POHICK CREEK
DRAFT
Watershed Workbook
September 2008

Fairfax County
Watershed Planning & Assessment Branch
Stormwater Planning Division
Department of Public Works & Environmental Services

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1.0COMPILATION OF OVERALL WATERSHED CONDITION DATA

1.1 General Watershed Characteristics

The Pohick Creek watershed comprises more than 9% of Fairfax County covering more than 36 square miles (23,248 acres**)** making it one of Fairfax County's largest watersheds. Pohick Creek watershed is situated in the center of the County and includes 3.2 square miles of land outside its jurisdiction, either in the City of Fairfax or Fort Belvoir. See **Map 1.1** and **Map 1.2** for Fairfax County, and Pohick Creek watershed respectively.

Pohick Creek is oriented northwest to southeast and drains southeast into Pohick Bay, then into Gunston Cove, ultimately discharging into the Potomac River. Pohick Creek watershed is bound by Accotink Creek watershed to the north and east, Popes Head Creek to the northwest, and Sandy Run, Mill Branch, and Kane Creek watersheds to the southwest. Pohick Creek watershed is a long and fairly narrow watershed. The watershed falls 460 feet in elevation from the highest point near the City of Fairfax in the northeast section to sea level at the southeast point (Flood Plain report, 1977).

Pohick Creek lies within two main physiographic provinces, or distinct geologic regions. Interstate-95 generally follows the fall line, which is the divide between the Coastal Plain and the Piedmont Provinces. The soft, flat Mesozoic and Tertiary sedimentary rocks indicative of the Coastal Plain lie to the east of the fall line while the hard, Paleozoic metamorphic rocks of the Piedmont lie to the west. Both provinces have characteristic gently sloping landscapes; however, the streams of the Coastal Plain are dominated by low-velocity pool-and-glide habitats while the streams of the Piedmont have higher-velocity riffle-run habitats. According to the Virginia Department of Quality (VDEQ), the "Coastal Plain region is the only one in Virginia that is composed mostly of unconsolidated deposits, primarily alternating layers of sand, gravel, shell rock, silt, and clay and more ground water is stored in these very permeable materials than in any other province in the state(VDEQ, Physiographic Provinces of Virginia)".

1.2 Population Growth and Watershed History

Fairfax County's original boundary lines were drawn in 1741, yet over the next 50 years, portions of the County would become areas of the District of Columbia and Loudoun County. From 1750 to 1930, Fairfax County was largely considered agricultural, with a large population of tobacco and dairy. Over the next 20 years the population would grow from 25,000 in 1930 to almost 100,000 by 1950. The availability of the automobile and the expansion of the federal government were key factors for the County's population boom to 450,000 by the 1970's. Over the next 20 years, as even more job opportunities became available, the population nearly doubled to 800,000, and by 2005, Fairfax County had exceed 1 million residents.

In September 1969, the Board of Supervisors adopted the final Report, a *Restudy of the Pohick Creek* Watershed. The report planned the population growth through the year 2000. According to the report, the Pohick Creek watershed was designed to accommodate a population of 161,000 by 2000. Since the U.S. Census Bureau does not capture population data by watersheds, current population information for Pohick Creek watershed has not been identified to verify the 1969 assumptions.

Fairfax County as a whole is expected to experience more than a 37% population increase over the next 20 years. See Table 1 below for County growth trends

Table 1: Growth Trends in Fairfax County 1990-2025

Year	Population (thousands)	Households (thousands)	Employment (thousands)
1990	818.6	292.3	403.7
2000	968.2	353.4	526.4
2010	1,112.9	412.5	644.4
2020	1,184.1	438.1	701.3
2025	1,203.7	445.0	727.8

(Source: Metropolitan Washington Council of Governments 2006)

1.3 Existing & Future Land Use

According to the Fairfax County Stream Protection Baseline Study (SPS), in 2001, more than half of Pohick Creek was forested, with nearly 30% of the watershed serving low-density residential uses; see Table 2 below for Pohick Creek land usage. Refer to **Map 1.3** for existing and future land use.

Table 2: Existing Land Use (2001 SPS)

Land Uses in the Pohick Creek Watershed	Existing Conditions	
	Acres	Percent
Forested	11,139.68	50.5%
Field/Pasture	1,658.49	7.5%
Low Intensity Residential	6,336.23	28.7%
High Intensity Residential	13.23	0.1%
Commercial/ Industrial	1,601.15	7.3%
Exposed Land	460.94	2.1%
Wetlands	436.68	2.0%
Open Water	408.01	1.9%

Pohick Creek is also home to two distinct land areas, Fort Belvoir and Laurel Hill (formerly District of Columbia Department of Corrections Facility, located in Lorton). While Fort Belvoir is considered federal property, portions of the facility lie in the Pohick Creek watershed and with the implementation of the 2005 Base Realignment and Closure (BRAC), the ramifications could potentially impact the watershed.

