act. Drainageways are determined to be "Waters of the United States" and within the Jurisdictional Limits of Section 404 of the Clean Water Act if they possess a defined bed and bank with an ordinary high water mark. As depicted on the Hydrology and Wetlands Map, many drainage features were determined to have a high probability for streams that are Jurisdictional Waters of the United States (as opposed to non-jurisdictional ephemeral swales). At the time of observations (September 7 through 10, 1999), water was flowing in all of the areas with a high probability for streams due to recent rainfall events.

The streams at Pohick Bay Regional Park can be classified based on the nature of their

flow. The tidal portion of Pohick Creek is R1. Further upstream, Pohick Creek would be classified as R2 and R3 where flow is perennial but no longer tidal. The stream that flows across Hole #14 and out of the pond on the "Back Nine" of the golf course is depicted on the USGS quadrangle map of the area as perennial (i.e., as a solid blue line). Therefore, it is classified as R3, upper perennial. All other streams on the site are, in all likelihood, R4, with intermittent flow. Further information and observations beyond the scope of this study are needed to determine if other streams at Pohick Bay Regional Park have perennial flow. The nature of a stream's flow could potentially be important if future development plans propose to impact any of these streams.

Open Water

Open water habitats include shallow and deep water (greater than 6 feet) areas within Gunston Cove and Pohick Bay. Shallow water areas are largely vegetated with submerged aquatic vegetation (SAV) during the growing season. Hydrilla (Hydrilla verticillata) was the most widespread species of SAV observed during this investigation. These shallow open water areas are largely unvegetated and consist of mudflats during the non-growing season.

Upland Field

An upland field area is present in the Golf Course area. This area is located to the southwest of the golf course maintenance buildings, and a portion of the area is used for the storage of compost material. The upland field is characterized by a mid-successional plant community dominated by grasses and forbs with scattered thickets of shrubs and small trees. Common species growing in this area include meadow fescue (Festuca pratensis), Virginia pine, blackberry (Rubus argutus), and winged sumac (Rhus copallina). This area was previously used to store landscape plant material and some non-native landscape plants, most notably common crapemyrtle (Lagerstroemia indica), grow in this area.

Edge Habitat

Edge habitats occur throughout Pohick Bay Regional Park, primarily in the developed portions of the park. Edge habitats include the golf course, as well as park administrative and recreational facilities in the eastern portion of the park. These areas are characterized by golf course fairways, mowed lawns and landscaped areas. Large planted shade trees, including non-native species such as Japanese temple tree (Cryptomeria japonica) and southern magnolia (Magnolia grandiflora), occur in the vicinity of the golf course buildings. Landscape shrubs and trees are planted at the Recreational Facilities Area entrance as well as around the park buildings at the marina, ranger station, and golf course.

Where the mowed lawns, golf course fairways, and forests meet, the forest edge is characterized by a dense growth of shrubs and small trees. The species growing in these areas are generally similar to the species growing within the adjacent forests.

Blackberries and various herbaceous species, which grow better in open situations with high levels of sunlight, are more common along the forest edges than in the interiors of the forests.

3.3.2 Invasive Exotic Plant Species

An exotic species is defined as any species that is not native to a geographic area. A significant portion of the flora of Northern Virginia is exotic. Many exotic species were encountered during the Environmental Resources Inventory. Exotic species are present as naturalized species within the various plant communities or are planted as landscape trees and shrubs within the park. An invasive species is one that spreads rapidly and occurs in greater abundance than may be desirable. Thus, the determination that a species is invasive is less clear cut and more subjective, particularly without detailed ecological studies for a particular geographic region. Many different lists exist of invasive exotic species and there is not universal agreement among ecologists and botanists as to which exotic species should be considered to be invasive versus naturalized and common throughout this region.

Five exotic species found in Pohick Bay Regional Park were identified as potentially invasive after review of various invasive exotic species lists and based on NVRPA comments and extensive field observations by WSSI staff throughout Northern Virginia. This is not intended to be an exhaustive list of all species that are considered by any botanist or ecologist to be an invasive exotic species. A thorough discussion of the merits of these species and their possible control is beyond the scope of this study. However, their locations were noted and are depicted on the Vegetation and Wildlife Habitat Map so that their relative abundance can be monitored as part of future park management activities. If these species are not managed, they will, in all likelihood, increase in abundance and out-compete other plant species found in their vicinity.

Japanese Knotweed or Mexican Bamboo (*Polygonum cuspidatum*)

This large bushy plant, a native of Asia, grows 4 to 10 feet high with erect, glaucous stems and broad, sharp-pointed leaves. Flowers are greenish white in axillary panicles. This plant spreads by rhizomes and, unless controlled, produces a dense thicket of canes that can spread rapidly in a short period of time.

Small patches of Japanese knotweed were observed in the following locations, all of which are in the Golf Course area:

- On the western side of the fairway for Hole #10.
- Northeast of the green at Hole #18 and along the cart path from Hole #18 to the clubhouse.
- West of the clubhouse.
- On the eastern side of the fairway for Hole #1.

This species was observed only in areas of landscape plantings and, in all likelihood, will be controlled by regular mowing and pruning in connection with routine golf course maintenance.

Mile-a-minute Vine or Asiatic Tearthumb (*Polygonum perfoliatum*)

This vine can be identified by its triangular leaves, perfoliate ocreae and reclining stems with retrorse (i.e., backward curving) prickles. Fleshy blue berrylike fruits are present in the late summer and early fall. This species was introduced from Asia and is spreading in stream valleys throughout Fairfax County.

A small patch of mile-a-minute vine was observed in a small palustrine forested wetland along the powerline. It was more widespread in the palustrine forested and palustrine scrub-shrub wetlands on the northern portion of the site.

Kudzu Vine (*Pueraria thunbergiana*)

This vigorous, course, twining vine is a native of China and Japan. It was blooming with purple, pea-like, fragrant flowers, in clusters somewhat hidden by foliage at the time of WSSI's field observations.

This vine was observed in two locations:

- On the northern side of the fairway for Hole #9, upslope of Fern Valley.
- Along the hiking trail that parallels Pohick Creek to the east of "Gallop Hill" and west of the knoll where canoe trip lunches are held in the vicinity of brick ruins to a chimney or cookout area.

Nepal Microstegium or Stilt Grass (*Eulalia viminea*)

This annual grass, a native to the warm areas of Asia, has escaped from cultivation and become established in broad flat stream valleys throughout Fairfax County. It frequently forms a dense carpet and, in all likelihood, excludes other species of grasses and forbs.

