Attachment C

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Department of Park & Planning, Montgomery County, Maryland
8787Georgia Avenue, Silver Spring, Maryland 20910

MEMORANDUM

TO: Rich Weaver, Planning Coordinator, Development Review
FROM: Mark Pfefferle, Planning Coordinator, Environmental Planning MP
VIA: Steve Federline, Supervisor, Environmental Planning SF
DATE: May 28, 2004
SUBJECT: Preliminary Water Quality Plan for Cabin Branch
Preliminary Plan 1-03110

RECOMMENDATION

Staff recommends approval of the preliminary water quality plan for Preliminary Plan # 1-03110 subject to the following conditions:

- Reforestation of the stream buffer is to begin in the first planting season after the issuance of the first grading permit by the Montgomery County Department of Permitting Services (DPS).

- A five-year maintenance period shall be required for all planted areas credited toward meeting the requirements of the forest conservation law.

- Applicant to minimize the amount of fill used throughout the site to reduce the loss of groundwater hydrology supporting the headwater wetlands, and to better preserve the hydrology necessary for existing vegetation in stream buffers. After minimization has been conducted, opportunities shall be examined at site plan to retain the 68-inch dbh specimen sycamore tree and reduce the need for extensive retaining walls.

- No encroachment into stream buffers for stormwater management facilities, or sediment control facilities, is allowed without permission of the Planning Board, except for necessary outfalls and temporary sediment control facilities in non-forested portions of stream buffers. If at later stages of stormwater review and design it is determined that the stormwater management facility is not properly sized and it must be enlarged to accommodate the proposed drainage areas, the applicant will have to find additional space outside the stream buffer. This may mean the reconfiguration of layouts and loss of developable area.

- Conformance to the conditions as stated in the DPS letter dated May 13, 2004 approving the elements of the SPA water quality plan under its purview.

DISCUSSION

This memorandum contains Environmental Planning staff's review and recommendations on the preliminary water quality plan for the Cabin Branch preliminary plan of subdivision in Clarksburg. The sections below discuss existing conditions, forest conservation, compliance with environmental guidelines, imperviousness, and stormwater management.

Background

The 540-acre property is located west of I-270 in Clarksburg. The area, also known as the Clarksburg Triangle and is within the Clarksburg Special Protection Area (SPA). West Old Baltimore Road is the southern most boundary of the property, I-270 the eastern most boundary, and MD-121 the western and northern boundaries. The property is zoned RMX and MXPD. The site includes drainage areas to Little Seneca Creek (Use IV-P SPA stream), Cabin Branch (Use I-P non-SPA stream), and Ten Mile Creek (Use I-P SPA stream). The current land uses include active agricultural, abandoned agricultural, and forest. The natural resources for the subject properties are characterized in Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) plans 4-02007, 4-02008, 4-02009, 4-02010, and 4-03340. Staff approved the NRI/FSDs in 2003.

Approximately 243-acres of the 540-acre site is within the SPA including two pods of land that drain to the Cabin Branch Tributary. The entire Clarksburg Study Area falls within the area designated as a sole source aquifer. The sole source acquifer underlays part of Montgomery, Frederick, Howard, and Carroll Counties. The "sole source" designation is used to describe an aquifer that is the only source of drinking water for a people living above the acquifer. The two pods where designated as part of the SPA because they were identified as the most sensitive areas for groundwater contamination.

The subject site contains 130 acres of forest, 11 acres of wetlands, 27 acres of floodplains and 90 acres of stream buffers. There are steep slopes (> 25%) on the property and highly erodible soils. Not all steep slopes and erodible soils are hydraulically connected to Waters of the United States. Those that are hydraulically connected to Waters of the United States are included in the stream buffers.

Water quality plans are required as part of the Special Protection Area regulations. Under the SPA law, Montgomery County Department of Permitting Services (DPS) and the Planning Board have different responsibilities in the review of the water quality plan. DPS has reviewed and conditionally approved the elements of the final water quality plan under their purview. The Planning Board responsibility is to determine if the site imperviousness, environmental guidelines for special protection areas, and forest conservation requirements have been satisfied.

