THE MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION

MCPB
Item # 4
August 1, 2002

MEMORANDUM

TO: Montgomery County Planning Board

FROM: Mark Pfefferle, Planning Coordinator
County-wide Planning Division

VIA: Jeff Zyontz, Chief
County-Wide Planning Division

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County-Wide Planning Division

DATE: July 25, 2002

SUBJECT: Special Protection Area (SPA) Combined Preliminary and Final Water Quality Plan for the Rocky Hills Middle School, Clarksburg
(Mandatory Referral # 02303-MCPS-1)

STAFF RECOMMENDATION

Staff recommends approval of the Special Protection Area (SPA) combined preliminary and final water quality plan subject to the following:

- Conformance to the conditions as stated in the Montgomery County Department of Permitting Services (DPS) letter approving the elements of the SPA water quality plan under its purview.

DISCUSSION

There are two items for Planning Board review for the Rocky Hills Middle School Project: the SPA Combined Preliminary and Final Water Quality Plan and the mandatory referral, which is the agenda subject immediately following this item.

This memorandum contains staff's review and recommendation on the SPA combined preliminary and final water quality plan for the proposed project. A separate memorandum, prepared by Community-based Planning staff, covers the mandatory referral application.

The Planning Board must act on the SPA water quality plan before it can act on the mandatory referral application.

Site Description

The subject property is located in the northwest quadrant of Frederick Road (MD-355) and proposed Little Seneca Parkway in Clarksburg. The 23.3-acre site lies within the Seneca Creek watershed and drains directly to the Use IV-P (recreational trout waters and public water supply) stream. There are no streams or stream buffers within the project limits. The subject property is mainly active agricultural land that is currently planted with soybeans. Only 0.3 acres of forest exists on the property along the northwest property line. This forest is contiguous to a larger forested area. The subject property slopes steeply to the southeast corner and rises to a saddle in the center before dropping off again to the northwest.

Proposed Project

The proposed onsite project work consists of constructing a three-story 144,000 square foot school building, ball fields, tennis and basketball courts, bus drop off lanes, and approximately 140 parking spaces.

REVIEW FOR CONFORMANCE TO THE SPECIAL PROTECTION AREA REQUIREMENTS

This review includes both the preliminary and final water quality plans, which is required as part of the Special Protection Area regulations. Under the SPA law, 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 preliminary/final water quality plan under their purview. The Planning Board responsibility is to determine if the environmental buffer protection, SPA forest conservation and planting requirements, and site imperviousness limits have been satisfied.

Site Performance Goals

As part of the pre-application water quality plan meeting, several site performance goals were established for the project. These include:

- Minimize any increase in stormwater runoff
- Minimize the ambient temperature of stormwater (infiltrate as much as possible, 12 hour extended detention, use dry ponds over wet ponds)
- Minimize sediment loading (redundant erosion and sediment controls and immediate stabilization)
- Minimize nutrient loadings.

Site Imperviousness

There are no impervious surface restrictions for development plans in the Clarksburg SPA. M-NCPPC staff requested Montgomery County Public Schools (MCPS) to explore utilizing a green roof for the school. A green roof would lower the overall imperviousness of the site and provide credit toward the overall stormwater management requirements. A green roof involves a special root repelling membrane, a drainage system, a lightweight growing medium and plants. When correctly designed and installed, green roofs are maintenance free. Green roofs not only retain the rainwater, but also moderate the temperature of the water and act as natural filters for any of the water that happens to run off. Water collected in a green roof is stored by the substrate and then taken up by the plants from where it is returned to the atmosphere through transpiration and evaporation. Other benefits from green roofs include improved air quality, inside building temperature regulation, and sound insulation. At this time, MCPS has chosen not to pursue a green roof for Rocky Hills Middle School. The proposed school site will result in 28.6 percent of the site being impervious.

Environmental Buffers

There are no streams or environmental buffers on the subject property.

Forest Conservation

There exists a small, 0.3-acre, forest stand along the northwest property line. The applicant is proposing to grade all the subject property except for 0.2 acres of forest. The forested area lost will be for the construction of a roadway around the school site. The development proposal requires the planting of 3.4 acres of forest. The applicant is proposing to meet these requirements through a combination of on- and off-site plantings. MCPS has not selected an off-site planting location as this time although it will be within the Clarksburg SPA.

Stormwater Management

To help meet these performance goals, the applicant will construct four water quality and one water quantity structures on the project site. The stormwater management structures will be located at the lower portions of the property, near Little Seneca Parkway, and away from the active play areas. The four water quality structures will be combined surface sand filters and dry ponds. Water quantity will be controlled by underground storage pipes.

Sediment and Erosion Control

DPS is requiring the use of super silt fencing around the perimeter of the disturbed areas. Immediate stabilization of the site is also encouraged.

Monitoring of Best Management Practices

DPS has determined that total suspended solids monitoring is necessary at the inlet and outlet for the largest sediment control facility. Additionally, the Department of Environmental Protection (DEP) required the applicant to install three groundwater-monitoring wells and to monitor these

wells prior to construction, during construction, and post-construction. DEP has requested the monitoring wells remain in place and be used as a teaching tool when the post construction monitoring requirement is met.