The most extensive patches of this grass are present in the broad flat valleys of the major streams that flow into Pohick Creek. It was found growing on wetland floodplains as well as in low upland woods adjacent to these streams. Nepal microstegium is also present in smaller headwater basins such as in Fern Valley and on the western side of the road into Camp Wilson. Smaller amounts of this grass are present in many other locations throughout Pohick Bay Regional Park.

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Hydrilla (*Hydrilla verticillata*)

This submerged aquatic (SAV) plant, a native of Africa, forms dense beds in many locations in and adjacent to the tidal portions of the Potomac River. This perennial species grows from underground tubers and has simple toothed leaves arranged in whorls of three to ten. While hydrilla can be invasive, it also has potential benefits in terms of water quality and habitat for fish and waterfowl.

Extensive mats of hydrilla were observed in the shallow areas where Pohick Creek flows into Pohick Bay. The approximate limits of a very large mat are depicted on the Vegetation and Wildlife Habitat Map.

3.4 Wildlife

The various habitats provided by the diverse plant communities at Pohick Bay Regional Park provide habitat for a wide variety of wildlife species. Tables 3, 4, and 5 list the species of amphibians and reptiles, birds, and mammals, respectively, that WSSI staff observed during the field reconnaissance on September 7 through 10, 1999. Because field observations at the park were limited to a four-day period in only one season, it is highly unlikely that all species that use the park were recorded. Species that have been observed at other times by NVRPA staff are noted in these tables. The tables also include additional species that have not been observed, but are likely to occur at the park based on the habitats present in the park, the species' range and habitat preferences, and known species occurrences at nearby locations. The names and sequence of the birds in Table 4 follow the 7th Edition of the American Ornithologists Union Check-list for North American Birds (AOU, 1988). The AOU Check-list of North American Birds is the official source on the taxonomy of birds found in North and Middle America, including adjacent islands. Tables 3, 4 and 5 also list the habitat types in which each species is likely to occur. These habitat types correspond to the plant communities discussed in the vegetation and wetland sections of this report. Although much of the open water habitat within Pohick Bay and Gunston Cove is not within the park boundaries, birds and other wildlife species that use the open areas, or are likely to use them, are included within Tables 3, 4, and 5 since they are easily observed from the park. Table 6 provides a key to habitat usage abbreviations in Tables 3, 4, and 5.

3.5 Endangered and Threatened Species

According to the Virginia Department of Conservation and Recreation's Division of Natural Heritage, the vicinity of Pohick Bay Regional Park has a high probability of providing habitat for at least three threatened/endangered species: Bald Eagle, small whorled pogonia, and wood turtle. These species are described below. Field observations by WSSI staff during the Environmental Resources Inventory confirmed the presence of one of these species, the bald eagle (*Haliaeetus leucocephalus*). Due to the status of these species, the Department of Conservation and Recreation recommends coordination with the USFWS, the Virginia Department of Game and Inland Fisheries, and the Virginia Department of Agriculture and Consumer Services as appropriate should future land development be proposed.

In addition, the Department of Conservation and Recreation indicates that potential habitat may exist for several extremely rare (S1) species: water-plantain crowfoot (*Ranunculus ambigens*) (G4/S1/NF/NS), a vetchling (*Lathyrus palustris*) (G5/S1/NF/NS), and river bulrush (*Bolboschoenus fluviatilis*) (G5/S1/NF/NS). Another rare species of damselfly *Nehalennia gracilis* (G5/S2/NF/NS) may also be present. Note that none of these species are Federally or State listed as threatened or endangered.

Specific codes included next to each species' name in the preceding paragraph and in the subsequent discussions specific to the bald eagle, small whorled pogonia, and wood turtle describe the species' relative abundance and legal status. The first two alphanumeric codes by each species' name are the global and state ranking codes based on a system originally developed and instituted by The Nature Conservancy and now used by all state Natural Heritage Programs to assess the range-wide status of a species. For more

information of these codes, the Nature Conservancy's Operations Manual (1988) should be consulted. The third code is the Federal status as determined by the USFWS. The final code is the State status as determined by the Virginia Department of Conservation and Recreation.

G1 = Highly Globally Rare S1 = Highly State Rare

G2 = Globally Rare S2 = Very Rare

G3 = Very Rare of Local S3 = Rare to Uncommon

G4 = Apparently Globally Secure S4 = Common

G5 = Demonstrably Secure Globally S5 = Very Common

NF = not Federally listed as threatened or endangered

NS= not State listed as threatened or endangered

LT = listed as threatened

3.5.1 Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) (G4/S2S3/LT/LT) nests in several locations within 1 to 2 miles of the park. A significant roost site is located within nearby Mason Neck State Park. The USFWS has designated Pohick Bay and Gunston Cove as a bald eagle roosting/perching/shoreline use area. At least seven individuals (two adult and five immature birds) were observed soaring over the park and fishing in Pohick Bay and Gunston Cove during WSSI's field reconnaissance.

Please note that the bald eagle is currently classified as threatened by the USFWS as indicated by the status code in the preceding paragraph.

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3.5.2 Small Whorled Pogonia

The small whorled pogonia (*Isotria medeoloides*) (G2G3/S2/LT/LT) has been documented near Pohick Bay Regional Park and may be present within the park where suitable habitat is present. Small whorled pogonia inhabits mature third-growth upland forests on terrain that is almost level or gently to moderately sloping in northerly or easterly directions. Colonies also occur infrequently on steep slopes and slopes with a southerly exposure. The pogonia requires an open understory with flecks of sunlight. The canopy where pogonia occurs usually includes white oak, tulip poplar, hickory, American beech, black oak, scarlet oak, and northern red oak. Generally, chestnut oak is not an important part of the canopy. In WSSI's opinion, portions of the hardwood forest and mixed forest communities at Pohick Bay Regional Park possess the appropriate species in the canopy, with an open, sun-dappled understory, and the proper slope orientation to have a high likelihood for providing habitat for the small whorled pogonia.

Please note that the small whorled pogonia is currently classified as threatened by the USFWS as indicated by the status code in the preceding paragraph.

If future development plans are proposed in these areas, an inventory for the small whorled pogonia is strongly advised. Such inventories can only be performed during the spring when this ephemeral wildflower blooms. However, a more-detailed evaluation to locate potential pogonia habitat can be performed at any season.

3.5.3 Wood Turtle

The wood turtle (*Clemmys insculpta*) (G4/S2/NF/LT) inhabits forested floodplains and nearby fields, wet meadows and farmlands. This species overwinters in the bottom of creeks and small streams. Its primary habitat requirement is water.