Site Performance Goals

As part of the final water quality plan, several site performance goals were established for the project:

- Protect the streams and aquatic habitat.
- Maintain the nature of onsite stream channels.
- Maintain stream base flows.

- Identify and protect stream banks prone to erosion and slumping.
- Minimize storm flow runoff increases.
- Minimize increases in ambient water temperatures.
- Protect springs, seeps, and wetlands.
- Minimize sediment loading.
- Minimize nutrient loadings.
- Control insecticides, pesticides, and toxic substances.

Forest Conservation

Planting Requirements

The applicant has submitted a preliminary forest conservation plan for staff review. The applicant is proposing to remove 58.97 acres of forest, retain 71.85 acres of forest and plant 58.32 acres of forest. Part of the property is developed using an optional method of development. Section 22A-12(f) of the forest conservation law requires properties developed under an optional method of development to meet certain forest retention requirements on site. The forest conservation plan indicates that the applicant will meet the conservation threshold on onsite and that they will meet all planting requirements through a combination of onsite forest retention, onsite planting of unforested stream buffers, and landscape credit.

Under the M-NCPPC's implementation of the Special Protection regulations, the Environmental Guidelines require accelerated reforestation of stream buffers within SPAs. Since the property includes land both in and out of the SPA and the tributaries drain to a common water body, Environmental Planning staff is requesting the planting requirements be treated as if the entire site is located within the Clarksburg SPA. Therefore, Environmental Planning is requesting a condition on the preliminary plan of subdivision requiring the applicant to plant the stream buffers after DPS approval of the first sediment control/grading permit and that the applicant provide a five-year maintenance period for all planting areas credited toward the forest conservation plan.

Tree Save

Environmental Planning staff has repeatedly requested the applicant to preserve a 68-inch diameter at breast height (dbh) sycamore tree that is located outside of the stream buffer and is in good condition. Staff first requested preservation prior to the rezoning case. The tree has a circumference of 213 inches, which is 85 percent of the County champion sycamore tree.

Staff has requested the applicant to modify the site and retain an arborist to identify ways to preserve the tree. Community based planning staff supports Environmental Planning's request to preserve the tree. Staff does not believe the applicant has made reasonable efforts to protect the tree. The applicant's preliminary plan proposes to remove the tree and replace it with 22 feet of fill. The applicant has not provided staff with other layouts that minimizes the amount of fill in the tree's location nor has the applicant provided staff with other alternatives. The only reasonable solution to protect the 68-inch sycamore tree is for the fill to be greatly reduced by having applicant take advantage of existing topography.

Environmental Guidelines

The environmental guidelines for SPAs require examination of many tools to maximize achievement of site performance goals. For instance, the goal of protecting seeps, springs, and wetlands is better achieved with naturalized buffers surrounding these areas. The NRI/FSDs for the various properties included in this preliminary plan identified the environmental buffers. Environmental buffers include wetlands and wetland buffers, floodplains, and streams and stream buffers. As part of the *Environmental Guidelines*, the stream buffer must be reforested. Where trees do not currently exist in the stream buffers, the applicant will plant new forests. The applicant will place forest conservation easements on the environmental buffers and all forest retention areas.

Stream Buffer Encroachments

The only encroachments into the environmental buffers associated with this plan are necessary stormwater management conveyances, some utilities, natural surface trails, widening of West Old Baltimore Road, and construction of A-302 (Little Seneca Parkway)/I-270 Interchange.

Environmental Planning has concerns with encroachment of ever enlarging stormwater management facilities and temporary sediment control traps into stream buffers even after the approved water quality/stormwater management concept plans indicate no encroachment. The final design of stormwater management facilities does not occur until after preliminary/site plans are approved and often after plats are approved locating roadways and individual lots. The applicant submits grading/stormwater management plans to DPS for review and approval. If more space is required for stormwater management because of ponds incorrectly sized during the water quality/stormwater concept stage, Environmental Planning receives requests to allow encroachment into the buffers. Many times the encroachment can be avoided by reconfiguring the stormwater management facilities but sometimes there is no alternative but to allow the encroachment or the facility is constructed with undesirable features such as steep slopes from the rear of residential units into stormwater management facilities.