1.3.1 Fort Belvoir Area

Located on a peninsula in southeastern Fairfax County along the Potomac River, Fort Belvoir military base covers approximately 13.5 square miles (8,656 acres). Established in 1935 as a military training facility, Fort Belvoir has expanded and transitioned into a military command post, housing over 7,000 people with more than 2,000 housing units. In the fall 2005 the Defense Base Closure and Realignment Commission (BRAC Commission) made numerous recommendations for realignment and closures for military installations located in the United

States. If fully implemented, Fort Belvoir could see an increase of 22,000 people working on base in the near future (Draft EIS, 2007).

1.3.2 Laurel Hill Area

The Laurel Hill Area comprises 3,211 acres and is located in the south eastern part of Fairfax County. The area is bounded by West Ox Road and Hooes Road to the west, the Occoquan River to the south, I-95 on the east, the South Run Stream Valley Park to the north. A small portion of the Laurel Hill Area extends into southern Pohick Creek, with the remaining area falling within the Lower Occoquan watersheds to the south. In July 2002 Fairfax County assumed ownership of the Laurel Hill area (EDAW, 2004). The County is currently engaged with the redevelopment of this area and is in the process of identifying multiple stormwater management strategies to enhance the land use and improve overall stream water quality. The Fairfax County Park Authority is managing the majority of the area, while about 10% was developed for residential uses. The County had worked with consultants to perform upland reconnaissance, Neighborhood Source Assessments (NSA), and Hot Spot Investigations (HIS) all of which provides the County with data to develop a plan of action for redevelopment of the Laura Hill area (KCI study, 2007). The focus of the study was to identify areas where innovative stormwater management techniques can be employed.

1.4 Impervious Areas

Impervious areas can be described as hard surfaces that stormwater (rain water) can not penetrate and consequently runs off into a collection system. Increased impervious surfaces can result in channel erosion and downstream degradation caused by the increased volume and velocity of new stormwater runoff reaching receiving waters. It has been shown that levels of 10-20% impervious surface significantly reduce stream health (Annual Report, 2005). Over the decades, Pohick Creek has experience population growth and consequently an increase in impervious surface due to new development and supporting infrastructure development.

Figure 1: Pohick Creek Impervious Areas

Currently, Pohick Creek is considered built out and future large scale new development is not planned outside of the Laurel Hill redevelopment. However, Pohick Creek watershed has been experiencing pockets of redevelopment. Generally these areas are already considered developed

and therefore do not typically create large tracks of new impervious areas, consequently the overall future impervious surface area is only predicted to increase by less than 150 acres. As permitted redevelopment construction occurs updates to the County's electronic Geographical Information Systems (GIS) land use layers will be populated and impervious areas may reflect an increase. Table 3 below identifies the historic and future planned imperviousness conditions throughout the Pohick Creek watershed.

Table 3: Pohick Creek Impervious Area

Year	Area (sq. miles)	Area (%)
1980	2.8	7.6
1990	3.3	9.1
Current	8.36	22.9
Future	8.63	23.6

1.5 Existing Stormwater Controls

In the 1970s, a series of six impoundments began construction in the Pohick Creek watershed as part of a federally assisted pilot program Public Law 566 (PL-566) to attempt to control flooding and sedimentation ahead of anticipated development. Approved in 1967, the Pohick Watershed Project resulted in Woodglen, Royal, Braddock, Barton, Huntsman, and Mercer lakes being built. In 1967 the County adopted the Erosion and Sediment Control Ordinance which became the model for the State Erosion and Sediment Control Law. In addition to the PL-566 impoundments, the western portion of the watershed contains Burke Lake Park, an 888 acre park built around a 218 acre recreational lake, Burke Lake. The Burke Lake Park is operated by the Fairfax County Park Authority and the lake itself is co-managed by the Authority and the Virginia Department of Game and Inland Fisheries. Below provides further detail of the dams in the Pohick Creek watershed.

1.5.1 PL-566 Dams

The Federal Watershed Protection and Flood Prevention Act of 1953 (Public Law 83-566) funded the construction of six large dams within the Pohick Creek watershed. These dams, more commonly referred to as PL-566 dams, were built decades ago and were designed as structural measures to reduce flood damage within Pohick Creek. In addition to flood control, the dams are also used as sediment control measures.

The Virginia Department of Conservation and Recreation Division of Dam Safety and Floodplain Management administers the Virginia Dam Safety Act which regulates all dams that meet one of the following two requirements: (1) 25 feet or greater in height and create an impoundment capacity of 15 acre-feet or greater and/or (2) all dams that are six feet or greater in height and create an impoundment capacity of 50 acre-feet or greater. Each of the six PL-566 dams within Pohick Creek meets one of the two requirements. The Fairfax County Department of Public Works and Environmental Services (DPWES) Dam Safety Program, under the authority of the Fairfax County Public Facilities Manual (PFM), is responsible for maintaining these dams.

