



## Montgomery County DEP Water Resource Monitoring in Special Protection Areas

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### Description

Earlier this year, the Planning Director and the Director of the Montgomery County Department of Environmental Protection (DEP) discussed the value of providing the Planning Board with a briefing on the status of the health and quality of water resources in the stream systems that define the 5 Special Protection Areas (SPA). Such a briefing would provide the Board members with a better understanding of some of the valuable water resources that exist in the County and how the tools used in the SPA program may be affecting these natural resources. The last time DEP briefed the Planning Board on water quality monitoring in County streams was in June, 2009.

The Special Protection Area (SPA) program is designed to protect some of the County's highest quality stream systems. The Planning Board plays a major role in the program when it reviews and acts on certain elements of water quality plans as part of its reviews of land development projects that are located in a SPA.

Since the beginning of the SPA program in 1994, DEP, in close coordination with the Montgomery County Parks Department, have conducted biological and chemical monitoring of streams in the SPAs and, more recently, of the stormwater management (SWM) and sediment and erosion control measures that are incorporated into land development projects. The biological component of the SPA monitoring program evaluates fish and benthic macroinvertebrates (or, more commonly known as aquatic insects). The presence or absence of certain aquatic animal species and how common such species are found in a stream are reliable measures of water quality. Certain species are more sensitive to water pollution than others.

For this briefing, DEP staff will discuss the SPA water resource monitoring program, findings based on their data analysis, and some practical applications of their findings.

For the history and background of the SPA program, staff has attached a brief summary (Attachment 1).



**Attachment 1.  
History and Background of the Special Protection Area (SPA) Program**

**I. History**

The SPA program is based on the premise that certain watersheds or parts of watersheds have high quality natural resources that are tied to aquatic-based habitats, but existing and planned land uses, existing zoning patterns over the land, and County requirements for environmental protection measures incorporated into such land uses (e.g., stream and wetland buffers, stormwater management and sediment and erosion control measures, etc.) are inadequate to provide sufficient protection of the aquatic resources in these watersheds.

The dilemma of attempting to balance the need for an area's growth with the negative effects of intense land development on the natural environment, particularly the area's water resources, was recognized by the Planning Board and the County Council in their work to create the 1994 Clarksburg Master Plan and Hyattstown Special Study Area. The SPA program was created in response to the concerns raised in the master plan for specific portions of the Little Seneca watershed. The County Council adopted the SPA Law in November, 1994 (Chapter 19, Article V. Water Quality Review in Special Protection Areas, in the Montgomery County Code).

**II. Overview of the SPA Program**

Today, there are 5 SPAs in 4 watersheds.

