

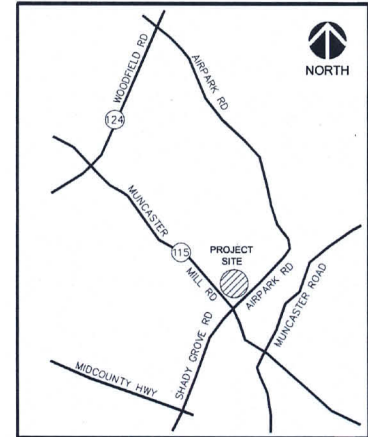


MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item #
5-12-11

MEMORANDUM

DATE: April 29, 2011
TO: Montgomery County Planning Board
VIA: John Carter, Chief *JAC*
Area 3 Planning Team
FROM: Joshua Penn, Senior Planner (301) 495-4546
Area 3 Planning Team *JP*



REVIEW TYPE: Special Protection Area (SPA) Final Water Quality Plan

PROJECT NAME: Montgomery County Animal Shelter (Laytonia)

CASE #: MR2010711

REVIEW BASIS: Chapter 50, Montgomery County Subdivision Regulations

ZONE: RE-1

LOCATION: North quadrant of the intersection of Muncaster Mill Road and Airpark Road.

MASTER PLAN: Upper Rock Creek

APPLICANT: Montgomery County Department of General Services

ENGINEER: A. Morton Thomas

HEARING DATE: May 12, 2011

STAFF RECOMMENDATIONS

Approval of the SPA Final Water Quality Plan 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 (Attachment 1).
2. Total impervious surfaces for the entire site must not exceed 9.01 acres (18.7% of the 48.17 acres).
3. Total impervious surfaces for the Animal Shelter portion must not exceed 2.56 acres (111,513 square feet). ~~2.38 acres (103,673 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.

In addition to the conditions of approval of the Preliminary Water Quality Plan the applicant was required to submit a Final Water Quality Plan for review and approval.

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 north quadrant of Muncaster Mill Road and Airpark Road. The project area is bordered to the north by the 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 the second parcel is 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 with 4.11 acres of associated 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 western most portion of the overall site. 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 one baseball field with associated parking.

Since both projects are located on the same parcels of land it was determined at the original hearing that one Preliminary Water Quality Plan and one Forest Conservation Plan was required for the entirety of both projects. Additionally, the Planning Board agreed that two separate Final Water Quality Plans would be submitted and reviewed for this site. This decision was based on the different timelines for the two projects. Parks would develop their portion of the site at a later date.

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 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 Overlay Zone regulations, a SPA Water Quality Plan should be reviewed in conjunction with a mandatory referral¹. Under the provision of the Regulations, 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's 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 the Final Water Quality Plan and finds that the Plan complies with the Environmental Guidelines for protection of sensitive environmental features, and that it complies with Chapter 22A, with respect to SPA forest conservation requirements and that with the conditions, the Plan will meet the impervious limits imposed by the Upper Rock Creek Overlay Zone.

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 that relieves public projects from holding to the strict 8% imperviousness 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.

¹ 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.”

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

The proposed project area is comprised of two separate parcels; one 31.24 acre parcel owned by Montgomery County and the other 16.93 acre parcel one owned by M-NCPPC, for a total area of 48.17 acres. The total impervious surfaces for the entire 48.17 acre 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 which in this instance is the County's Animal Shelter and the M-NCPPC, Recreation Park.

Since the Preliminary Water Quality Plan was approved, the County Animal Shelter portion of the site has moved forward and has submitted a Final Water Quality Plan. The Montgomery County Department of General Services has requested a 0.55 acre increase to the impervious surface shown on the Preliminary Water Quality Plan to accommodate road improvements and on-site amenities. The requested increase would bring the overall site imperviousness to 18.9%, or an additional 1.2%. This assumes that the future Park development remains unchanged from that shown on the Preliminary Water Quality Plan approval.

In a letter dated February 10, 2011 (updated March 28, 2011) (Attachment 2), the applicant describes the impervious surface increases and provides some explanation as to why the impervious surface area must be increased from that shown on the Preliminary Water Quality Plan. The new plan shows additional hardscape in several areas including: pavement, sidewalks, loop trail, courtyard, rooftops, and the required State Highway Administration road access improvements.