1.5.2 Current Stormwater Controls

In addition to the flood control capacity of these lakes, the watershed also contains a wide variety of additional stormwater infrastructure and best management practices which track with the watershed's development history. For example, in areas that developed earlier, stormwater management facilities, where present, consist primarily of dry detention basins designed to curb peak storm flows (quantity management). For areas that developed more recently, stormwater management facilities are more likely to include a water quality component, and the variety of facility types increases. Facilities found in these areas include wet detention facilities, underground chambers, infiltration devices, and wetlands.

In 2005, the County released the Stream Physical Assessment (SPA) report which documented the instream conditions of more than 800 stream miles. Both habitat assessment and some infrastructure assessment (if found instream) were captured. The infrastructure assessment was included to determine the impacts on streams from specific infrastructure and problem areas. For each watershed, a visual evaluation of infrastructure such as road culverts and stormwater outfalls was performed; any potential impacts to the stream were documented with an impact score. The impact scores ranged from zero to ten (10) or greater, with zero indicating no impact and ten indicating extreme conditions. An extreme condition would include such things as impervious encroachment near the stream severe erosional areas and large obstructions in the channel. See photo below for an example of stream bank erosion located along the South Run stream in Pohick Creek.

Figure 2: Pohick Creek Bank Erosion

In Pohick Creek a total of 871 inventory points were visually assessed. The most significant problems were related to four head cuts, two exposed utility lines and one pipe, which were each given an impact score of 10, with the two highest impacts both being deficient buffers, each scoring a five. Table 4 below identifies the full scoring for the Pohick Creek watershed.

Table 4: Pohick Creek Inventory Points (SPA, 2005)

Inventory Type	Impact Score												
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**>10**	**Total**
Deficient Buffers	0	0	18	26	64	48	14	9	4	0	0	N/A	183
Crossings	136	66	50	21	10	10	2	1	1	0	0	N/A	297
Ditches and Pipes	162	17	12	10	20	24	6	4	1	3	1	N/A	260
Erosion	0	0	0	0	2	7	15	13	8	2	0	N/A	47
Head Cut	0	0	1	0	4	4	2	0	0	1	4	N/A	16

Inventory Type	Impact Score												
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**>10**	**Total**
Obstruction	8	7	5	12	12	5	0	0	0	1	0	N/A	50
Utility	0	0	0	1	4	4	5	1	1	0	2	0	18
Total	**306**	**90**	**86**	**70**	**116**	**102**	**44**	**28**	**15**	**7**	**7**	**0**	**871**

1.6 Stream Habitat

In 2001, the County released the Stream Protection Strategy Baseline (SPS) Study. This study documented the current stream conditions throughout the County using physical, chemical and biological evaluations. The County collected biological and habitat data from 114 stream sites and developed a ranking of overall quality for each of site. The rankings were based on the following four components of stream/watershed condition:

- Index of Biotic Integrity (IBI) incorporating 10 separate measures of benthic macroinvertebrate (insect) community integrity,
- General evaluation of the site's habitat features (including vegetation and instream features) as well as a more specific evaluation of 10 parameters,
- Fish taxa richness (number of distinct species present), and
- Overall percent impervious cover within a contributing drainage area

While numeric scores were given to each of the above individual components, a composite value was determined and a qualitative category of: Excellent, Good, Fair, Poor and Very Poor; was assigned to each of the sites.

The streams within Pohick Creek watershed represented some of the poorest and best quality watersheds in all of Fairfax County. The fish community rating and biological integrity rated as generally moderate and fair, respectively. The results for Pohick Creek watershed are summarized in the Table 5 below.

Table 5: Pohick Creek Biological Integrity Rating (2001 SPS)

Stream Name & Site Code	Environmental Variables			Composite
	Index of Biotic Integrity	**Habitat**	**Fish Taxa**	**Site Condition Rating**
Rabbit Branch 1 (PCRA01)	Fair	Fair	Low	Fair
Rabbit Branch 2 (PCRA02)	Fair	Poor	High	Fair
Sideburn Branch (PCSI01)	Very Poor	Poor	High	Very Poor
Pohick Creek 1 (PCPC01)	Fair	Fair	High	Fair
Pohick Creek 2 (PCPC02)	Poor	Fair	Low	Poor
South Run 1 (PCSR01)	Fair	Good	Low	Good
South Run 2 (PCSR02)	Poor	Poor	Moderate	Fair
Middle Run (PCMI01)	Fair	Fair	Moderate	Good
Pohick Creek 3 (PCPC03)	Poor	Poor	Moderate	Poor
South Run 3 (PCSR03)	Fair	Fair	Moderate	Excellent
Pohick Creek 4 (PCPC04)	Poor	Poor	High	Good

