

V. SPECIAL PROTECTION AREAS (SPAs)

A. Goals and Objectives for Special Protection Areas

The County's goal in special protection areas is to protect and maintain high-quality or sensitive water resources and related environmental features in identified geographic areas where proposed land uses threaten those resources and a higher level of environmental protection is needed. This protection will be accomplished cooperatively through the control of land use, site design, and protection of environmentally sensitive areas by the Planning Board and the provision of effective design, implementation, maintenance, and monitoring of best management practices by DEP and other County agencies. Both approaches are necessary to achieve the goal of watershed and stream protection.

The Park and Planning Department objective for special protection areas is to maximize protection of natural resources in environmentally sensitive areas through site design features (such as reduced impervious areas) and use of best management practices (such as accelerated forestation and provision of expanded wetland buffers).

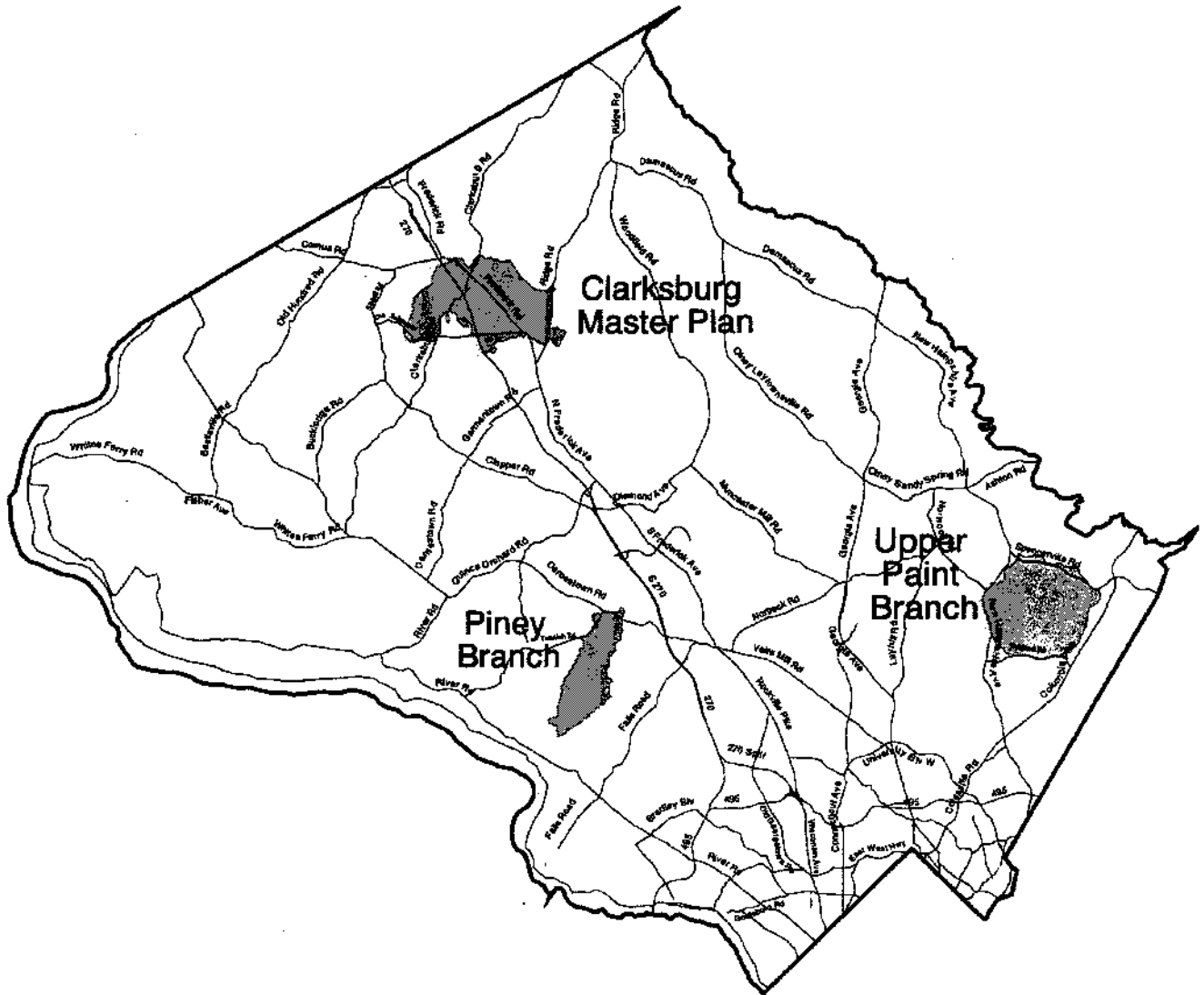
The SPA guidelines, when complemented with the County's water quality review regulations, provide a regulatory framework to accomplish these water resource protection objectives for plans reviewed by the Planning Board and department staff. The tools available to the Department to implement the objectives of special protection areas are:

