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
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COUNTY ADMINISTRATOR
ANTHONY J. ROMANELLO, ICMA-CM

April 2, 2008

MEMORANDUM TO: Stafford County Planning Commission

FROM: Jeffrey A. Harvey, AICP 
Director of Planning and Zoning

SUBJECT: ***Ordinance O08-27; Potomac River Resource Protection Overlay District***

ATTACHMENTS:

1. Proposed Ordinance O08-27
2. Map of Proposed District Boundary
3. Impaired Waters Map

ISSUE:

The Planning Commission is to consider a proposed amendment to Article II. Definitions and construction, and Article IV. Planned Development and Overlay District Regulations, by amending Section 28-25, Definitions, and creating Section 28-67, Potomac River Resource Protection Overlay District, of the Zoning Ordinance.

BACKGROUND:

The purpose of this ordinance is to recognize the existence of sensitive water resources within the Potomac River watershed and create an overlay district which would help protect the integrity of these resources. According to Environmental Protection Agency (EPA) Final 2006 305(b)/303(d) Water Quality Assessment Integrated Report, 6.59 miles of Aquia Creek, 4.2 miles of Accokeek Creek, and 2.23 miles of Potomac Creek have been identified as Category 5 impaired waters. These impairments are deemed to threaten or impair aquatic life, wildlife, fish and shellfish consumption use, and recreation. This ordinance may enhance the protection of water quality in the Potomac River watershed through additional buffering. Riparian buffers help maintain and improve the quality of water flowing into streams and rivers that eventually flow into the Chesapeake Bay. Buffers help remove sediments, nutrients and other potential

pollutants from surface and groundwater flows. Forested buffers can maintain shade cover for streams and aquatic systems to regulate temperature and dissolved oxygen levels.

The Potomac River, Aquia Creek, Accokeek Creek and Potomac Creek, as well as some of their tributaries are identified as perennial waterways. Perennial waterways contain water year round during a year of normal rainfall, and exhibit typical biological, hydrological and physical characteristics commonly associated with continuous conveyance of water. A 100-foot Critical Resource Protection Area (CRPA) buffer is incorporated along these waterways, in accordance with the Chesapeake Bay Preservation Area Overlay District. The Department of Conservation and Recreation, Division of Chesapeake Bay Local Assistance (CBLA), has commented that additional buffers serve to enhance water quality protection. They have indicated that studies have shown that buffers are extremely valuable in protecting the water quality of larger scale streams, creeks and rivers further downstream, but they are of even greater value for protecting smaller scale streams such as intermittent streams.

COMMENTS:

The proposed overlay district would encompass properties in the eastern portion of the County, as shown on the map entitled "Proposed Potomac River Resource Protection Overlay District" dated February 25, 2008 (draft). This is intended to capture properties along the majority of segments of the impaired waters and their tributaries, which are primarily located east of Jefferson Davis Highway, within the Coastal Plain. The Coastal Plain is one of two major geologic zones within Stafford County that generally lies east of the Interstate 95 corridor. The County's Land Use plan states that many soil types within the Coastal Plain may impose severe limitations on development. The water table is generally high, and some of the marine soil deposits are prone to slippage and swelling. Land slippage is more likely to occur on steep slopes. The U. S. Natural Resource Conservation Service has indicated that when a steep slope exceeds 15 percent or has an erodibility factor of 0.35 or greater in a stream valley, then a buffer should be expanded beyond the 100 feet to encompass these areas.

The ordinance as proposed would affect new development only within the proposed district boundaries. Applications for subdivisions, commercial development, rezonings, and conditional use permits would be affected. The ordinance would not affect existing lots of record.

The ordinance would require submission of an existing conditions plan with the application for development. The existing conditions plan would identify forest cover; floodplain districts; CRPA; intermittent streams; and slopes greater than or equal to 15%, where adjacent to wetlands, perennial streams and intermittent streams. The County's Chesapeake Bay ordinance requires delineation of the CRPA by the applicant. The site-specific boundaries of the CRPA are delineated through the performance of an environmental site assessment. The assessment determines whether water bodies have perennial flow onsite. The determination of perennial flow may be accomplished by the use of an approved scientifically valid method using field

indicators of perennial flow. The County currently accepts two methods of determining perennality, which are the two methods accepted by CBLA. One is "Perennial Stream Field Identification Protocol, May 2003 (Fairfax County)", and the second is "North Carolina, Division of Water Quality – Identification Methods for the Origins of Intermittent and Perennial Streams, February 28, 2005, Version 3.1". While both methods are acceptable, the North Carolina version includes guidance on both perennial streams and intermittent streams. Therefore, this version would need to be utilized when determining intermittent streams.