The *regulatory* elements are in response to Mandatory Referral comments and other agencies regulations. These include the addition of sidewalks along Muncaster Mill Road, an entrance sidewalk from Muncaster Mill Road to the front entrance, and roadway/frontage improvements to Muncaster Mill Road. Combined, these elements add 0.27 acres to the impervious surface coverage.

The *design* change elements consist of pavement increases due to functional changes as the construction documents were developed. The courtyard was redesigned from grass to artificial turf to help withstand constant use, and a small increase in rooftop area is now shown on the Plan. These design changes add 0.21 acres of impervious surface.

The final category consists of a desired programmatic element of a hard surface dog walk loop trail to provide stable walk surface for volunteers. The applicant states the hard surface trails since they will be used by volunteers and the public must be ADA compliant. Figure 1 below provides an area breakdown of impervious surface.

MONTGOMERY COUNTY ANIMAL SHELTER
IMPERVIOUS AREA SUMMARY TABULATION

IMPERVIOUS AREA LOCATION	PRELIMINARY WQP (AS OF 5/4/2010) (ACRES)	CURRENT PLAN (AS OF 1/26/2011) (ACRES)	DIFFERENCE (ACRES)	INCREASES IN IMPERVIOUS			TOTAL (ACRES)
				DESIGN (ACRES)	CODE (ACRES)	REGULATORY (ACRES)	
PAVEMENT	1.19	1.34	0.15	0.14		0.01	0.15
SIDEWALK	0.16	0.25	0.09	0.04	0.02	0.03	0.09
LOOP TRAIL		0.09	0.09	0.09			0.09
COURTYARD		0.03	0.03	0.03			0.03
ROOF	0.46	0.49	0.03	0.03			0.03
GREEN ROOF	0.29	0.27	-0.02	-0.02			-0.02
SUBTOTAL	2.10	2.47	0.37	0.31	0.02	0.04	0.37
SHA		0.18	0.18			0.18	0.18
TOTAL	2.10	2.65	0.55	0.31	0.02	0.22	0.55

Figure 1: Impervious Surface Increase Table

The regulatory and the design change elements proposed by this Plan, for the most part, fit well within the requirement of the Upper Rock Creek Overlay Zone to ...*“keep imperviousness to the minimum needed to accomplish the public purpose intended”*. However, staff recommends that the dog-walk, loop trail be eliminated from the plan because it is, in Staff’s opinion, not essential to the program. The trail was not shown on the Preliminary Water Quality Plan and while it might appear to be a desirable element to have available, staff believes that it is overdesigned and unnecessarily adds 0.09 acres of impervious surface to a site already 10.7% over the recommend impervious limits in the Overlay Zone. If the Animal Shelter was a standalone project on 7.0 acres, it would be 37.9% impervious, an extremely high percentage in an environmentally sensitive, Use III watershed. With this in mind, staff has looked at all means to keep imperviousness to the minimum needed to accomplish the public purpose intended.

The conditions recommended in this report reflect staff’s opinion that the dog-walk loop trail be removed. If the Planning Board believes the trail to be a necessary element for the intended public purpose, staff suggests a scaled back design that significantly reduces the pavement necessary to provide the trail element.

Other Issues

Because the impervious surface percentage is capped for the overall site but the site is being developed by two different entities at different times, raising the allowable impervious level for one “developer” will tend to affect the allowable impervious surface for the second developer, namely M-NCPPC. If the Planning Board approves an increase in the impervious surface being used on the Animal Shelter portion of the site without increasing the previously approved cap of 8.55 acres, the MNCPPC portion of the site would tend to lose that corresponding amount of impervious surface which may impact the design of the future Laytonia Recreation Center.

Planning staff recommends that if the Planning Board agrees to increase the amount of impervious surface being used by the Animal Shelter that the previously approved impervious cap be raised accordingly so that it will not negatively impact the Parks portion of the site. This recommendation is highlighted in Condition #2 and raises the allowable impervious surface area to 9.01 acres for the overall site.

With the exception of the loop trail, the increases in the imperviousness of the site being requested for the Animal Shelter are consistent with keeping impervious surfaces to the minimum amount to meet the public use intended. Staff recommends that the Planning Board approve the impervious surface increases reflected in the conditions and raise the previously imposed cap for the overall site by the same amount.

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 concept 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 in the immediate north corner of the intersection of Muncaster Mill Road and Airpark Road.