Environmental Planning would like to include a condition of approval of this water quality plan that requires the applicant to honor the approved stream buffers and that all permanent stormwater management facilities, except for necessary conveyances, but kept out of the stream buffer and that no temporary sediment control facilities be located in forested stream buffers. The *Environmental Guidelines* permit temporary sediment control facilities in unforested portions of stream buffers, which are recommended to continue for this site. If the applicant is prohibited from encroaching into the stream buffers, it will offer the permanent protection required by the *Environmental Guidelines*. At the same time, it may require the reconfiguring the lots/roadways outside the stream buffers or result in a loss in developable area approved by the Planning Board.

Protection of Seeps, Springs and Wetlands

One of the performance goals for this preliminary water quality plan is to protect springs, seeps, and wetlands. The applicant has not provided DPS with sufficient information to determine what impacts deep cuts and fill areas will have on groundwater recharge and stream base nor does Environmental Planning believe sufficient information is submitted to protect springs, seeps and

wetlands. Condition of Approval #2 on page 3 of the May 13, 2004 approval letter requires the applicant to *"Provide a geotechnical study/evaluation of the potential effect that the proposed deep cut and fill areas will have on groundwater recharge and stream base flow."* The Department of Permitting Services is responsible for determining and ensuring the performance goals are achieved. It is M-NCPPC's responsibility to protect seeps, springs, and wetlands through the delineation of stream and wetland buffers.

Protection of the valuable resources also depends upon maintaining the hydrological source. If the water source feeding the wetlands and associated wetland vegetation is altered or stopped, the wetlands will disappear or the quality will decrease. Changes in hydrology will negatively impact the existing vegetation. Wet loving trees grown in wet conditions will not be able to tolerate permanently drier conditions. This has the potential to create gaps in the tree canopy, encourage ambient temperature increases of surface water that may collect in the former wetland, and invite invasive plants to inhabit the altered environments.

Environmental Planning staff does not believe the water quality plan submitted can guarantee the protection of some of the seeps, springs and wetlands on the site. The primary reason is the excessive cutting and fill proposed for the site. Cut and fill operations

- Alter existing hydrology
- Inhibit groundwater recharge into native soils
- Takes away opportunities to save natural features
- Soil removal eliminates most filtering and final cleansing of water before it enters the groundwater table
- Cuts may intersect bedrock and groundwater providing ready access for pollutants without the benefit soil cleansing.

Site Imperviousness

There are no impervious limitations within the Clarksburg SPA; however, the Special Protection Area regulations allow M-NCPPC to review imperviousness and to work with the applicant to reduce imperviousness. The impervious amount proposed for the 535-acre site is 38 percent in the SPA and 41 percent for the entire Cabin Branch development area. Impervious data is not available for sites of this size and mixture of units and square foot of commercial/office space. When individual site plans are submitted for the various portions of this preliminary plan, Environmental Planning will make a thorough assessment to identify ways to reduce impervious surfaces.

Stormwater Management

To help meet these performance goals, the stormwater management plan requires water quality control and quantity control to be provided through an extensive system of linked best management practices (BMPs). Stormwater quantity control will be provided by 13 extended detention dry ponds. These facilities are designed with a maximum retention time of 12 hours for the one-year storm. Stormwater quality control is provided via a treatment train consisting of recharge structures, surface sand filters, bio-filtration structures, dry swales, structural water

quality inlets and vegetated buffer filtering. The preliminary water quality plan includes 260 stormwater management facilities.

Redundant sediment control facilities are required during construction of the site. This means upland sediment traps will drain to secondary traps downgrade. DPS will not allow silt fences as lone perimeter control.