The proposed ordinance includes a definition for intermittent streams. An intermittent stream is a natural or engineered channel with flowing water during certain times of the year, when groundwater provides for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for intermittent streams.

Applicants for family subdivisions would not be required to submit a site-specific determination conducted by a consultant under the new ordinance, but would be able to use the County's resources for delineation of CRPA, as well as slopes. This is currently the practice for family subdivisions in lieu of a site-specific determination, although a fee is charged by the County.

Once existing conditions are shown on the plan, certain development criteria would need to be met, based on those conditions. The ordinance would require a 100-foot CRPA buffer be established for intermittent streams on site. CRPA would also be extended to include slopes greater than or equal to 15% where adjacent to perennial and intermittent streams and tidal water bodies. The extended CRPA would be subject to all regulations regarding CRPA pursuant to Section 28-62, Chesapeake Bay Preservation Area Overlay District, of the Zoning Ordinance. The proposed ordinance includes definitions for top of slope and toe of slope to better identify where the CRPA would need to be extended to incorporate the slopes.

The Comprehensive Plan recommends various objectives and strategies to preserve and enhance the County's natural resources. Goal 7 recommends discouragement of development within the 100-year floodplain, and consideration of an additional 100-foot buffer from the edge of the RPA on major water bodies including the Potomac River and Aquia, Potomac and Accokeek Creeks. It also recommends protection of tidal wetlands and strategic nontidal wetlands that support aquatic species and vegetation, and protection of slopes greater than 25 percent especially those adjacent to streams and rivers.

RECOMMENDATION:

Staff recommends adoption of Ordinance O08-27. Staff believes it would set standards for development near environmentally sensitive resources, as recommended in the Comprehensive Plan.

JAH:KCB:kb

Attachments (3)

O08-27

PROPOSEDBOARD OF SUPERVISORS
COUNTY OF STAFFORD
STAFFORD, VIRGINIAORDINANCE

At a regular meeting of the Stafford County Board of Supervisors (the Board) held in the Board Chambers, Stafford County Administration Center, Stafford, Virginia, on the _____ day of _____, 2008:

MEMBERS:

George H. Schwartz, Chairman
M. S. "Joe" Brito, Vice Chairman
Harry E. Crisp
Mark Dudenhefer
Paul V. Milde III
Cord A. Sterling
Robert "Bob" Woodson

VOTE:

On motion of _____, seconded by _____, which carried by a vote of _____, the following was adopted:

AN ORDINANCE TO AMEND AND REORDAIN CHAPTER 28, ARTICLE II, DEFINITIONS AND CONSTRUCTION, AND ARTICLE IV, PLANNED DEVELOPMENT AND OVERLAY DISTRICT REGULATIONS, BY AMENDING SECTION 28-25, DEFINITIONS, AND CREATING SECTION 28-67, POTOMAC RIVER RESOURCE PROTECTION OVERLAY DISTRICT, OF THE ZONING ORDINANCE

WHEREAS, the Code of Virginia (1950), as amended allows for ordinances to be designed to provide for protection of the natural environment; and

WHEREAS, the Comprehensive Plan includes goals for preservation and enhancement of the County's natural resources; and

WHEREAS, those goals include directing development to minimize impact on environmentally sensitive resources such as wetlands, floodplains, steep slopes, poor soils, streams, forested areas and shorelines; directing developments to protect slopes especially where adjacent to streams and rivers; and

WHEREAS, the Chesapeake Bay Preservation Area Plan encourages preservation of sensitive areas adjacent to tidal water bodies and streams; and

WHEREAS, the United States Natural Resource Conservation Service has indicated that when a slope exceeds fifteen percent or has an erodibility factor 0.35 or

greater in a stream valley, protective buffers should be expanded to include the slope; and