Based on WSSI's site observations, potential habitat for the wood turtle is present. Further investigation is needed to determine whether or not a population of this turtle species is present within Pohick Bay Regional Park.

[Return to Index](#)

4.0 CULTURAL RESOURCES

ABSTRACT

The Cultural Resources Survey of Pohick Bay Regional Park in Fairfax County, Virginia, was conducted between September and December 1999, and revised in February 2000, by the architectural and historic preservation firm of E.H.T. Tracerics, Inc. The project consisted of the intensive and reconnaissance survey of twenty-one resources encompassed within the 1,002 acres of Pohick Bay Regional Park, which was acquired by the Northern Virginia Regional Park Authority (NVRPA) in a number of separate transactions between 1961 and 1974. Those selected resources included in the survey represent the areas and periods of significance of the property prior to and during its tenure as a regional park.

Pohick Bay Regional Park is located in southeastern Fairfax County on the boot-shaped peninsula of Mason Neck, which extends southeast into the Potomac River. The park is bordered to the north by Pohick Creek and Pohick Bay, Gunston Road (State Route 242) and private landholdings to the west and south, and Gunston Hall to the east. Mason Neck is significant for its wildlife, recreation, historic, and scenic values. Mason Neck State Park (1,804 acres) and the Mason Neck National Wildlife Refuge (2,275 acres) occupy the tip of Mason Neck, southeast of Pohick Bay Regional Park. Owned by the Commonwealth of Virginia, the adjacent Gunston Hall encompasses 556 acres surrounding the 1755-1760 home of George Mason.

Native Americans first populated Pohick Bay Regional Park and the Mason Neck peninsula, hunting and gathering in this region approximately 12,500-13,000 years before the exploration of America by the first adventurers from Western Europe. Near the end of this Paleoindian period, major climatic changes took

place as the Ice Age was ending and the great glacier began to melt and retreat north. The sea level rose, spreading water across the Coastal Plain of Virginia. This change created the Chesapeake Bay and covered or eroded most of the places where the early hunters and dispersed foragers lived. Many of the Paleoindian sites became submerged when the sea level rose and the coastline started to change. And, most likely, as the vegetation became profuse, the Native Americans gathered more plant foods, such as fruits and nuts. Open grassland gave way to woods of pine and oak. These natural changes had profound effects on the culture of the Indians in what is now Fairfax County.

In 1608, when English explorer Captain John Smith conducted a reconnaissance survey of the Potomac River shoreline in Fairfax County, he encountered an independent settlement of Native Americans who had adapted to the natural changes of the area. The local natives, known as the Doque or Doeg, were found as early as A.D. 1300 along both sides of the Potomac River from what is now Alexandria to Prince William County, and inland as far west as modern Centreville. The Doque were agricultural, as well as hunting and gathering people, who lived in villages, towns, and farms along the banks of the rivers. The chief or werowance village of the Doque Indians was the Tauxenent, located near the mouth of the Occoquan River. From this location, they continued the hunting and gathering traditions learned over thousands of years of living in North America's forests.

The Doque lent their name phonetically to the boot-shaped peninsula, Dogg's Island. One of the first grants in the region to become Fairfax County was patented in 1651 on the southeastern tip of Dogg's Island, which was re-named Mason Neck after its largest 18th century landholder (George Mason). The first patents along Mason Neck's Pohick Bay shoreline, destined to become Pohick Bay Regional Park, were granted to Nicholas Jernew on March 22, 1657, for 1,000 acres and John Gosnell on July 15, 1657, for 500 acres. Jernew's property was eventually subdivided into two 500-acre parcels owned separately in 1760 by Richard Lee and Catesby Cocke.

For more than 200 years, from the mid-18th century to the third quarter of the 20th century, these three tracts were independently owned, although each was similarly utilized in agricultural production. During the 18th and early 19th centuries, the land was used in tobacco cultivation. With the depletion of the soil by the second quarter of the 19th century, the property supported itself by yielding wheat, oats, and corn, and the raising of livestock. The circa 1837 single-family dwelling known as Lebanon and its contemporary barn are the only extant resources within the boundaries of Pohick Bay Regional Park that are representative of this rural and agricultural society.

The agrarian nature of the Pohick Bay Regional Park property continued into the 20th century, although agricultural production appears to have ceased by the 1930s. In 1942, Dr. Paul Bartsch and his wife, Dr. Elizabeth Parker, purchased 450-acres of Lebanon, the northernmost tract that was originally patented by Gosnell. Bartsch, an ornithologist at the Smithsonian Institute, rehabilitated the circa 1837 dwelling and landscaped the property with wildflower and fern gardens. Dr. Bartsch's efforts to create a wildlife preserve along Pohick Bay were furthered in 1948, when the National Capital Area Council of the Boy Scouts of America purchased the adjacent land to the south. This 173-acre tract consisted of a portion of the property originally patented by Jernew, and subsequently owned by Richard Lee in the mid-18th century. Improved by the construction of camping facilities, the Woodrow Wilson Scout Reservation at Pohick Bay was used primarily as a summer camp, providing activities such as overnight sleep outs, cooking, hiking, swimming, and programs built around merit badge work.

The Northern Virginia Regional Park Authority was one of the first groups to take positive action in the preservation of Mason Neck and Pohick Bay, visualizing the land as a riverfront park facility with significant wildlife, recreation, historic, and scenic values. Thus, the movement to establish a park, while preserving the rural nature of the area, began with the acquisition of 180 acres in September 1961. By 1967, the NVRPA owned the entire southernmost tract historically owned by Catesby Cocke, which had been further subdivided in the 20th century. Consisting of approximately 382 acres at the southeastern end of the property, this parcel is known today as Pohick Bay Regional Park, Recreational Facilities Area. The final acquisition of this tract coincided with the purchase of the Woodrow Wilson Scout Reservation, which had closed in 1967. Thus, portions of Nicholas Jernew's 1657 land grant were reunited under a single owner for the first time since the property had been subdivided and sold independently in the early 18th century to Lee and Cocke.

The Nature Conservancy, a private conservation organization, joined the preservation efforts by agreeing to purchase all 460 acres of the neighboring Lebanon property with the intention of holding the property until funding was made available for NVRPA to buy it. The first purchase was made in September 1970, with the last Lebanon tract acquired by NVRPA in November 1972. Meanwhile, Pohick Bay Regional Park, consisting of 704 acres, officially opened to the public on March 20, 1971. The final purchase, a 1.28-acre tract bought in 1974, completed the land acquisitions for the regional park. At last, the adjacent three tracts on the shore of Pohick Bay were united for the first time under a single owner. Today, the 1,002-acre park includes an 18-hole golf course, 150 campsites, a boat launch, bridle paths, hiking trails, swimming pool, picnic tables, and marina interspersed with a variety of wildlife habitats.