Following up from the 2001 SPS, the County released the SPA study which, in addition to identifying stormwater structural inventory documented the visual habitat assessments of the stream conditions throughout the County. Using information based on habitat conditions, impacts on streams, general stream characteristics and geomorphic classification, a length-weighted total habitat score was calculated for each watershed and categorized into one of five habitat assessment rating categories:

- Excellent (142-168): Minimally impaired habitat with a relatively high potential for supporting a diverse biological community
- Good (114-141): Slightly degraded habitat with a moderate potential for supporting a diverse biological community
- Fair (87-113): Moderately degraded habitat with a fair potential for supporting a diverse biological community
- Poor (59-86): Significantly degraded habitat with a low potential for supporting a diverse biological community
- Very poor (32-58): Severely degraded habitat with little potential for supporting a diverse biological community

Overall the County stream habitats were rated as 'fair' with scores ranging from 32 to 168 out of a possible 200 with an average length-weight total habitat score of 104. Pohick Creek watershed had an average length-weight total habitat score of 95 slighly below the County average. Approximately two miles of stream were categorized as having "very poor" habitat conditions, 20 miles as "poor", 37 miles as "fair", and ten miles as "good". Table 6 below shows Pohick Creek stream conditions.

Table 6: Habitat Assessment Summary (2005 SPA)

Stream Habitat Condition	Linear Feet	Percent of Stream
Excellent	0	00.00%
Good	53,618	14.63%
Fair	197,539	53.88%
Poor	102,945	28.08%
Very Poor	12,514	03.41%
Total	**366,615**	**100%**

1.7 Stream Water Quality

In addition to collecting and analyzing biological data, the 2001 SPS classified each subwatershed into management categories which outline key strategies and goals for future stream restoration and protection. Three management categories were established based on overall stream rankings and projected development within the watersheds. These categories were developed as management planning tools. Table 7 below identifies the management categories and the associated goals.

Table 7: Management Category (SPS, 2001)

Management Category	Goal
Watershed Protection Areas	Preserve the quality rating of the streams
Watershed Restoration Level I (WRL I)	Take measures to re-establish a healthy biological community
Watershed Restoration Level II (WRL II)	Maintain areas to prevent further degradation, improve water quality to comply with Chesapeake Bay initiatives & TMDL regulations

Since Pohick Creek watershed contains the range of biological and habitat conditions from high to low, areas of Pohick range from Watershed Protection Areas to Watershed Restoration Level II (WRL II). The majority of Middle Run and Lower South Run watershed management areas fall under WMA and are considered the lowest levels of degradation in the watershed. Excluding a small portion of Upper South Run and Middle South Run watershed management areas, the remainder of the watershed is classified as WRL II.

1.7.1 Resource Protection Areas

As one of many measures used to protect stream water quality, the County adopted the Chesapeake Bay Preservation Ordinance, which imposes restrictions on development for any land that lies within a Resource Protection Area (RPA). Resource protection areas are buffers which protect sensitive areas adjacent to or near the shorelines of streams, rivers and other waterways from the excessive influx of pollutants. The sensitive areas include tidal and nontidal wetlands, tidal shorelines, floodplains and perennial streams (waters flowing year round). As **Map 1.4** indicates a majority, or more than 75% (134 of the 180 miles) of the streams within the Pohick Creek watershed lie within a RPA. (County GIS, 2008)

1.7.2 Impaired Waters

In 1972, the Clean Water Act was established to provide a regulatory framework to protect the waters of the U.S. Under the Clean Water Act, water quality standards were developed to protect the public health and enhance the quality of surface waters. To meet these standards, *designated uses* have been developed to define the water quality needed to support each usage. In Virginia, "all State waters, including wetlands, are designated for the following uses: recreational uses, e.g., swimming and boating; the propagation and growth of a balanced, indigenous population of aquatic life, including game fish, which might reasonably be expected to inhabit them; wildlife; and the production of edible and marketable natural resources, e.g., fish and shellfish" (2007, 9 VAC 25-260 Virginia Water Quality Standards).

To meet these standards, the county and the VDEQ regularly monitor water quality at various locations in the watershed. These sampling data reflect that Pohick Creek watershed has some of the best and worst water quality in the County; this is due in part to the multiple large impoundments located throughout the watershed. While many streams in the Pohick Creek watershed are considered "fair", areas further downstream of the impoundments experience high levels of E coli. See **Map 1.5** and Table 8 below for complete impairments.

