



**Laytonia Animal Shelter, Final Water Quality Plan Amendment, MR2010711**

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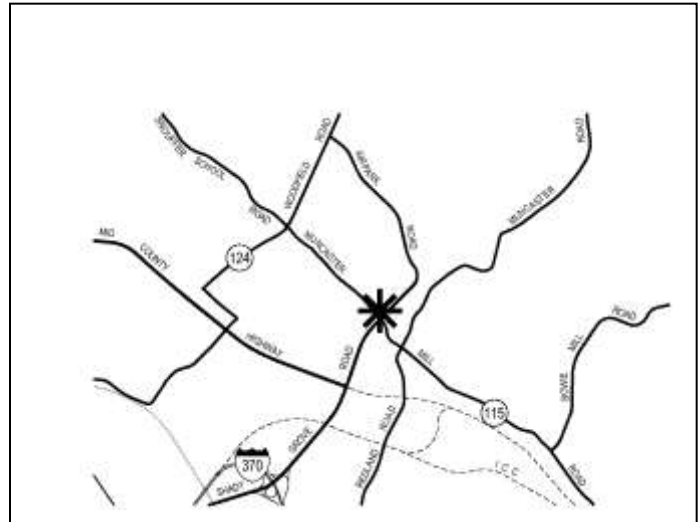
**Completed: 11/18/11**

**Description**

**A. Final Water Quality Plan Amendment MR2010711:  
Laytonia Animal Shelter**

50.14 acre tract with an animal hospital, parking and stormwater management facilities, northwest quadrant of Muncaster Mill and Airpark Roads, RE-1 Zone, Upper Rock Creek Master Plan and the Upper Rock Creek Special Protection Area (SPA)

**Staff Recommendation: *Approval with Conditions***



**Summary**

The original Water Quality Plan for the Animal Shelter was approved on July 29, 2010. The proposed amendment will satisfy additional requirements for the SHA.

## **STAFF RECOMMENDATIONS**

Approval of the Revised SPA Final Water Quality Plan with the following conditions:

1. Applicant will conform to the conditions as stated in Montgomery County Department of Permitting Services (DPS) final water quality plan approval letter dated October 8, 2010 (Attachment 1).
2. Total impervious surfaces for the entire site must not exceed 9.72 acres (19.4% of the 50.14 acres).
3. Total impervious surfaces for the Animal Shelter portion must not exceed 2.95 acres (128,502 square feet)

## **Previous Actions**

The Planning Board reviewed the Forest Conservation Plan and Preliminary Water Quality Plan at a prior hearing on July 29, 2010. At that hearing, the Planning Board approved the Forest Conservation plan and the Preliminary Water Quality Plan. The Preliminary Water Quality plan was approved with the following conditions:

1. Total impervious surfaces for the entire site must not exceed 8.55 acres (17.7% of the 48.17 acres) as shown on the proposed Preliminary Water Quality Plan.
2. Ten percent of the total parking for the entire site (Animal Shelter and Recreation Park) shall utilize small-car-only parking stalls to minimize imperviousness.
3. Applicant will conform to the conditions as stated in Montgomery County Department of Permitting Services (DPS) preliminary water quality plan approval letter.

Subsequently on May 12, 2011 the Planning Board approved the Final Water Quality Plan for the animal shelter portion of the project with the following conditions:

1. Applicant is bound by the conditions as stated in Montgomery County Department of Permitting Services (DPS) final water quality plan approval letter dated October 8, 2010.
2. Total impervious surfaces for the entire site must not exceed 9.08 acres (18.9% of the 48.17 acres).
3. Total impervious surfaces for the Animal Shelter portion must not exceed 2.63 acres (114,713 square feet).