WHEREAS, the Board recognizes that segments of the Potomac River, and of Potomac Creek, Accokeek Creek and Aquia Creek, which are tributaries to the Potomac River, have been designated by the Virginia Department of Environmental Quality as impaired waters (EPA Category 5); and

WHEREAS, the Board recognizes that these impairments have been deemed by the Virginia Department of Environmental Quality to threaten or impair aquatic life, wildlife, fish consumption use, and recreation; and

WHEREAS, the water quality is threatened by development and redevelopment activities that contribute to degradation of water quality; and

WHEREAS, stream bank and land erosion contribute to sedimentation of Potomac River and its tributaries, such sedimentation is detrimental to water quality, and removal of sediment is costly to taxpayers and causes further degradation of water quality; and

WHEREAS, the Board believes that current zoning regulations do not adequately promote good development practices in consideration of these Potomac River resources; and

WHEREAS, the Board has carefully considered the recommendations of the Planning Commission and staff and the testimony at the public hearing; and

WHEREAS, the Boards finds that public necessity, convenience, general welfare and good zoning practice requires adoption of the Potomac River Resource Protection Overlay District ordinance;

NOW, THEREFORE, BE IT ORDAINED by the Stafford County Board of Supervisors on this the ____ day of _____, 2008, that the Zoning Ordinance be and it hereby is amended and reordained to amend Section 28-25 and create Section 28-67 as follows with all other portions remaining the same:

Sec. 28-25. Definitions of specific terms.

Intermittent stream. Any natural or engineered channel with flowing water during certain times of the year, when groundwater provides for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for intermittent stream flow.

Toe of slope. The base or bottom of a slope at the point where the ground surface abruptly changes to a significantly flatter grade.

Top of slope. The summit or crest of a slope at the point where the ground surface abruptly changes to a significantly flatter grade.

Sec. 28-67. Potomac River Resource Protection (PRRP) Overlay District

(a) Purpose and intent. Stafford County wishes to recognize the existence of sensitive water resources within the Potomac River basin. The County further recognizes the positive impact of these resources on the local community and economy and wishes to protect the integrity of these resources. Therefore, the purposes of the PRRP Overlay District are to:

- (1) Protect streams, floodplains, slopes equal to or greater than fifteen percent, and wetland areas in the Potomac River Basin;
- (2) Expand buffers surrounding sensitive water resources within the Potomac River Basin in order to improve the capture of sediment, organic material, fertilizer, pesticides and other pollutants that may adversely impact the Potomac River;
- (3) Protect and enhance the wise use of natural resources through management of development and redevelopment; and
- (4) Promote protection of sensitive water resources within the Potomac River Basin in order to provide for the health, safety and welfare of the present and future citizens of Stafford County.

(b) Applicability. The regulations and requirements of both the underlying district(s) and the PRRP Overlay district shall apply on all parcels of land within the below described area. When the regulations applicable to the PRRP conflict with the regulations of the underlying district, the more restrictive regulations shall apply. The boundaries of the PRRP Overlay District shall be as follows:

Beginning at a point where Telegraph Road intersections with Widewater Road continuing easterly along Widewater Road to a point where Widewater Road intersects with Rectory Lane; thence continuing easterly following the southern boundary line of Quantico Marine Corps Base to the Potomac River mean low water (MLW) line; thence continuing southerly following the Potomac River MLW line to Brent Point; thence continuing southerly and westerly along the Stafford County/Charles County, Maryland, boundary line to a point where the Potomac River MLW line intersects with Black Swamp Branch; thence continuing westerly generally following the southern property lines of parcels fronting on the south side of Potomac Creek to the intersection with Brooke Road; thence continuing northerly along Brooke Road to a point where it intersects with the CSX Railroad tracks; thence continuing northerly along the CSX Railroad tracks to a straight line intersection with an unnamed road near the end of Hope Road; thence continuing along said unnamed road westerly to its intersection with Hope Road; thence continuing westerly along Hope Road to the intersection with Olde Concord Road; thence continuing northerly along Olde Concord Road to the intersection with Greenridge Drive; thence continuing northerly along Greenridge Drive to the intersection with Coal Landing Road; thence continuing westerly along Coal Landing Road to the intersection with Jefferson Davis Highway; continue northerly along Jefferson Davis Highway to the intersection with Telegraph Road; and continue northeasterly along Telegraph Road to the point of beginning at the intersection with Widewater

Road, as shown on the map entitled "Proposed Potomac River Resource Protection Overlay District, dated February 25, 2008, prepared by the Stafford County Department of Planning and Zoning, a copy of which shall be added to and become a part of the Official Zoning Map of Stafford County.