Table 8: Pohick Creek Impaired Waters

	Aquatic Life	Fish Consumption		Recreation		
	Submerged Aquatic Plants	Benzo[k] fluor-anthene	PCB in Fish Tissue	E. coli	Fecal Coliform	Total
Pohick Bay Estuarine	0.6		0.6		0.6	0.6 mi^2
Pohick Bay Estuarine	0.3		0.3		0.3	0.3 mi^2
Pohick Creek Riverine		3.2	3.2	3.2		3.2 mi
Pohick Creek Riverine				1.5		1.5 mi

(Annual Report, 2006)

Stream conditions are assessed through bacteria, physical, chemical and biological sampling at multiple monitoring stations through the County's stream monitoring program. These monitoring stations are randomly selected each year throughout the county to capture water quality and biological health data for various drainage areas and stream sizes. In 2006, the County had four monitoring stations located within the Pohick Creek watershed. See Table 9 below for monitoring results. While the majority of upper Pohick Creek is considered fair, portions of lower Pohick Creek was impaired for aquatic plants, PBC in fish, and E. coli (Annual Report, 2006).

Table 9: Pohick Creek Monitoring Results*

Pohick Creek Watershed				**Benthics**		**Fish**		**Bacteria**
WMA	Site ID	Stream Order	Drainage Area (mi)	IBI	Rating	IBI	Rating	Sample Exceeding
Middle	PC0501	4	15.25	37	Poor	29	Fair	0 of 6
Upper	PC0502	4	8.04	51	Fair	29	Fair	2 of 6
Upper	PC0503	1	0.14	18	Very Poor	N/A		3 of 4
Upper	PC0504	1	0.14	14	Very Poor	N/A		1 of 4

(Annual Report, 2006 * monitoring results for 2005 sample year)

Section 303(d) of the Clean Water Act requires states to develop a list of impaired waters, commonly referred to as the "303(d) list." If a water body fails to meet the numeric or narrative criteria in a water quality standard or does not achieve its designated use, then a water body is considered impaired. Every two years, states are required to submit a list of impaired waters to EPA for approval.

Over the past few years, Pohick Creek has experienced an increase in the number of impaired waterbodies. By 2006, Pohick had four impaired waterbodies, two of which have been listed on EPA's 303(d) list of impaired waterbodies.

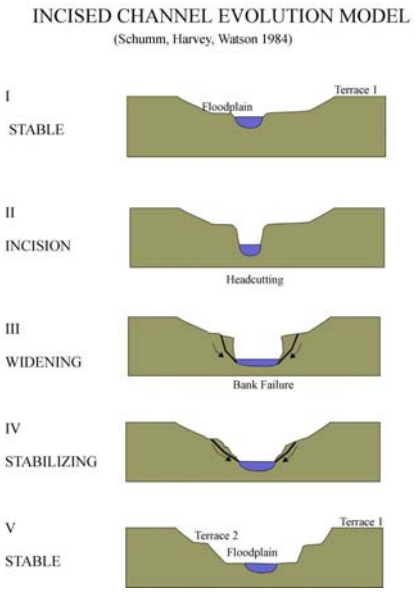
In 2006, Virginia's Department of Environmental Quality (DEQ) developed an Impaired Waters list which was released to the public in draft form for a 30-day comment period. After receiving and reviewing comments, the list was revised and resubmitted to EPA. The following streams within Pohick Creek watershed are considered Category 5 waters, or waters requiring a Total Maximum Daily Load (TMDL) Study. A TMDL is designed to identify the amount of pollution a specific stream can receive and still meet its designated use. See Table 10 below for Category 5 waters. Information is currently being compiled capturing data from the past two years (through 2008) and should be released for public review in early 2009.

Table 10: Pohick Creek TMDL (2006 VDEQ Virginia 305(b)/303(d) list)

TMDL Group ID	Use	Impairment	Size	TMDL Development Date
Pohick Creek 00799	Fish Consumption	Total Size Benzo[k]fluoranthene	3.20 River miles	2014
Pohick Creek 60046	Recreation	Total Size Escherichia coli	4.72 River miles	2018

1.8 Stream Geomorphology

Over time, stream morphology naturally evolves and changes. These natural dynamics can be drastically affected by human land use changes. To identify and track these physical changes, the Channel Evolution Model (CEM) (Schumm et al. 1984), was developed in the early 1980s. Based on visual observations, the CEM classifies a stream evolution into five channel stages. Figure below provides a visual representation of the steam evolution. A Stage I stream/channel is characterized as the most stable system in the group with a well developed flow and strong vegetation coverage – this is a stream in which the watershed has never been disturbed from its naturally-formed character. As flow rates increase (from land use changes), down-cutting occurs in the channel bottom creating a Stage II channel – which is typified by a very narrow, deeply incised channel.



Heavy erosion begins to widen the channel bottom until stream bank failure occurs. This is a Stage III channel, which is the most unstable and typically generates the most issues. As stream bank erosion begins to decrease and the channel begins to re-stabilize according to the new flow regime, the channel is classified as a Stage IV. Finally at Stage V, the channel returns to a stable system with two floodplain terraces. Once a stream has reached this "dynamic equilibrium" it will remain in this stage until the watershed characteristics are once again changed (i.e.: increase in storm flows due to increased runoff from greater impervious area creation). This process can

take decades. If the land uses are continuously changing, then the stream never quite reaches equilibrium and will continue to respond to changes in the flow (runoff) regime.