## **BACKGROUND**

The Montgomery County Department of General Services (DGS), Division of Building and Construction and the Maryland National Capital Park and Planning Commission (M-NCPPC) Park Development Division each plan to co-develop a 48 acre tract of land in the northeast quadrant of Muncaster Mill and Airpark Roads. The project area is bordered to the north by Pope Farm Nursery, to the east by Airpark Road, Muncaster Mill Road to the south, and fallow land belonging to the Seventh Day Adventist Church to the west. The land is comprised of two

parcels one currently owned by the County and managed by the Parks Department and a second parcel owned by the Parks Department. The entire site is within the Upper Rock Creek Special Protection Area (SPA).

Planning staff approved a Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) on July 13, 2009. The site contains 9.26 acres of forest, one stream, and 4.11 acres of Stream Valley Buffer (SVB). There are also many specimen trees on the site. The stream is located in the northeast corner of the site.

The Department of General Services plans to construct the Montgomery County Animal Shelter on approximately 7 acres of the site located on the east side of Muncaster Mill Road, approximately 600 feet north of the intersection of Muncaster Mill Road and Airpark Road.

The Parks Department proposes to construct the Laytonia Recreational Park on the remaining 41 acres of land. The recreational Park will include three soccer fields and 1 baseball field with associated parking.

Since both projects are located on the same parcels of land it was determined that one combined Preliminary Water Quality Plan and one combined Forest Conservation Plan was required that incorporated the entirety of both projects. Additionally, it was agreed that two separate Final Water Quality Plans would be submitted and reviewed for this site. This decision was based on the drastically different timelines for the two projects.

## **DISCUSSION**

### **SPA WATER QUALITY PLAN**

This project is within the Upper Rock Creek SPA and on publicly owned property so it is subject to submitting a water quality plan under section 19-62(c) of the Montgomery County Code. This section of the code states:

*(c) Publicly owned property. Before engaging in any land disturbing activity on publicly owned property in an area designated as a special protection area, the applying agency or department should prepare a combined preliminary and final water quality plan.*

The Planning Board is being asked to approve the Revised Final Water Quality Plan for the site as it pertains to the animal shelter.

## **Review for Conformance to the Special Protection Area Requirements**

As part of the requirements of the Special Protection Area law, a SPA Water Quality Plan should be reviewed in conjunction with a mandatory referral<sup>1</sup>. Under the provision of the law, the Montgomery County Department of Permitting Services (DPS) and the Planning Board have different responsibilities in the review of a water quality plan. DPS has reviewed and conditionally approved the elements of the Preliminary Water Quality Plan under its purview. The Planning Board responsibility is to determine if environmental buffer protection, SPA forest conservation and planting requirements, and site imperviousness limits have been satisfied.

*Planning Staff has reviewed and recommends Planning Board approval with conditions of the elements of the SPA final water quality plan under its purview:*

### ***Site Imperviousness***

The Environmental Overlay Zone for the Upper Rock Creek SPA imposes an 8 percent imperviousness limit for new projects within the SPA that are serviced by public water and sewer. However, in the applicability section there is a clause for public projects does not require public facilities to comply with the 8 percent impervious cap. More specifically, section 59-C-18.242 of the Montgomery Zoning Ordinance states

*All public projects are subject to the provisions of this overlay zone, however, these provisions are not intended to preclude the development of public facilities. Such facilities must conform to the water quality plan submission and review requirements established in the Montgomery County Code, Chapter 19, Article V, and keep imperviousness to the minimum needed to accomplish the public purpose intended.*

This section identifies that public projects are not subject to the 8% imperviousness cap, but the project must minimize impervious surfaces to amount needed to achieve the public purpose intended.

The proposed project area is composed of two separate parcels one owned by Montgomery County, 31.24 acres, and one owned by M-NCPPC, 16.93 acres, for a total area of 48.17 acres. The total impervious surfaces for the entire site was capped by the Planning Board at 8.55 acres (17.7% of the 48.17 acres) based on the numbers provided in the Preliminary Water Quality Plan. The 9.7% imperviousness over the 8% Upper Rock Creek cap was determined to be the minimal amount of impervious surface needed to achieve the public purpose intended for the Animal Shelter and Recreation Park to be situated on this property.