(c) Development standards. All applications for reclassifications, conditional use permits, subdivisions and site plans shall be subject to the use limitations and development standards set forth in the underlying zoning district(s) and, in addition shall be subject to the following:

(1) Submission of an Existing Conditions Plan. The purpose of the Existing Conditions Plan is to determine the limits of sensitive Potomac River resource areas within any parcel(s) prior to development to promote conservation of the resources and the incorporation of the landscape features into the development design. This requirement does not release the applicant from obtaining a permit from the Corps of Engineers for disturbances in wetland areas, or any other necessary local, state or federal permits. The Existing Conditions Plan shall be submitted at the time of initial application and shall identify and illustrate the location of environmental resources on the property as follows:

- a. Forest or other vegetated cover as depicted in aerial photos or maps available from the Department of Planning and Zoning or other applicable agency, or as indicated by a professional land surveyor
- b. Flood plain districts as delineated in the most recent flood plain insurance study (FIS) for Stafford County, Virginia, prepared by the Federal Emergency Management Agency;
- c. Critical Resource Protection Area components as identified through a site-specific determination and approved by the agent, including:
 1. tidal wetlands;
 2. nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;
 3. tidal shores;
 4. a one-hundred foot vegetated buffer area located adjacent to and landward of the components listed in subsections (1) through (3) above; and along both sides of any water bodies with perennial flow.
- d. Streams with intermittent flow, as identified through a site-specific determination based on the North Carolina Division of Water Quality, Identification Methods for the Origin of Intermittent and Perennial Streams, Version 3.1 or other applicable method and approved by the agent;
- e. Slopes equal to or greater than fifteen percent, as identified through a site-specific determination, where adjacent to and landward of Critical Resource Protection Area components and intermittent streams;
- f. Existing Conditions Plans for family subdivisions may use the agent's delineation in lieu of a site-specific determination for features c-e, except as required by Section 28-62 of the Code of Stafford County the Chesapeake Bay, Resource Protection Overlay district.