- Designation of special protection area wetland buffers
- Expanded and accelerated forest conservation
- Imperviousness limitations

The additional protection from disturbance recommended for SPA wetland buffers along with forest and imperviousness provisions will help maintain the high quality characteristics and biological integrity of water resources. This protection should be utilized to better achieve the following objectives:

- Protect, restore, and maintain the chemical, physical, and biological integrity of streams, wetlands, springs, seeps, and other water resources
- Help maintain stream baseflow
- Provide infiltration of runoff
- Reduce erosion and control sedimentation
- Provide riparian wildlife habitat
- Provide organic matter to support the food web of aquatic ecosystems
- Provide spawning and nursery areas for aquatic life

Figure 7. Special Protection Areas in Montgomery County (as of January, 1997)



- Filter overland and non-concentrated stormwater flows through the buffer
- Provide a separation between physical disturbance and sensitive water resources

A coordinated effort in both the public and private sector will be made to protect water resources in special protection areas. Therefore, government agencies (including MCDPWT, MCDEP, MCDPS, M-NCPPC Department of Park and Planning, and WSSC) and utility companies should consider allowing flexibility and innovation to their standard design and regulatory requirements to better address watershed protection objectives in special protection areas and still achieve their statutory mission. As part of the plan review process, agency representatives on the Development Review Committee will work together, in concert with State regulatory agencies and in accordance with lead agency protocols (in place since November 1992), to maximize flexibility in site design and to cooperate with the applicant to reduce stream impacts.

B. Special Protection Area Wetland Buffer

1. Rationale for Expanded Wetland Buffer

A stream ecosystem includes not only the stream channel itself, but also the wetlands, floodplains, near-stream (or riparian) area, seeps, and springs that are linked to the stream. These areas are important for maintaining stream water quality, water temperature, and biological integrity, as well as contributing to baseflow. Protection of these features is essential to the vitality and health of the local aquatic ecosystem by virtue of their function, diversity, size, or location.

Expanded buffers for wetlands in SPAs satisfies the requirement for added protection of natural features that provide a continual supply of clean, cool water to environmentally sensitive streams. The importance of wetlands, springs, and seeps as critical components of the stream ecosystem, when coupled to the high intensity of surrounding development in the SPA, create the need for expanded physical protection of these resources.

All wetlands within Special Protection Areas will be considered for application of expanded buffers² with the exception of certain created wetlands that are not hydrologically connected to a stream. The appropriate buffer width will be recommended by Park and Planning Department staff and will range from 25 to 150 feet based on the following factors: (a) the State Water Use for the watershed, (b) stream order, (c) the presence of steep slopes or highly erodible soils, and (d) designation as a wetland of special State concern. Table 3 describes the appropriate wetland buffer widths after applying the relevant factors.