Sediment and Erosion Control

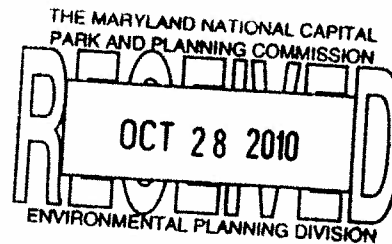
Redundant sediment control structures are required by DPS for this site; such as sediment traps/basins with forebays. All sediment trapping structures are to be equipped with dewatering devices, bringing the total storage volume to 133% of the normally required volume. In addition, due to the sensitive 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.



DEPARTMENT OF PERMITTING SERVICES

Isiah Leggett
County Executive

Carla Reid
Director

October 8, 2010

Mr. Matthew Ernest, P.E.
A. Morton Thomas and Associates
12750 Twinbrook Parkway
Rockville, Maryland 20852

Re: **Final Water Quality Plan for the
Montgomery County Animal Shelter**
SM File #: 237759
Tract Size/Zone: 7.0 Ac/RE-1
Tax Plate: GT 342
Parcels: 162
Watershed: Upper Rock Creek

SPECIAL PROTECTION AREA

Dear Mr. Ernest:

Based on a review by the Department of Permitting Services, the Final Water Quality Plan (FWQP) for the above mentioned site is conditionally approved. This approval is for the elements of the Final Water Quality Plan of which DPS has lead agency responsibility, and does not include limits on imperviousness or stream buffer encroachments.

Site Description: The proposed site is located on 7 acres of land at the northwest quadrant of the intersection of Muncaster Mill Road and Airpark Road. The site will consist of an animal shelter, parking areas and the associated infrastructure. This is located within the portion of the Upper Rock Creek watershed that has been designated as a Special Protection Area.

Stormwater Management: Stormwater management will consist of a combination of ESD practices that include vegetated swales, infiltration trenches, micro-biofilters/biofilters, a green roof and porous pavement sidewalks. The majority of the site will then drain to an existing MSHA stormwater management pond.

Sediment Control: Redundant sediment control structures are to be used throughout the site. Sediment traps/basins with forebays will be acceptable. The total storage volume is to be 133% of the normally required volume. All sediment trapping structures are to be equipped with dewatering devices. The following features are to be incorporated into the detailed sediment control plan:

1. The earth dikes that feed the sediment traps are to be constructed using trapezoidal channels to reduce flow rates.
2. Silt fence alone will not be allowed as a perimeter control. The use of super silt fence will be acceptable for small areas of disturbance.

Matthew Ernest

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www.montgomerycountymd.gov



October 8, 2010

Page 2

3. Site grading shall be minimized as much as possible immediate stabilization is to be emphasized.

Performance Goals: The performance goals that were established at the pre-application meeting are to be met as specified in the Preliminary Water Quality Plan. They are as follows:

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.

Monitoring: The monitoring must be in accordance with the BMP monitoring protocols which have been established by the Department of Permitting Services (DPS) and Department of Environmental Protection (DEP). The construction and post construction monitoring requirements will be determined upon the finalization of the actual stormwater management structure locations. Typically one sediment trapping structure is monitored during construction and one linked BMP or ESD practice is monitored for up to five years after construction is complete

Prior to the start of any monitoring activity, a meeting is to be held on site with DEP, DPS, and those responsible for conducting the monitoring to establish the monitoring parameters.

Conditions of Approval: The following conditions must be addressed in the initial submittal of the detailed sediment control plan. This list may not be all inclusive and may change based on available information at the time of the subsequent plan reviews:

1. Provide documentation from MSHA that allows developed site runoff to drain to the existing pond. Also, verify storage volume for safety storms for this pond.
2. All vehicular use areas must provide water quality pretreatment.
3. All of the proposed micro-biofilters and biofilters need to be underdrained.
4. Minimize the use of insecticides and fertilizers via an Integrated Pest Management Plan.
5. Provide safe non-erosive conveyance from the parking area to biofilters SWM #5 and SWM #6. This may require matting or some other type of fill slope protection.
6. Prior to permanent vegetative stabilization, all disturbed areas must be topsoiled per the latest Montgomery County Standards and Specifications for Topsoiling.
7. Water quality areas that are to be used for sediment control must have a minimum undisturbed buffer of two feet from the bottom of the sediment trap to the bottom of the stormwater feature.
8. A detailed review of the stormwater management computations will occur at the time of detailed plan review.