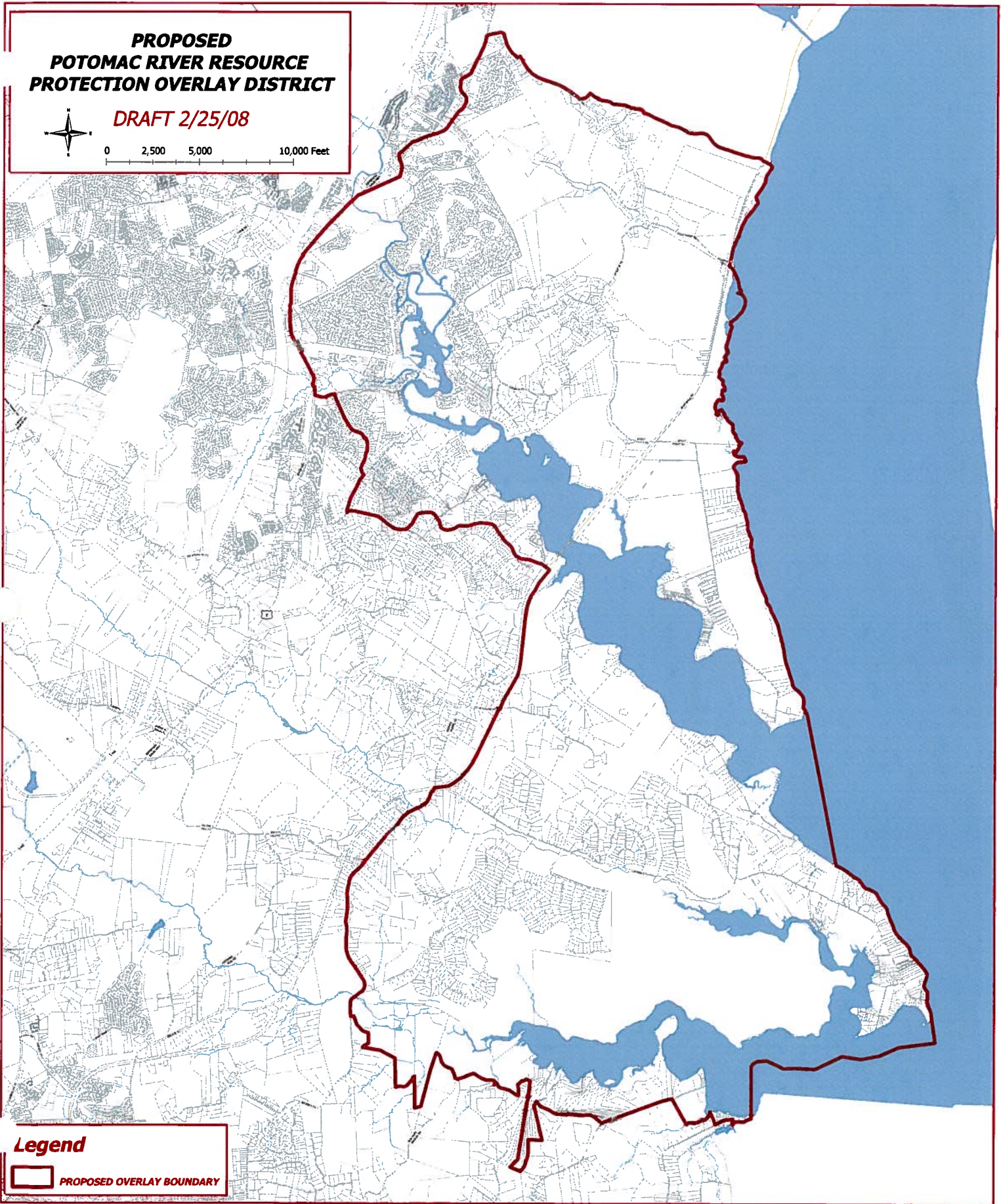
- (2) Performance Criteria. Design of a development plan shall take into consideration the Resources as stated above.
- a. Plans shall be designed to preserve and protect Potomac River resource areas, and to mitigate impacts to Potomac River and its tributaries.
 - b. The CRPA shall be expanded to include intermittent streams.
 - c. The CRPA shall be expanded to include a variable width buffer area not less than one hundred (100) feet in width. The variable width buffer area shall be located adjacent to and landward of
 1. tidal wetlands;
 2. nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;
 3. tidal shores; and
 4. along both sides of any water body with perennial or intermittent flow.
 - d. The variable width buffer shall also include any slope with a vertical rise over horizontal run equal to or greater than fifteen percent as measured from the toe of the slope to the top of the slope, where the slope is adjacent to and landward of the water bodies listed in c.1-4 above. A slope shall be considered contiguous to a protected resource if the toe of the slope extends to within 100 feet of the landward limit of the resource. The top of the slope shall be considered the landward limit of the slope. The variable width buffer shall extend to the top of slope.
 - e. The CRPA shall be subject to all of the regulations regarding CRPAs as set forth in Section 28-62 of the Code of Stafford County, the Chesapeake Bay Preservation Area Overlay District.
 - f. Existing vegetation to be retained shall be delineated on plans and marked on-site with orange plastic fencing during all phases of construction per Section 140 of the Design and Construction Standards for Landscaping, Buffering and Screening (DCSL). The limits of the variable width buffer shall be marked on-site with orange plastic fencing during all phases of construction.
- (3) Establishment of the buffer. All buffer areas shall be identified as CRPA on all plans; approved by the agent; recorded on a plat in the land records; and run with the land and continue in perpetuity.
- a. The agent and/or his designee shall have access to the buffer to inspect it for compliance.