The Cultural Resources Survey resulted in the completion of Virginia Department of Historic Resources' reconnaissance survey forms for six properties encompassing fourteen resources. Each resource was architecturally defined, photographed with black-and-white film, color slides, and documented for its contribution to the context of Pohick Bay Regional Park. Intensive level documentation was conducted on one property, specifically the circa 1837 dwelling known as Lebanon and the adjacent site of the razed tenant house and Fern Valley. The documentation included interior and exterior documentation of the seven standing resources associated with this property, in addition to historical research. On-site documentation included architectural descriptions, photographs, slides, site plans and floor plans. Research was limited to secondary sources, although primary research was conducted at the discretion of the architectural historians in preparation of the historic overview.

The Heritage Resources Branch of the Office of Comprehensive Planning has conducted a significant number of archeological investigations within the boundaries of the Pohick Bay Regional Park in Fairfax County. Additionally, explorations have been conducted underwater and along the shores of Pohick Bay, Pohick Creek, Belmont Bay, Gunston Cove, Fort Belvoir, and the Occoquan and Potomac rivers. This work has resulted in the identification of possible Paleoindian sites, hunting camps of the Dogue, and possibly the identification of the Tauxenent on the Occoquan River, as well as frontier and colonial-era sites. The findings of all these investigations are believed to be relevant to the prehistory and history of the property now known as Pohick Bay Regional Park. Considered too sensitive for publication, the site locations, survey documentation, and written histories related to these archeological sites are archived at the Heritage Resources Branch of the Office of Comprehensive Planning (Fairfax County Archeological Department) and the Virginia Department of Historic Resources in Richmond. Thus, no sites relating to the Native Americans or any frontier or colonial-era properties have been recorded in this document. Phase I archeology was performed at Pohick Bay Regional Park without excavation at six sites that historically were improved by

standing structures and buildings.

Following the survey, recommendations for archival research and archeological investigations with excavation were made for the property surrounding Lebanon, Fern Valley, the Woodrow Wilson Scout Reservation, and the lands owned in the 18th century by Richard Lee and Catesby Cocke. It was further recommended that appropriate archeological investigations be conducted in areas threatened by erosion and prior to new construction by the Park. This archeological study and evaluation process applies to underwater sites and land, particularly along the shoreline. At this time, no recommendations for listing of any individual resources or group of properties to the Virginia Landmarks Register or the National Register of Historic Places were made.

To view Cultural Resources Inventory in its entirety, see [SUPPLEMENT - CULTURAL RESOURCES INVENTORY](#)

[Return to Top](#)

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5.0 CONSTRAINTS AND OPPORTUNITIES

The results of the Environmental Resources Inventory identified areas within the park where the condition of a certain resource or resources presents a constraint to future development. The environmental resources that were identified as constraints are:

- Wetlands
- The RPA
- 100-year floodplain
- Slopes greater than 15 percent
- Soils with one or more of the following characteristics:
 - Poor slope stability
 - Poor building location
 - High Erodibility
 - Hydric soils

Additional constraints are associated with existing site development and designated park uses. These constraints are identified on the Site Constraints and Opportunities Map. Constraints to site development that could not be mapped relate to the occurrences of threatened and endangered species and unidentified archaeological sites. Based on the results of the environmental and cultural resources inventories, the potential occurrences of threatened and endangered species and archaeological sites within the park property would require site specific investigations of proposed development sites during the planning process to ensure avoidance of, or minimization and mitigation of, any adverse impacts to these resources.

Poor soils, steep slopes, wetlands, the 100-year floodplain, and RPA limit the opportunities for development along drainageways and most of the parkland on the northern half of the site. Passive recreation, such as hiking, is well suited for these areas, as indicated by the several trails currently maintained by the park staff

that follow the waterfront and wind through Camp Wilson and the Recreational Facilities Area. The entire waterfront of the Pohick Bay Regional Park provides opportunities for vistas of Pohick Bay and the undeveloped waterfront of Fort Belvoir Military Reservation across the Bay.

The Golf Course and associated facilities, including the clubhouse, fairways, golf cart trails, driving range, and maintenance areas, limit the use of this area for other recreational opportunities.

Unless otherwise indicated by a detailed threatened and endangered species survey and an archaeological resources survey, developable areas that are unconstrained by environmental factors are located in the central portions of Camp Wilson and the Recreational Facilities Area, and along the park's southern/southwestern border. The area northwest of the Golf Course is similarly unconstrained. These areas could be used as building sites for new park structures or active recreation areas, such as ball fields and volleyball or tennis courts.

[Return to Index](#)

TABLES

TABLE 1		
STRUCTURES/CULTURAL RESOURCES AT POHICK BAY REGIONAL PARK		
No.	Structure	Description
1	Golf Course Club House (Lebanon, circa 1807-1827) Survey # 029-0128	Brick colonial, two-story with symmetrical single-story additions, portico entry
2	Golf Cart Garage (circa 1980)	Single-story aluminum structure, partially enclosed
3	Small Storage Shed (circa 1980-1990)	Small aluminum structure
4	Small Storage Shed (circa 1980-1990)	Small aluminum structure
5	Site of Tenant House/Fern Valley	No structure present
6	Gazebo (circa 1990)	Wood frame structure with conical roof clad in wood shingles
7	Barn (circa 1800) Survey # 029-5026	Tall, red, historic, wooden structure, double door entry

8	Maintenance/Storage Shed (circa 1970)	Aluminum structure, two doors, garage-style entry
9	Maintenance/Storage Shed (circa 1970)	Aluminum structure, two doors, garage-style entry
10	Small Storage Shed (circa 1970)	Small wooden structure
11	Cinderblock Shed (circa 1970)	Small structure of cinderblock construction
12	Camp Ranger Tucker's House (circa 1940) Survey # 029-5030	Peaked roof, single-story, vinyl siding, attached garage, modern construction
13	Site of Quarter Master Health Lodge and Trading Post	No structure present
14	Comfort Station (circa 1960)	Cinderblock structure with corrugated tin roof, modern construction and auxillary building
15	Pump House and Metal Storage Tank (circa 1930) Survey # 029-5029	Small wooden structure and metal storage tank on concrete piers located directly next to the pump house
16	Meyer Hall (circa 1940) Survey # 029-5027	Single-story wooden structure, peaked tin roof, historic construction
17	Privy (1954)	Small wooden structure with gable roof and poured concrete foundation
18	Gatehouse (circa 1980)	Small, hexagonal structure of wood construction with steep pitched, shingled roof, modern construction
To view Cultural Resources Inventory in its entirety, see SUPPLEMENT - CULTURAL RESOURCES INVENTORY		