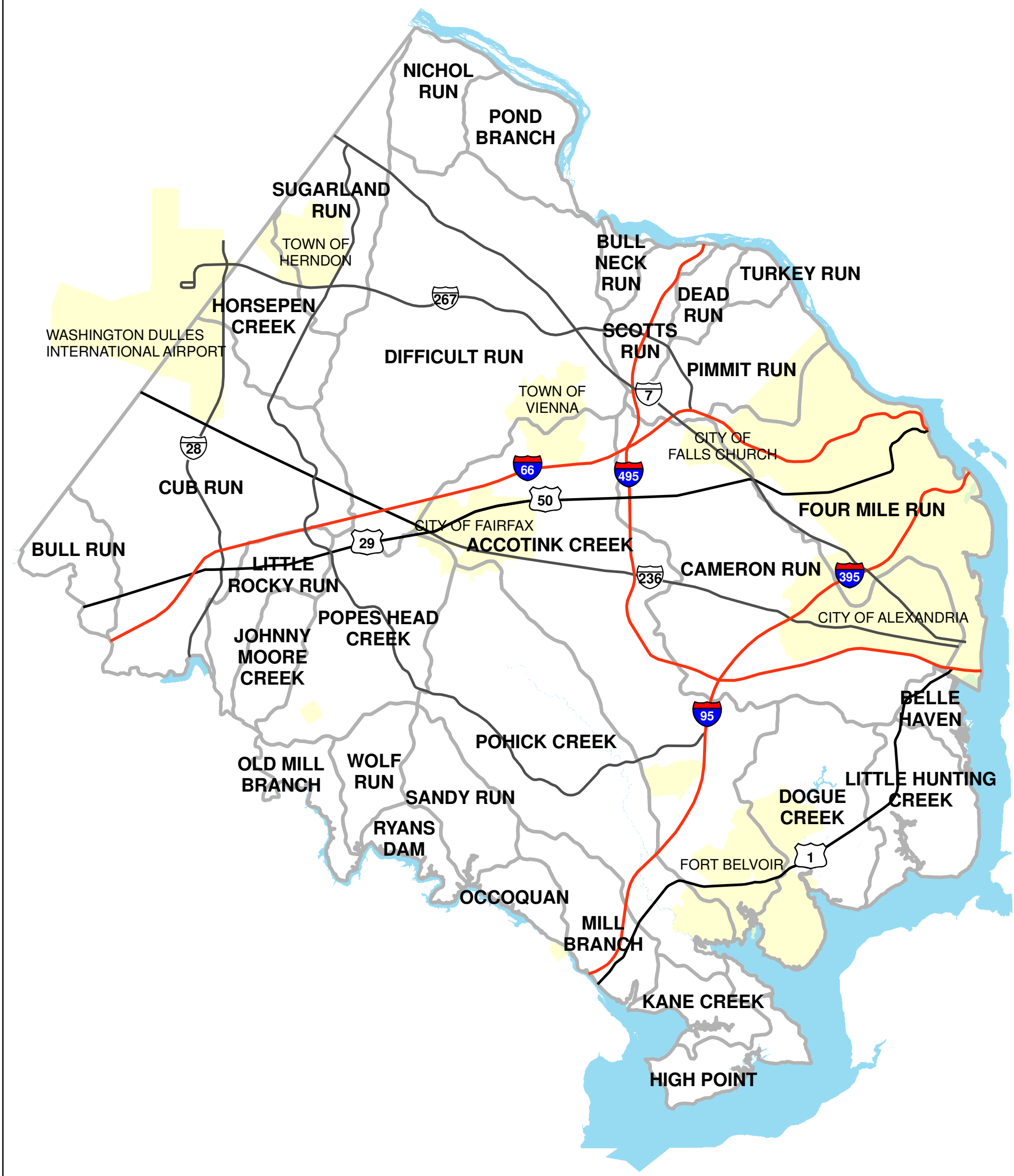
Using the CEM, nearly 75% of Pohick Creek's stream channels are classified as Stage III. Stage III is generally characterized as unstable, showing erosion signs of widening and deepening (in response to altered hydrologic characteristics of the watershed – usually a result of changing land uses). A small percentage of Pohick Creek' stream channels are classified as Stage II, indicating incising head cuts (vertical erosion) that produces harmful amounts of instream sediments and could ultimately lead into Stage III. The remaining streams are classified Stage IV, which is much more stable and easily recognized by its two terraced stream banks. See Table 11 for CEM results.