The following definition for wetlands will be used *solely* for the purposes of determining the applicability of expanded buffers in SPAs. This definition is consistent with the federal and State definition of jurisdictional wetlands as described in the *1987 Corps of Engineers Wetlands*

²These buffers are considered “expanded” in relationship to the 25-foot State defined wetland buffer. It should be noted that this 25-foot width is a *minimum* and that the State has regulations allowing expansion.

Delineation Manual. All wetlands within Special Protection Areas that meet this definition will be subject to the expanded buffer recommendations.

Wetlands - areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions and are hydrologically connected to a stream.

The 1987 Corps of Engineers Wetlands Delineation Manual will be the reference for determining if an area meets the wetland vegetation, soils and hydrology criteria. The assumption will be that all springs, seeps, and emergent and forested wetlands are hydrologically connected to both groundwater and stream systems.

2. Exemptions to Expanded Wetland Buffers

Expanded wetland buffers will not be applied to isolated farm ponds, existing stormwater management ponds, and other man-created wetlands such as highway drainage ditches that are not hydrologically connected to a stream system. However, these created wetlands may be regulated by the Maryland Department of the Environment (MDE) and the U.S. Army Corps of Engineers (COE) and may have a 25 foot buffer applied to their perimeter if MDE/COE takes jurisdiction over these wetlands under the State Nontidal Wetlands Protection Act.

An expanded wetland buffer will not be applicable in situations where wetland soils, vegetation, or hydrology have been legally removed or altered by human activity, as in the case of prior converted croplands. (Prior converted croplands are defined by federal regulation as wetlands that have been drained, dredged, filled, or otherwise manipulated for the production of an agricultural commodity prior to December 23, 1985.) Prior converted croplands are exempt from State and federal wetland regulations.

However, prior converted croplands provide an excellent opportunity for wetland restoration. Therefore, Park and Planning staff will recommend that the area be preserved for future consideration for wetland restoration. Potential wetland restoration sites are essential to the County to offset wetland losses due to unavoidable encroachment for infrastructure associated with public and private development. These sites may be used to mitigate wetland losses in the watershed, as permitted by the Maryland Department of the Environment. Opportunities to provide an expanded buffer will be examined after wetland restoration has occurred.

3. SPA Stream Buffer Determination

To protect all components of the stream system, the SPA stream buffer will be *the outermost limit* of the areas specified below:

- a) Regular stream buffer widths found in Table 1 (page 8) in Chapter III (100 to 200 feet) applied from the intermittent or perennial stream bank
- b) Steep slopes where the toe of the slope starts within the stream buffer from Table 1. Steep slopes are defined as slopes equal to or greater than 25 percent. The one exception is in the Upper Paint Branch SPA, where steep slopes are defined as equal to or greater than 15

percent.

- c) 100-year floodplain
- d) Standard wetland buffer width of 25 feet
- e) Expanded wetland buffer width, as described in Table 3. Expanded buffers are calculated based on the following criteria. The larger of the following buffers will apply:

(1) Steep Slopes

For SPA wetland buffer determination, slopes greater than 15 percent are considered steep slopes. Steep slopes are calculated by taking the steepest 50 foot run within the 100 feet adjacent to the edge of the wetland. Buffers for wetlands with adjacent steep slopes will be expanded to the outer edge of the steep slope area up to the maximums shown in the second column of Table 3. The minimum buffer is 60 feet, except in the headwater streams (first and second order) in Use IV watersheds where the minimum buffer is 75 feet. For Use III first and second order streams, a flat 150 foot buffer applies.

(2) Highly Erodible Soils

Highly erodible soils are defined as all soils classified as having a *severe hazard of erosion* in the soil profile descriptions of the *Soil Survey of Montgomery County, Maryland* (July, 1995), published by the Natural Resources Conservation Service (formerly the Soil Conservation Service). Wetland buffers will be expanded to include highly erodible soils up to the maximum buffer shown in Table 3.

(3) Watershed Use Category

(a) Use III/III-P Watersheds

Wetlands associated with first and second order streams will be protected by an expanded buffer of *150 feet*. (See Figure 7 for an illustration.)