[Return to Index](#)

TABLE 2					
SOIL					

CHARACTERISTICS AND GENERAL LAND USE POTENTIAL					
Soil No.	Soil Name	Slope Group	Slope Stability	Building Location	Road Construction
1A	Mixed Alluvial_Nonhydic	0-2	Good	Poor-B,W,F	Marginal-B,W,F
1HA	Mixed Alluvial_hydic	0-2	Good	Poor-B,W,F	Marginal-B,W,F
6	Hyattsville	0-7	Good	Marginal-B,W,F	Marginal-B,W,F
34B	Woodstown	2-7	Good	Marginal-F	Good
37B	Beltsville	2-7	Good	Good-W	Good
37C	Beltsville	7-14	Good	Good-W	Good
45B	Matapeake	2-7	Good	Good-W	Good
46B	Matapex	2-7	Good	Good-W	Good
49B	Lunt	2-7	Good	Marginal-C	Good
49C	Lunt	7-14	Marginal	Marginal-C	Good
54B	Sassafras	2-7	Good	Good	Good
54C	Sassafras	7-14	Good	Good	Good
64C	Silty, sandy, Clayey Sed.	7-14	Marginal	Marginal-C	Good
64D	Silty, sandy, Clayey Sed.	14-25	Marginal	Marginal-C,S	Marginal-C,S
64E	Silty, sandy, Clayey Sed.	25-50	Marginal	Poor-C,S	Poor-C,S
64F	Silty, sandy, Clayey Sed.	50-75	Marginal	Poor-C,S	Poor-C,S
87B	Wickham	2-7	Good	Marginal-F	Good
89A	Tidal Marsh	0-1	Good	Poor-B,W,F	Poor-B,W,F
118D	Clayey & Silty Sediments	14-25	Poor	Poor-C,S	Poor-C,S
Spot Samples					
H	Hydic Inclusion	0-2	Good	Poor	Poor
SL	Land Slippage Area	14-75	Poor	Poor	Poor

Key to Soil Characteristics					
B =	Low bearing values for foundation support				
C =	Clays with moderate to high shrink-swell potential often having slow to very slow permeability rates				
F =	Flooding hazard following storm events				
P =	Slow Permeability				
S =	Potentially unstable slopes from massive slope failure or slope creep				
W =	High seasonal groundwater tables in drainage ways or low areas				

[Return to Index](#)

TABLE 3			
AMPHIBIANS AND REPTILES OF POHICK BAY REGIONAL PARK			
Common Name	Scientific Name	Status	Habitats Used
Redback Salamander	<i>Plethodon cinereus</i>		HW, MW
Three-lined Salamander	<i>Eurycea longicauda</i>		PFO, HW
American Toad	<i>Bufo americanus</i>	a	HW, MW, PF, PFO, UF, ED
Fowler's Toad	<i>Bufo woodhousii fowleri</i>		HW, MW, PF, PFO, UF, ED
Northern Cricket Frog	<i>Acris crepitans</i>		HW, PFO, PSS

	<i>crepitans</i>		
Green Treefrog	<i>Hyla cinerea</i>	a	PFO, PSS, PEM
Gray Treefrog	<i>Hyla versicolor</i>	*,a	HW, MW,PFO,
Spring Peeper	<i>Pseudacris crucifer</i>	*,a	HW, MW, PFO
Upland Chorus Frog	<i>Pseudacris triseriata feriarum</i>		HW, MW, PFO, PSS, PEM
Bullfrog	<i>Rana catesbiana</i>	a	PFO, PSS, PEM, OW
Green Frog	<i>Rana clamitans melanota</i>	*,a	PFO, PSS, PEM
Southern Leopard Frog	<i>Rana utricularia</i>	a	HW, PFO, PSS, PEM
Pickrel Frog	<i>Rana palustris</i>	a	PFO, PSS. PEM
Snapping Turtle	<i>Chelydra serpentina</i>	a	PEM, OW
Common Musk Turtle	<i>Sternotherus odoratus</i>		PFO, PSS, PEM, OW
Eastern Mud Turtle	<i>Kinosternon subrubrum</i>	a	PSS, PEM, OW
Spotted Turtle	<i>Clemmys guttata</i>		PFO, PSS, PEM
Box Turtle	<i>Terrapene carolina carolina</i>	*,a	HW, MW, PF, UF, ED
Redbelly Turtle	<i>Pseudemys rubriventris</i>	*	PEM, OW
Painted Turtle	<i>Chrysemys picta</i>	*,a	PEM, OW
Eastern Five-lined Skink	<i>Eumeces fasciatus</i>	a	HW, MW, PFO, ED
Southeastern Five-lined Skink	<i>Eumeces inexpectata</i>	*	HW, MW, PF, PFO, ED
Broadhead Skink	<i>Eumeces laticeps</i>	a	HW, MW, PFO, ED
Brown Water Snake	<i>Nerodia taxispilota</i>	a	PFO
Northern Water Snake	<i>Nerodia sipedon</i>	a	PFO, PSS, PEM, OW
Northern Brown Snake	<i>Storeria dekayi</i>		HW, MW, PF, PFO, PSS, PEM, UF, ED
Red-bellied Snake	<i>Storeria occipitomaculata</i>		HW, MW, PF, PFO
Eastern Garter Snake	<i>Thamnophis sirtalis</i>	a	HW, MW, PF, PFO, PSS, PEM, UF, ED
Eastern Ribbon Snake	<i>Thamnophis sauritus</i>		PFO, PSS, PEM
Eastern Hognose Snake	<i>Heterodon platyrhinos</i>		HW, MW, PF
Northern Ringneck Snake	<i>Diadophis punctatus edwardsii</i>	a	HW, MW, PF
Black Racer	<i>Coluber constrictor</i>	*	HW, MW, PF, PFO, PSS, UF, ED

Rough Green Snake	<i>Opheodrys aestivus</i>	a	HW, MW, PFO, PSS
Corn Snake	<i>Elaphe guttata</i>		HW, MW, PF, UF
Black Rat Snake	<i>Elaphe obsoleta obsoleta</i>	a	HW, MW, PF, PFO, PSS, UF, ED
Eastern King Snake	<i>Lampropeltis getula getula</i>		HW, MW, PFO, PSS
Copperhead	<i>Agkistrodon contortrix</i>	a	HW, MW, PF
* Species observed during fieldwork at Pohick Bay Regional Park (Sept.7-10, 1999). Species included in the list, but not observed during field work at the park, are considered likely to occur in appropriate habitats within the park based on the species			
a Species observed by NVRPA staff at times outside of the Environmental Resources Inventory study period.			