Table 11 : Pohick Creek CEM Results (SPA, 2005)

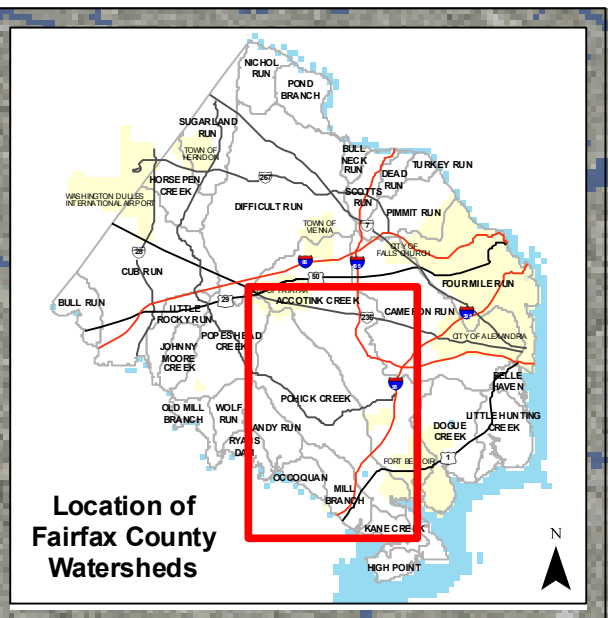
CEM Stage	Linear Length of Stream (ft)	Linear Length of Stream (%)
Stage I	0	0
Stage II	16,965	5
Stage III	264,729	74
Stage IV	76,533	21
Stage V	0	0
Total	**358,226**	**100**

1.9 Concerns Identified By the Public

In the late 1970's the County began documenting and logging publicly reported drainage related complaints. Today, the County is still documenting and logging stormwater management complaints in a Microsoft Access database. This database allows the County to identify areas that may require additional County attention and helps prioritize Capital improvement projects. The complaints database can also help the County identify target areas for public outreach projects. Over the years, Pohick Creek watershed has experienced 2,834 complaints. The primary complaints were erosion control and damage to infrastructure such as cave-ins/sinkholes. Many other complaints related to either tree/brush related issues or flooding or standing water.



Map 1.1
Fairfax County
Watersheds



Pohick- Rabbit Branch

COUNTRY CLUB VIEW

Kings Park West

MIDDLERIDGE

Pohick- Sideburn Branch

KINGS PARK

SIGNAL HILL

Pohick- Upper

CARDINAL FOREST SEC. 2

KEENE MILL STATION

Pohick- Upper South Run

Pohick- Middle

Sherry Run

ORANGE HUNT ESTATES

ROLLING VALLEY

Pohick Creek

LONGWOOD KNOLLS

LAKEWOOD HILLS

Pohick- Middle Run

South Run

Pohick- Middle South Run

SOUTH RUN FOREST

Saratoga

SOUTH RUN OAKS

Newington Forest

THE ESTATES AT ROSELAND

TERRA GRANDE

Pohick- Lower South Run

NEWINGTON STATION

CROSSPOINTE

Laurel Hill

Pohick- Lower

Pohick- Potomac

Pohick- Potomac

SPRINGFIELD FARMS

0 3,000 6,000 9,000 Feet

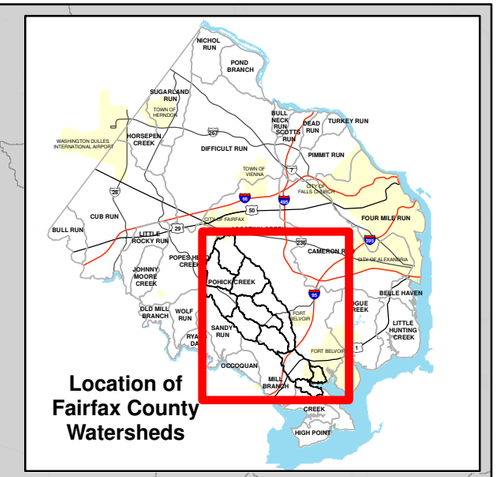
WMA Boundary

Water

Map 1.2
Pohick Watershed

Current Landuse
Pohick Creek Watershed

Future Landuse
Pohick Creek Watershed

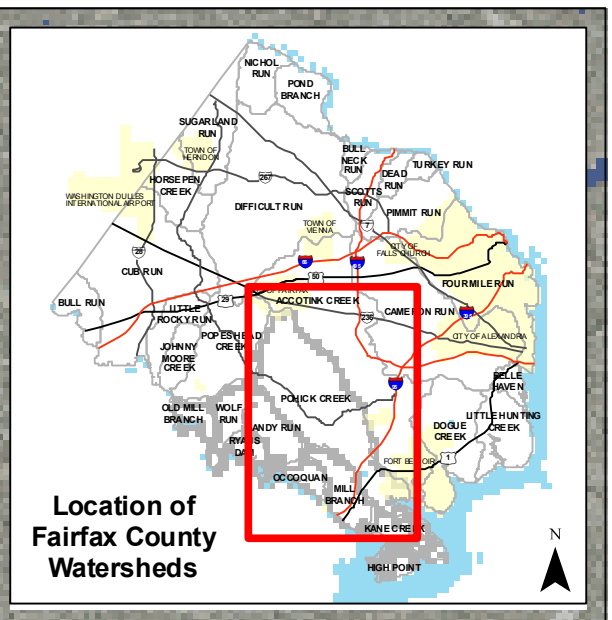


0 7,900 15,800 23,700 Feet

Legend

- WMA Boundary
- Open Space
- Forested
- Golf Course
- Estate Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Transportation
- Institutional
- Low Intensity Commericial
- High Intensity Commercial
- Industrial
- Water