Matthew Ernest

October 8, 2010
Page 3

Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended Water Quality Plan requirements.

If you have any questions regarding these actions, please feel free to contact Leo Galanko at (240) 777-6242.

Sincerely,



Richard R. Brush, Manager
Water Resources Section
Division of Land Development Services

RRB:tlc: CN237759

cc: M. Pfefferle (MNCPPC-ED)
R. Gauza (MCDEP)
L. Galanko
SM File # 237759

Qn: on-site 7.0 ac.
Qt: on-site 7.0 ac.
Recharge provided on-site



To: Mr. Joshua Penn
Senior Planner
Montgomery County Planning Department | M-NCPPC

From: Ms. Kori Purdum Matheis
Project Architect
Proffitt & Associates Architects

Cc: Ms. Anjali Gulati
Senior Architect
Division of Building Design & Construction | DGS

Subject: Final Water Quality Plan Approval – Impervious Area Comparison Summary
New Animal Shelter for
Montgomery County, Maryland

MR #: 10711-DGS-1

Date: 10 February 2011 – **Updated 28 March 2011**

Mr. Penn:

Please see the attached updated Impervious Area tabulation drawing exhibit, which details the change in impervious area between the Preliminary Water Quality Plan submission and the current design, as requested in your January 5, 2011 e-mail. This drawing has been updated since the initial submission made on February 10 to reflect deletion of the cellular confinement system SWM access paths, which were permitted to be eliminated by DPS. Following is a narrative description explaining the required increases by category:

1. Pavement: There are a few minor increases to paved area indicated on the drawing exhibit, which were required due to functional needs as the construction documents were developed.
2. Sidewalk: Sidewalk increases are an aggregate of several functional and regulatory needs that became apparent as the design was developed, including provision of sidewalks along Muncaster Mill Road, provision of an ADA compliant path from public transportation to the building entries, provision of bike racks as requested by Mandatory Referral comments, and provision of miscellaneous concrete stoops and walks immediately adjacent to the facility.
3. Loop Trail: The loop trail is a programmatic element added at the request of animal shelter volunteers and the general public in order to provide a secured

area for outdoor exercise and dog walking, which is critical to animal well-being. Since this trail will be used by volunteers and the public, it is required to be ADA-compliant and therefore must be constructed of an impervious surface.

4. Courtyard: This increase is a result of a functional decision to modify the surfacing material of the outdoor training courtyard. At the time of the water quality plan submission, it was assumed that the courtyard surface may be grass, however based on feedback from facilities with similar functional areas, it was decided that grass was not a feasible long term surfacing solution because it will not hold up under continual training use. An artificial turf-type surface specifically designed for canine outdoor use (K-9 Grass) is now proposed for installation at this area.
5. Roof: A portion of the roof increase is a result of a slight overall building area increase required to house additional mechanical and electrical equipment space required as design details were finalized. The remainder of the roof increase includes two roof areas that were originally excluded from the calculations because they cantilever over pervious surfaces (a second floor mechanical room cantilever and an overhang at the livestock barn). We were uncertain how these areas would be classified so therefore they are included in the attached table as increase in the impervious area.
6. Green Roof: There has been a slight decrease in green roof area, which is a result of further detailing of the design. The decrease in green roof area is actually offset by a portion of the increase in standard roof area.
7. SHA: This includes the acceleration and deceleration lanes required by SHA at the new site entry point, which were not included in the original calculations. SHA also requested an increase in impervious area during their Access Permit review by requiring that a 4' bike lane be provided in addition to the standard lane configuration.

The table included on the drawing exhibit indicates increases broken down into Design, Code, and Regulatory categories. Design changes are those made as a result of programmatic revisions to the facility. Code increases include additional sidewalks required in order to ensure ADA compliance, and Regulatory increases were made as a result of permitting comments received by DPS, SHA, or other review agencies.

Measures taken to minimize Impervious Area:

- Facility was revised from its original single story configuration to two stories in order to minimize its building footprint.
- Parking provided is less than that required by Zoning Requirements for its use.
- Parking stalls at the outer edges of the parking lots are designed with wheel stops and their paved length has been minimized.

Attachments: Drawing IAS-1, dated 28 March 2011