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<sup>1</sup> Section 19-62 (c) of the Montgomery County Code states that “ before engaging in any land disturbing activity on publicly owned property in an area designated as a special protection area, the applying agency or department should prepare a combined preliminary and final water quality plan.”

### Laytonia Animal Shelter Impervious Area Summary

Roof Area	0.49
Green Roof Area	0.27
Sidewalks	0.25
Pavement	1.34
Loop Trail	0.09
Off-site SHA Improvements	0.48
Courtyard	0.03
Total Impervious	2.95 acres
Percent of Total Area (50.14 acres)	5.88%

This revision to the final water quality plan for the Laytonia Animal Shelter project is to compensate for off-site State Highway Administration (SHA) improvements to Airpark Road and adjust the impervious calculations accordingly. The proposed plan for the Animal Shelter has not changed from the previous final water quality plan approval; however 1.97 acres of off-site improvements were added to the net tract area to satisfy SHA requirements. These SHA requirements added 0.30 acres of existing impervious surface area and 0.18 acres new impervious surface are into the impervious surface calculations for the project.

This revision will correct the net tract area for the project to include off-site disturbances and account for the additional impervious surface needed to satisfy the SHA requirements. The net tract are for the project will increase from 48.17 acres to 50.14 acres and the impervious surface area for the animal shelter will increase from 2.63 acres to 2.95 acres.

Planning staff believes that the applicant has minimized the total amount of impervious surface while maintaining the public purpose and responding to requirements from SHA.

### ***Environmental Buffers***

The entire site is within the Upper Rock Creek Special Protection Area (SPA). The site contains 9.26 acres of forest, one stream, and 4.11 acres of Stream Valley Buffer (SVB). The project has no direct impacts on streams, wetlands, or environmental buffers. The applicants will be required to plant the unforested stream buffers per Section V.C.2.a on page 37 of the Environmental Guidelines.

### **County DPS Special Protection Area Review Elements**

DPS has reviewed and conditionally approved the elements of the SPA preliminary water quality plan under its purview with a synopsis provided below (see Attachment 1).

### ***Site Performance Goals***

As part of the preliminary water quality plan, the following performance goal was established for the site:

1. Minimize storm flow run off increases.
2. Minimize increases to ambient water temperatures.
3. Minimize sediment loading.
4. Maintain stream base flows.
5. Minimize nutrient loading.

### ***Stormwater Management Concept***

A stormwater management concept plan was submitted and reviewed in conjunction with the Final Water Quality Plan. The stormwater management concept is split into two parts since the animal shelter will be built prior to the recreational park portion.

The animal shelter stormwater management will consist of a combination of ESD practices that include vegetated swales, infiltration trenches, biofilters, and a 10,051 square foot green roof. This entire area will then drain to the existing SHA stormwater management pond at the northwest corner of Muncaster Mill Road and Airpark Road.

### ***Sediment and Erosion Control***

Redundant sediment control structures are required for this site; such as sediment traps/basins with forebays. All sediment trapping structures are to be equipped with dewatering devices, bringing the total storage volume to 133% of the normally required volume. In addition, due to the sensitive nature of the watershed, coupled with the magnitude of proposed development, the use of flocculants, compost material, or other measures to increase the effectiveness of sediment removal devices may be required. Finally, it is recommended that the earth dikes are constructed using trapezoidal channels to reduce flow rates while feeding the sediment traps.

Accordingly, silt fence alone will not be allowed as perimeter control; the use of super silt fence will be required.

***Monitoring of Best Management Practices***

Groundwater wells will be required and will provide continuous monitoring of groundwater levels pre- and post-construction. If the ball fields are to be treated with fertilizers or pesticides, DPS may require monitoring of chemicals that may enter into the groundwater. The location and criteria of all monitoring will need to be detailed as part of Final Water Quality Plan.

**CONCLUSION**

Staff recommends the Planning Board approve the Final Water Quality Plan with conditions.