Map 1.3
Pohick Creek Watershed
Existing and Future Land Use

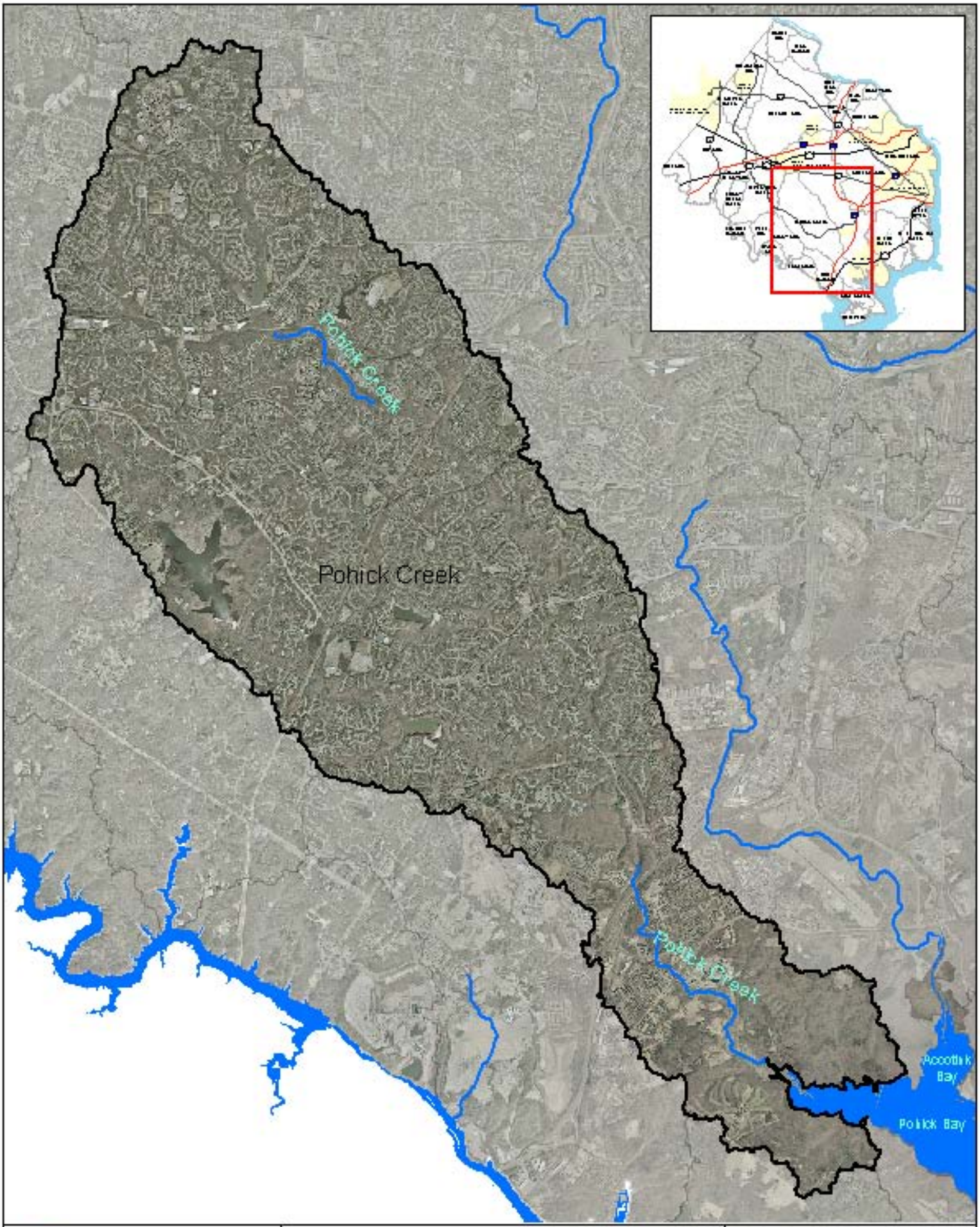


0 2,500 5,000 7,500 Feet

Resource Protection Areas

- RPA 1993
- RPA 2003
- RPA 2005
- Watersheds
- Water

Map 1.4
Pohick Watershed
Resource Protection Areas



Legend

Watershed Boundaries

Impaired Waters

Map 1.5
Pohick Creek
Impaired Waters