TABLE 4			
BIRDS OF POHICK BAY REGIONAL PARK			
Common Name	Scientific Name	Status	Habitats Used
Common Loon	<i>Gavia immer</i>	a	OW
Pied-billed Grebe	<i>Podilymbus podiceps</i>	*,a	PEM, OW
Horned Grebe	<i>Podiceps auritus</i>		PEM, OW
Western Grebe	<i>Aechmophorus occidentalis</i>	a	OW
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	*,a	OW
American Bittern	<i>Botaurus lentiginosus</i>	a	PEM, PSS
Great Blue Heron	<i>Ardea herodias</i>	*,a	PFO, PSS, PEM, OW
Great Egret	<i>Ardea alba</i>	*,a	PEM, OW
Snowy Egret	<i>Egretta thula</i>	a	PEM, OW
Green Heron	<i>Butorides striatus</i>	*,a,b	PFO, PSS, PEM
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	a	PFO, PSS, PEM, OW
Black Vulture	<i>Coragyps atratus</i>	*,a	Throughout
Turkey Vulture	<i>Cathartes aura</i>	*,a	Throughout
Canada Goose	<i>Branta canadensis</i>	*,a,b	PEM, OW
Tundra Swan	<i>Cygnus columbianus</i>	a	PEM, OW
Wood Duck	<i>Aix sponsa</i>	*,a,b	PFO, PSS, PEM, OW
Gadwall	<i>Anas strepera</i>		PEM, OW

American Wigeon	<i>Anas americana</i>		PEM, OW
American Black Duck	<i>Anas rubripes</i>	a	PEM, OW
Mallard	<i>Anas platyrhynchos</i>	*,a,b	PEM, OW
Blue-winged Teal	<i>Anas discors</i>	a	PEM, OW
Northern Shoveler	<i>Anas clypeata</i>	a	PEM, OW
Northern Pintail	<i>Anas acuta</i>		PEM, OW
Green-winged Teal	<i>Anas crecca</i>	a	PEM, OW
Ring-necked Duck	<i>Aythya collaris</i>		PEM, OW
Lesser Scaup	<i>Aythya affinis</i>	a	OW
Common Goldeneye	<i>Bucephala clangula</i>	a	OW
Bufflehead	<i>Bucephala albeola</i>	a	OW
Hooded Merganser	<i>Lophodytes cucullatus</i>	a	PFO, PEM, OW
Red-breasted Merganser	<i>Mergus serrator</i>		OW
Common Merganser	<i>Mergus merganser</i>	a	OW
Ruddy Duck	<i>Oxyura jamaicensis</i>	a	OW
Osprey	<i>Pandion haliaetus</i>	*,a	PEM, OW
Bald Eagle	<i>Haliaeetus leucocephalus</i>	*,a	PEM, OW
Northern Harrier	<i>Circus cyaneus</i>	*,a	PSS, PEM
Sharp-shinned Hawk	<i>Accipiter striatus</i>	*,a	HW, MW, PF, PFO, PSS, UF, ED
Cooper's Hawk	<i>Accipiter cooperii</i>	a	HW, MW, PF, PFO, PSS, UF, ED
Red-shouldered Hawk	<i>Buteo lineatus</i>		HW, MW, PFO
Broad-winged Hawk	<i>Buteo platypterus</i>	a,b	HW, MW
Red-tailed Hawk	<i>Buteo jamaicensis</i>	*,a,b	HW, MW, PF, PFO, PSS, UF, ED
American Kestrel	<i>Falco sparverius</i>	a	PEM, UF, ED
Merlin	<i>Falco columbarius</i>	a	Throughout
Peregrine Falcon	<i>Falco peregrinus</i>	a	Throughout
Wild Turkey	<i>Meleagris gallopavo</i>	a,b	HW, MW, PW
Virginia Rail	<i>Rallus limicola</i>		PSS, PEM
Sora	<i>Porzana carolina</i>		PSS, PEM
American Coot	<i>Fulica americana</i>	a	PEM, OW
Killdeer	<i>Charadrius vociferus</i>	a	PEM
Greater Yellowlegs	<i>Tringa melanoleuca</i>	*,a	PEM
Lesser Yellowlegs	<i>Tringa flavipes</i>	a	PEM
Solitary Sandpiper	<i>Tringa solitaria</i>	a	PEM
Spotted Sandpiper	<i>Actitis macularia</i>	*,a	PEM
Least Sandpiper	<i>Calidris minutilla</i>		PEM
Common Snipe	<i>Gallinago gallinago</i>	a	PEM

American Woodcock	<i>Scolopax minor</i>	b	HW, PFO, PSS
Short-billed Dowitcher	<i>Limnodromus griseus</i>	a	PEM
Laughing Gull	<i>Larus atricilla</i>	*,a	OW
Bonaparte's Gull	<i>Larus philadelphia</i>		OW
Ring-billed Gull	<i>Larus delawarensis</i>	*,a	OW
Herring Gull	<i>Larus argentatus</i>	*,a	OW
Great Black-backed Gull	<i>Larus marinus</i>	a	OW
Caspian Tern	<i>Sterna caspia</i>	*,a	OW
Forster's Tern	<i>Sterna forsteri</i>	*,a	PEM, OW
Mourning Dove	<i>Zenaida macroura</i>	*,a,b	UF, ED
Yellow-billed Cuckoo	<i>Coccyzus americana</i>	*,a,b	HW, MW, PFO, ED
Eastern Screech-Owl	<i>Otus asio</i>	a,b	HW, MW, PFO
Great Horned Owl	<i>Bubo virginianus</i>	a,b	HW, MW, PF, ED
Barred Owl	<i>Strix varia</i>	a,b	HW, MW, PFO
Chimney Swift	<i>Chaetura pelagica</i>	*,a	Throughout
Ruby-throated Hummingbird	<i>Archilochis colubris</i>	*,a,b	HW, PFO, PSS, ED
Belted Kingfisher	<i>Ceryle alcyon</i>	*,a,b	OW
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	b	PFO
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	*,a,b	HW, MW, PFO, ED
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	a	HW, MW
Downy Woodpecker	<i>Picoides pubescens</i>	*,a,b	HW, MW, PF, PFO, PSS, ED
Hairy Woodpecker	<i>Picoides villosus</i>	*,a,b	HW, MW, PFO
Northern Flicker	<i>Colaptes auratus</i>	*,a,b	HW, MW, PFO, ED
Pileated Woodpecker	<i>Dryocopus pileatus</i>	*,a,b	HW, MW, PFO
Eastern Wood-Pewee	<i>Contopus virens</i>	*,a,b	HW, MW, PFO, ED
Acadian Flycatcher	<i>Empidonax virescens</i>	*,a,b	HW, MW, PFO
Willow Flycatcher	<i>Empidonax traillii</i>		PSS
Eastern Phoebe	<i>Sayornis phoebe</i>	*,a,b	HW, PFO, PSS, ED
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	*,a,b	HW, MW, PFO
Eastern Kingbird	<i>Tyrannus tyrannus</i>	a,b	PSS, UF, ED
White-eyed Vireo	<i>Vireo griseus</i>	a,b	PSS, ED
Yellow-throated Vireo	<i>Vireo flavifrons</i>	*,b	HW, MW, PFO
Red-eyed Vireo	<i>Vireo olivaceus</i>	*,a,b	HW, MW, PFO
Warbling Vireo	<i>Vireo gilvus</i>	a	HW
Blue Jay	<i>Cyanocitta cristata</i>	*,a,b	HW, MW, PF, PFO, ED
American Crow	<i>Corvus brachyrhynchos</i>	*,a,b	HW, MW, PF, PFO, PSS, PEM, UF, ED
Fish Crow	<i>Corvus ossifragus</i>	*,a,b	HW, MW, PF, PFO, PSS, PEM, UF, ED