**PROPOSED
POTOMAC RIVER RESOURCE
PROTECTION OVERLAY DISTRICT**



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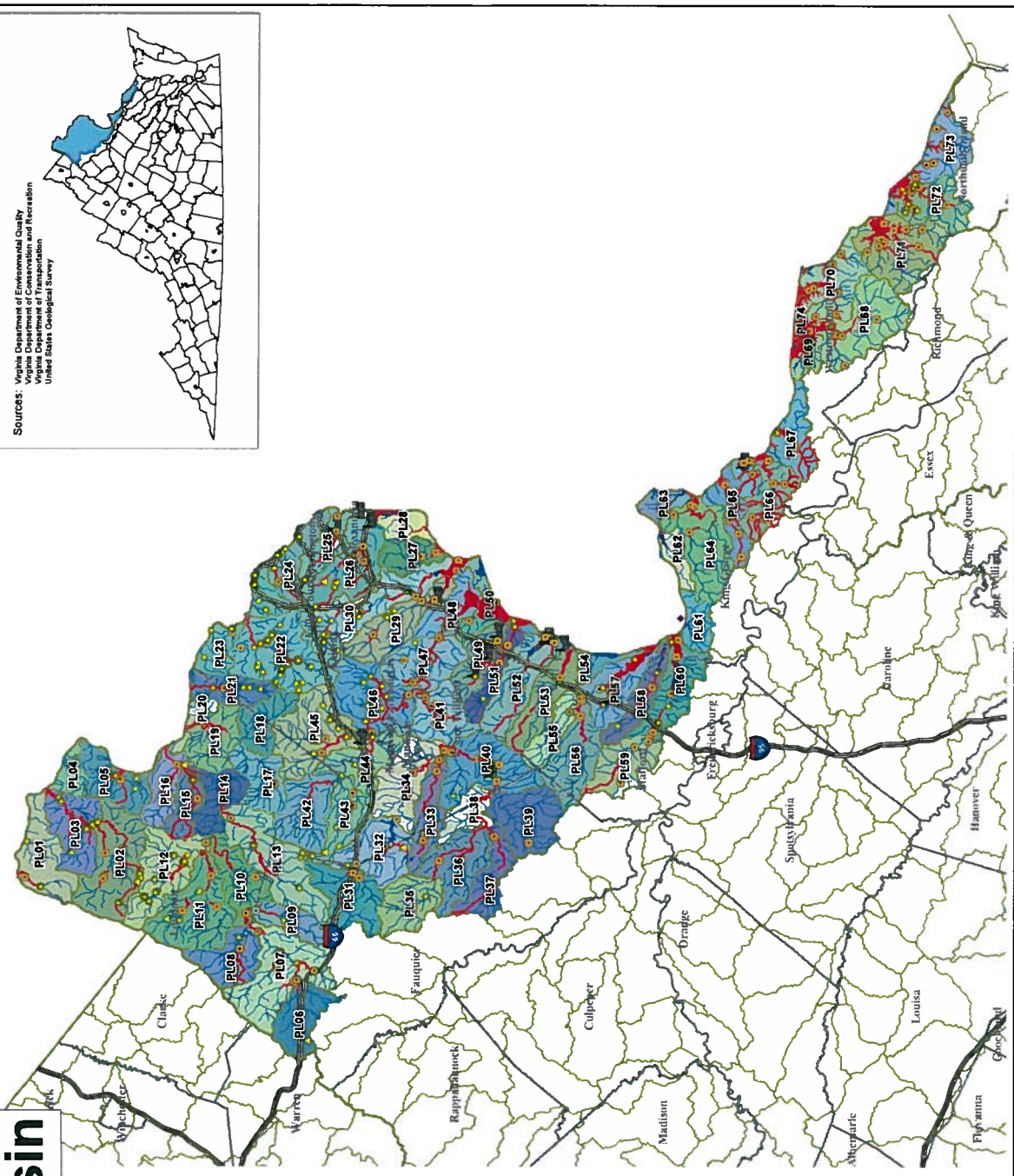
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Legend

 **PROPOSED OVERLAY BOUNDARY**

Potomac River Basin



Sources: Virginia Department of Environmental Quality
 Virginia Department of Conservation and Recreation
 United States Geological Survey

Monitoring Stations

- Ambient (209)
- Ambient/Biological (5)
- Ambient/Biological/Fish Tissue (5)
- Ambient/Fish Tissue (15)
- ▲ Biological (10)
- Citizen Monitoring (179)
- Federal (12)
- Fish Tissue (13)
- VDIH-BEACH (1)

NPDES Dischargers

- Industrial
- Municipal
- Interstate
- Watersheds
- Impaired Rivers and Streams
- Impaired Reservoirs or Estuaries

Enlarged Section of DEQ Impaired Waters Map Showing Stafford County