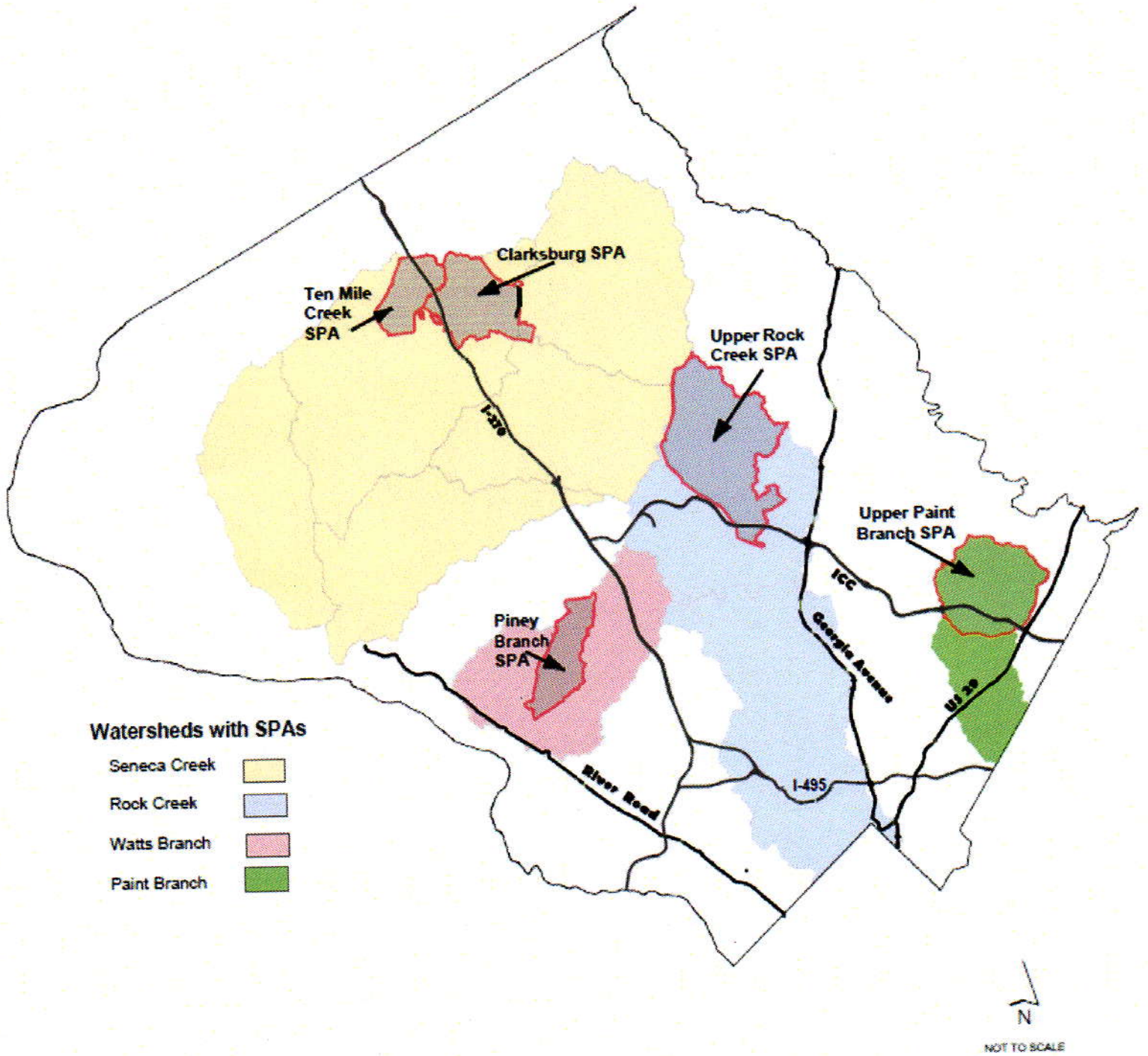
SPA	Watershed	SPA Designation	Associated Overlay Zone
Piney Branch SPA	A subwatershed of Watts Branch	October 24, 1995; CC Resolution 13-310	
Upper Paint Branch SPA	Paint Branch at and north of Fairland Road	July 11, 1995; CC Resolution 13-215	Upper Paint Branch Overlay Zone
Upper Rock Creek SPA	Part of the Rock Creek watershed north of Muncaster Mill Rd. that lies within the 2004 Upper Rock Creek Area Master Plan, plus the Norbeck Country Club property (Parcel N400 at 17200 Cashell Rd.)	April 2004, Upper Rock Creek Area Master Plan	Upper Rock Creek Overlay Zone
Clarksburg SPA	Original SPA covered the area that lies within parts of Seneca watershed designated in the 1994 Clarksburg Master Plan; includes all of Little Seneca Creek subwatershed from Skylark Rd. downstream to the master plan boundary, a part of the Ten Mile Creek watershed, a part of the Wildcat Branch subwatershed,	Original boundary defined by 1994 Clarksburg Master Plan.  Modified boundary defined in CC Resolution 17-1214, September 16, 2014	

SPA	Watershed	SPA Designation	Associated Overlay Zone
	and 2 designated areas within the Cabin Branch subwatershed. SPA boundaries modified by CC Resolution 17-1214 to separate out Ten Mile Creek subwatershed portion.		
Ten Mile Creek SPA	That portion of Ten Mile Creek subwatershed bounded by Shiloh Church Rd., West Old Baltimore Rd., Clarksburg Rd, and Comus Rd.	September 16, 2014, CC Resolution 17-1214	<ul style="list-style-type: none"> <li>• Clarksburg East Environmental Overlay Zone;</li> <li>and,</li> <li>• Clarksburg West Environmental Overlay Zone</li> </ul>



# Special Protection Areas

Montgomery County, MD



The SPA Program has three main elements:

- Regulatory requirements and reviews of land development projects
- Water quality and resource monitoring
- Analysis and findings of monitoring data

### **A. Regulatory Requirements and Review of Land Development Projects**

If a land development application in a SPA is reviewed by the Planning Board, and the project does not qualify for an exemption from the SPA Law, the project applicant must submit a water quality plan for Planning Board and Department of Permitting Services (DPS) approval.

The water quality plan typically consists of:

- (1) A stormwater management concept and sediment/erosion control plan that demonstrates how specific water quality protection goals for the project will be met;
- (2) An impervious surface plan that shows how the project will either meet numeric impervious limits specified in an overlay zone for the SPA or minimize impervious surface cover on the project site if there are no regulatory or master plan impervious limits for the SPA; and
- (3) A project layout that incorporates wider buffers than on non-SPA sites for onsite streams and wetlands, achieves forest cover on all onsite stream and wetland buffers through retention and planting even if the protected forest areas exceed forest conservation plan requirements.

In addition, the project applicant pays a fee to DEP. The fee is used to monitor streams on and near the project site and stormwater management and sediment and erosion control measures installed on the project site.

### **B. Water Quality and Resource Monitoring**

DEP sets up and conducts monitoring on and near a project site to collect data on conditions in receiving streams and on the performance of the various water quantity and quality control structures (i.e., stormwater management and sediment and erosion control measures) that are installed on the project site. The Parks Department participates in this monitoring effort. DEP's presentation to the Planning Board will cover this element of the SPA program.

### **C. Analysis and Findings of Monitoring Data**

DEP analyzes the data that are collected. Some of the findings that have resulted from the analysis have been used to improve requirements for land development practices to provide better protection for receiving stream resources. DEP's presentation to the Planning Board will cover this element of the SPA program.