Purple Martin	<i>Progne subis</i>	a	PEM, OW, ED
Tree Swallow	<i>Tachycineta bicolor</i>	*,a,b	PFO, PSS, PEM, OW, ED
N. Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	*,a,b	PFO, PSS, PEM, OW
Bank Swallow	<i>Riparia riparia</i>	*	OW
Barn Swallow	<i>Hirundo rustica</i>	*,a,b	PEM, OW, ED
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	a	PFO, PSS, PEM, OW, ED
Carolina Chickadee	<i>Poecile carolinensis</i>	*,a,b	HW, MW, PF, PFO, PSS, ED
Tufted Titmouse	<i>Baeolophus bicolor</i>	*,a,b	HW, MW, PF, PFO, PSS, ED
Red-breasted Nuthatch	<i>Sitta canadensis</i>	*,a	MW, PF
White-breasted Nuthatch	<i>Sitta carolinensis</i>	*,a,b	HW, MW, PF, PFO, ED
Brown Creeper	<i>Certhia americana</i>	a	HW, MW, PF, PFO
Carolina Wren	<i>Thryothorus ludovicianus</i>	*,a,b	HW, MW, PF, PFO, PSS, ED
House Wren	<i>Troglodytes aedon</i>	a,b	PSS, ED
Winter Wren	<i>Troglodytes troglodytes</i>	a	HW, MW, PFO
Marsh Wren	<i>Cistothorus palustris</i>		PSS, PEM
Golden-crowned Kinglet	<i>Regulus satrapa</i>	a	HW, MW, PF, PFO
Ruby-crowned Kinglet	<i>Regulus calendula</i>	a	HW, MW, PF, PFO, PSS
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	*,a,b	HW, MW, PF, PFO, PSS
Eastern Bluebird	<i>Sialia sialis</i>	*,a,b	PFO, PSS, UF, ED
Veery	<i>Catharus fuscescens</i>		HW, MW, PFO
Gray-cheeked Thrush	<i>Catharus minimus</i>		HW, MW, PF, PFO
Swainson's Thrush	<i>Catharus ustulatus</i>		HW, MW, PF, PFO
Hermit Thrush	<i>Catharus guttatus</i>	a	HW, MW, PF, PFO
Wood Thrush	<i>Hylocichla mustelina</i>	a,b	HW, MW, PFO
American Robin	<i>Turdus migratorius</i>	a,b	HW, MW, PF, PFO, UF, ED
European Starling	<i>Sturnus vulgaris</i>	*,a,b	UF, ED
Gray Catbird	<i>Dumetella carolinensis</i>	a,b	PSS, ED
Northern Mockingbird	<i>Mimus polyglottus</i>	*,a,b	ED
Brown Thrasher	<i>Toxostoma rufum</i>	a,b	ED
Cedar Waxwing	<i>Bombycilla cedrorum</i>	a	PFO, PSS, ED
Blue-winged Warbler	<i>Vermivora pinus</i>	*	HW, MW, PF, PFO
Tennessee Warbler	<i>Vermivora peregrina</i>		HW, MW, PF, PFO
Northern Parula	<i>Parula americana</i>	*,a,b	HW, MW, PF, PFO
Yellow Warbler	<i>Dendroica petechia</i>	a,b	HW, MW, PFO, PSS
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	*	HW, MW, PF, PFO

Magnolia Warbler	<i>Dendroica magnolia</i>	*,a	HW, MW, PF, PFO
Cape May Warbler	<i>Dendroica tigrina</i>		HW, MW, PF, PFO
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	a	HW, MW, PF, PFO
Yellow-rumped Warbler	<i>Dendroica coronata</i>	*,a	HW, MW, PF, PFO, PSS, ED
Black-throated Green Warbler	<i>Dendroica virens</i>		HW, MW, PF, PFO
Blackburnian Warbler	<i>Dendroica fusca</i>		HW, MW, PF, PFO
Yellow-throated Warbler	<i>Dendroica dominica</i>	b	HW, MW, PF, PFO
Pine Warbler	<i>Dendroica pinus</i>	*,a,b	MW, PF
Prairie Warbler	<i>Dendroica discolor</i>	b	PSS, UF, ED
Palm Warbler	<i>Dendroica palmarum</i>	a	HW, MW, PF, PFO, PSS, PEM, UF, ED
Bay-breasted Warbler	<i>Dendroica castanea</i>	*	HW, MW, PF, PFO
Blackpoll Warbler	<i>Dendroica striata</i>	*	HW, MW, PF, PFO
Black-and-white Warbler	<i>Mniotilta varia</i>	*,a,b	HW, MW, PF, PFO
American Redstart	<i>Setophaga ruticilla</i>	*,b	HW, MW, PF, PFO
Prothonotary Warbler	<i>Protonotaria citrea</i>	a,b	PFO
Worm-eating Warbler	<i>Helmitheros vermivorus</i>	b	HW, MW
Ovenbird	<i>Seiurus aurocapillus</i>	a,b	HW, MW, PF
Northern Waterthrush	<i>Seiurus noveboracensis</i>	*	PFO, PSS
Louisiana Waterthrush	<i>Seiurus motacilla</i>	b	PFO
Kentucky Warbler	<i>Oporornis formosus</i>	b	HW, MW, PFO
Common Yellowthroat	<i>Geothlypis trichas</i>	*,a,b	PFO, PSS, PEM, UF, ED
Hooded Warbler	<i>Wilsonia pusilla</i>	a,b	HW, MW, PFO
Canada Warbler	<i>Wilsonia canadensis</i>	a	HW, MW, PF, PFO
Yellow-breasted Chat	<i>Icteria virens</i>	a,b	PSS, UF, ED
Scarlet Tanager	<i>Piranga olivacea</i>	*,a,b	HW, MW, PFO
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	a,b	HW, MW, PF, PFO, PSS, UF, ED
American Tree Sparrow	<i>Spizella arborea</i>		PSS, PEM, UF
Chipping Sparrow	<i>Spizella passerina</i>	*b	UF, ED
Field Sparrow	<i>Spizella pusilla</i>	a	PSS, UF, ED
Savannah Sparrow	<i>Passerculus sandwichensis</i>		PEM, UF
Fox Sparrow	<i>Passerella iliaca</i>		MW, PF, PFO, PSS, ED
Song Sparrow	<i>Melospiza melodia</i>	a,b	PSS, PEM, UF, ED
Swamp Sparrow	<i>Melospiza georgiana</i>	a	PFO, PSS, PEM
White-throated Sparrow	<i>Zonotrichia albicollis</i>	a	HW, MW, PF, PFO, PSS, UF, ED
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>		PSS, PEM, UF, ED
Dark-eyed Junco	<i>Junco hyemalis</i>	a	HW, MW, PF, PFO,