Wetlands associated with third and higher order streams will be protected by an expanded buffer ranging from *25 - 100 feet* based on the presence of steep slopes, highly erodible soils, or designation as a wetland of special State concern, consistent with non-SPA areas of the County and State standards.

(b) Use IV/IV-P Watersheds

Wetlands associated with first and second order streams will be protected by a buffer ranging from *75 - 125 feet* based on the presence of steep slopes, highly erodible soils, or designation as a wetland of special State concern.

Wetlands associated with third and higher order streams will be protected by an expanded buffer ranging from *25 - 100 feet* based on the presence of steep slopes, highly erodible soils, or designation as a wetland of special State concern, consistent with non-

Table 3. Recommended Buffers for Wetlands, Springs, and Seeps in Special Protection Areas				
Stream Use & Order	Wetlands of Special State Concern*	Wetlands with Steep Slopes**	Wetlands with Erodible Soils***	Other Wetlands
Use III, First & Second Order Streams	150'	150'	150'	150'
Use III, Third & Higher Order Streams	100'	60-100'	25-100'	25'
Use IV, First & Second Order Streams	100'	75-125'	75-125'	75'
Use IV, Third & Higher Order Streams	100'	60-100'	25-100'	25'
Use I, First & Second Order Streams	100'	60-100'	50-100'	50'
Use I, Third & Higher Order Streams	100'	60-100'	25-100'	25'

NOTE: Isolated farm ponds, existing stormwater management ponds or man-made drainage ditches are exempt from these expanded buffer recommendations. The buffer widths for Use III first and second order streams are in accordance with the recommendations of the Upper Paint Branch Technical Work Group. See Appendix A for a definition of State Water Use designations and Appendix B for a definition of stream order.

* Wetlands of special State concern, as identified by MDE/DNR, are subject to a minimum 100-foot buffer by State regulations.

** Buffer for wetlands adjacent to steep slopes will be expanded to the outer edge of the steep slopes up to the maximum distance shown in the table. For wetlands inside SPAs, steep slopes are defined as greater than 15% on the steepest 50 feet within the 100 feet adjacent to the wetland.

*** Buffer for wetlands adjacent to erodible soils will be expanded to include the erodible soils up to the maximum distance shown in the table. Erodible soils are those soils classified as having a severe hazard of erosion in the soil profile descriptions of the *Soil Survey of Montgomery County* (July 1995), published by the Natural Resources Conservation Service (see Appendix C).

SPA areas of the County and State standards.

(c) Use I/I-P Watersheds

Wetlands associated with first and second order streams will be protected by a buffer ranging from *50 - 100 feet* based on the presence of steep slopes, highly erodible soils, or designation as a wetland of special State concern.

Wetlands associated with third and higher order streams will be protected by an expanded buffer ranging from *25 - 100 feet* based on the presence of steep slopes, highly erodible soils, or designation as a wetland of special State concern, consistent with non-SPA areas of the County and State standards.

4. Flexibility in Implementation of SPA Wetland Buffers

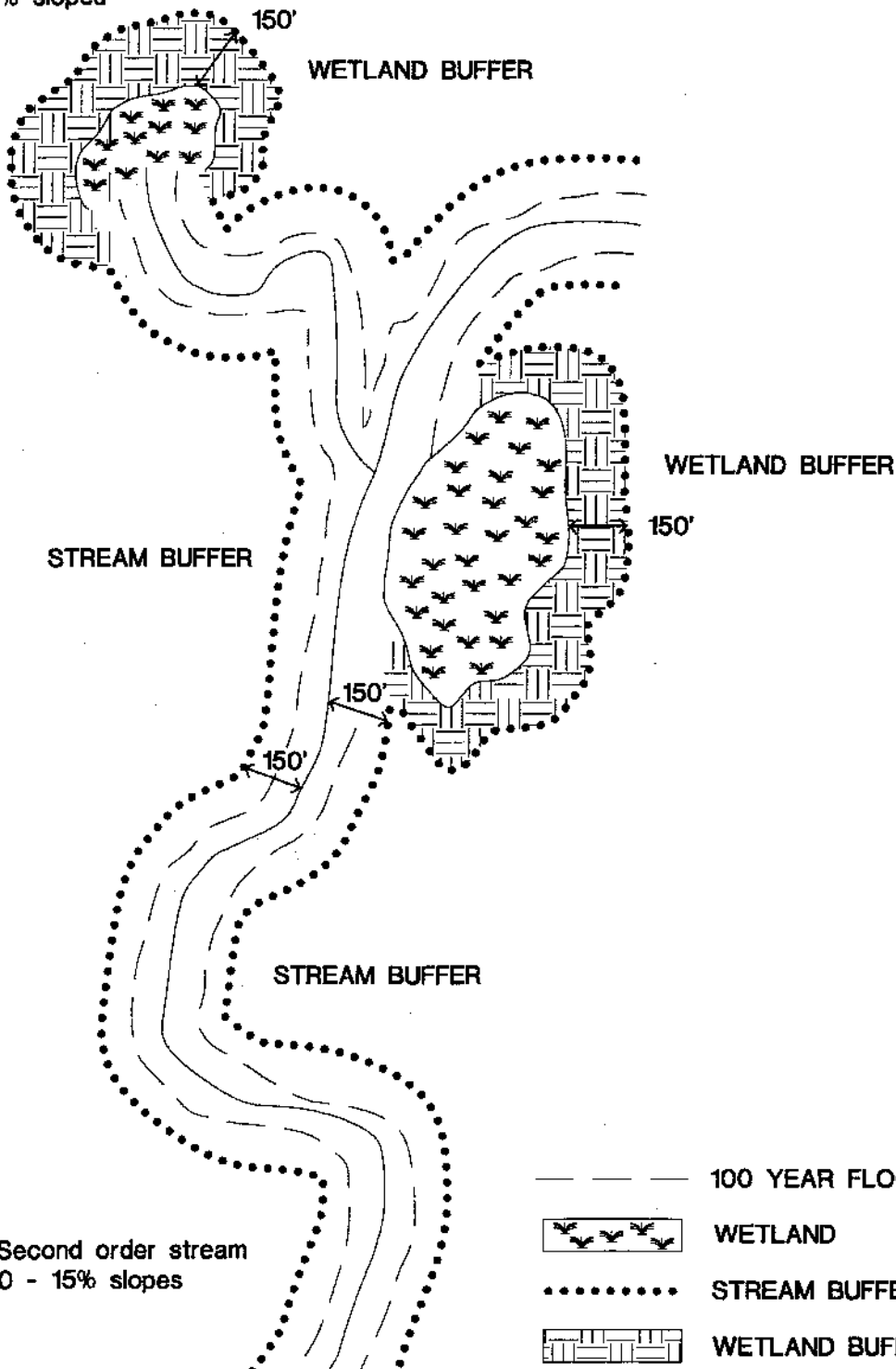
Table 3 describes the range of buffer widths that may be applied to the perimeter of a wetland within an SPA. Small amounts of clearing and grading for other purposes within the stream buffer (such as paving for bikeways) may be recommended for approval by staff on a case-by-case basis so long as the modification is consistent with a comprehensive approach to protecting areas that are critical to preserving or enhancing streams, wetlands, and their ecosystems. The applicant shall provide rationale for stream buffer modifications addressing at a minimum the factors below. The extent to which the proposal meets all the following factors will form the basis for staff recommendations.

- a) Reasonable alternative locations are not available.
- b) Encroachment into the buffer has been minimized.
- c) Existing sensitive areas have been avoided (forest, wetlands and their state designated buffers, floodplain, steep slopes, and habitat for rare, threatened, and endangered species and their associated protection buffers).
- d) The proposed use is consistent with the preferred use of the buffer (e.g., pervious areas such as tieouts to existing grades, slope stabilizing BMPs, etc.).
- e) The plan design provides compensation for the loss of buffer function.