			PSS, UF, ED
Northern Cardinal	<i>Cardinalis cardinalis</i>	*,a,b	HW, MW, PF, PFO, PSS, UF, ED
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>		HW, MW, PF, PFO
Indigo Bunting	<i>Passerina cyanea</i>	*,a,b	PFO, PSS, UF, ED
Bobolink	<i>Dolichonyx oryzivorus</i>		PEM
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	*,a,b	PFO, PSS, PEM
Rusty Blackbird	<i>Euphagus carolinus</i>		PFO, PSS
Common Grackle	<i>Quiscalus quiscula</i>	*,a,b	HW, MW, PF, PFO, PSS, UF, ED
Brown-headed Cowbird	<i>Molothrus ater</i>	*,a,b	HW, MW, PF, PFO, PSS, UF, ED
Orchard Oriole	<i>Icterus spurius</i>	a,b	PSS, ED
Baltimore Oriole	<i>Icterus galbula</i>	a,b	ED
Purple Finch	<i>Carpodacus purpureus</i>	a	HW, MW, PF, PFO
House Finch	<i>Carpodacus mexicanus</i>	*,a,b	PSS, UF, ED
American Goldfinch	<i>Carduelis tristis</i>	*,a,b	PSS, PEM, UF, ED
Pine Siskin	<i>Carduelis pinus</i>	a	PF
House Sparrow	<i>Passer domesticus</i>	*,a,b	ED
* Species observed during fieldwork at Pohick Bay Regional Park (Sept.7-10, 1999). Species included in the list, but not observed during field work at the park, are considered likely to occur in appropriate habitats within the park based on the species			
a Species observed by NVRPA staff at times outside of the Environmental Resources Inventory study period.			
b Species likely to nest within appropriate habitats at the park based on the species' breeding range within Virginia and known nesting occurrences at nearby locations.			

TABLE 5			
MAMMALS OF POHICK BAY REGIONAL PARK			
Common Name	Scientific Name	Status	Habitats Used
Opossum	<i>Didelphis marsupialis</i>	a	HW, MW, PF, PFO, UF, ED
Shorttail Shrew	<i>Blarina brevicauda</i>	a	HW, MW, PF, PFO, PSS, PEM, UF, ED

Eastern Mole	<i>Scalopus aquaticus</i>	a	UF, ED
Little Brown Bat	<i>Myotis lucifugus</i>	a	HW, MW, PFO, ED
Keen's Bat	<i>Myotis keenii</i>		HW, MW, PFO, ED
Eastern Pipistrel	<i>Pipistrellus subflavus</i>		HW, MW, PFO, ED
Big Brown Bat	<i>Eptesicus fuscus</i>	a	HW, MW, PFO, ED
Red Bat	<i>Lasiurus borealis</i>		HW, MW, PF, PFO
Raccoon	<i>Procyon lotor</i>	*,a	HW, MW, PFO, PSS, PEM, ED
Longtail Weasel	<i>Mustela frenata</i>		HW, MW, PF, PFO, PSS, PEM, UF, ED
Mink	<i>Mustela vison</i>		PFO, PSS, PEM
River Otter	<i>Lutra canadensis</i>		PEM, OW
Striped Skunk	<i>Mephitis mephitis</i>	a	UF, ED
Coyote	<i>Canis latrans</i>		HW, MW, ED
Red Fox	<i>Vulpes fulva</i>	a	HW, MW, PF, UF, ED
Gray Fox	<i>Urocyon cinereoargenteus</i>	a	HW, MW, PF
Bobcat	<i>Lynx rufus</i>		HW, MW, PF, PFO
Woodchuck	<i>Marmota monax</i>	*,a	UF, ED
Eastern Chipmunk	<i>Tamias striatus</i>	a	HW, MW, PF, ED
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	*,a	HW, MW, ED
Southern Flying Squirrel	<i>Glaucomys volans</i>	a	HW, MW, PFO
Beaver	<i>Castor canadensis</i>	*,a	PSS, PEM, OW
White-footed Mouse	<i>Peromyscus leucopus</i>	a	HW, MW, PF, PFO, PSS, ED
Rice Rat	<i>Oryzomys palustris</i>		PEM
Meadow Vole	<i>Microtus pennsylvanicus</i>		PSS, PEM, UF, ED
Pine Vole	<i>Microtus pinetorum</i>		HW, MW, PF
Muskrat	<i>Ondatra zibethica</i>	a	PEM, OW
House Mouse	<i>Mus musculus</i>	a	ED
Eastern Cottontail	<i>Sylvilagus floridanus</i>	a	UF, ED
White-tailed Deer	<i>Odocoileus virginianus</i>	*,a	HW, MW, PF, PFO, PSS, UF, ED

* Species observed during fieldwork at Pohick Bay Regional Park (Sept.7-10, 1999).
Species included in the list, but not observed during field work at the park, are considered likely to occur in appropriate habitats within the park based on the species

a Species observed by NVRPA staff at times outside of the Environmental Resources Inventory study period.

[Return to Index](#)

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