In reviewing buffer compensation proposals, staff will consider such options as buffer averaging, enhanced forestation, bioengineering practices, and other environmentally beneficial techniques. Buffer averaging provides environmentally-comparable on-site area outside the delineated stream buffer in exchange for the allowance of encroachment elsewhere in the delineated buffer. The concept of enhanced forestation (as detailed in section C) goes beyond the county legal requirements for forest conservation to enhance existing riparian forest or to accelerate the creation of healthy mature forest in afforestation/reforestation areas.

Figure 8. Illustration of Stream Buffers in a Special Protection Area Use III Watershed with Wetlands

USE III - First order stream
0 - 15% slopes



USE III - Second order stream
0 - 15% slopes

C. Expanded and Accelerated Forest Conservation Opportunities

1. Rationale

As stated in the County's forest conservation manual (*Trees: Approved Technical Manual*, 1992), "Forest areas in the natural landscape filter ground water, tend to reduce surface runoff, help alleviate flooding, lower stream temperature, and supply necessary habitat for wildlife." The forest conservation requirements are specifically intended to preserve existing forest, or provide for forest creation in environmentally sensitive locations. In SPAs, where forests play an important role in protecting water quality and the overall health of the stream ecosystem, the following guidelines will allow healthy, mature forest to be established more rapidly. The longer maintenance period gives a growing forest the opportunity to better establish itself against invasive vegetation so it can more quickly provide the many benefits to water quality.

2. Guidelines

- a) The applicant should retain or establish forest in all buffers on a site. Reforestation on SPA sites is to begin as soon as possible after the issuance by DPS of grading permits, with appropriate phasing to allow for the construction of sediment and erosion control structures. On development projects where standard forest conservation requirements do not completely forest the buffer area, the entire buffer should be reforested as part of the development project. This may be accomplished either by the applicant planting the entire buffer and selling the area in excess of their requirements to others as credit toward their off-site requirements, or by the applicant arranging for planting by other applicants.
- b) The applicant will provide a five-year maintenance program of forest planting areas to better ensure forest survival, with emphasis to be placed on control of invasive species. Bonding will remain in place for two years only, as required in current regulations.
- c) The use of 3- to 4-foot planting stock for trees and 18- to 24-inch planting stock for shrubs will be encouraged in re/afforestation plantings to minimize time to canopy closure.

D. Imperviousness Limitations

The multi-level protection of water quality inherent to the SPA concept requires extra emphasis be placed on opportunities for minimizing imperviousness in SPA areas. Policies and site design guidelines regarding overall levels of imperviousness are detailed in Chapter IV. Lower levels of imperviousness have benefits to all watersheds by providing more opportunity for natural infiltration and pollutant removal and less reliance on SWM controls.

As of publication time, the following SPAs have imperviousness limits specified either in a master plan or a Council resolution designating the SPA. See Chapter IV.G.4 for guidance for calculating imperviousness areas.

1. Paint Branch Special Protection Area

Development should not result in more than 10 percent of the total site area in imperviousness surface (including structures, roadways, parking areas, paths, etc.)³.

2. Clarksburg Employment Areas west of I-270 in Ten Mile Creek watershed

An impervious limit of 15 percent applies to the entirety of each subject site (see Figure 36 from the *Clarksburg Master Plan and Hyattstown Special Study Area*, June 1994). The imperviousness coverage must be calculated over the entire subject property, not just the portion that is zoned for industrial use.

³County Council Resolution No. 13-215 designates the upper Paint Branch watershed as an SPA. The resolution states that this SPA “will best be protected through the combined application of the Special Protection Area law and performance criteria as established in the 1981 Eastern Montgomery County Master Plans.” The 1981 master plan performance criteria include a 10 percent maximum limitation for site imperviousness.