



MONTGOMERY COUNTY DEPARTMENT OF PARKS

THE MARYLAND - NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB Item # 9

March 31, 2011

MEMORANDUM

March 23, 2011

TO: Montgomery County Planning Board

VIA: Mary Bradford, Director of Parks *M Bradford*
 Mike Riley, Deputy Director of Parks *MR*
 John E. Hench, Ph.D., Chief, Park Planning and Stewardship Division *J Hench*
 Doug Redmond, Natural Resources Manager, Park Planning and Stewardship Division *D Redmond*

FROM: Jai Cole, Principal Natural Resources Specialist, Park Planning and Stewardship Division *Jai Cole*
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PROJECT: ICC Environmental Stewardship-Compensatory Mitigation (ES-CM) Project PB-1
 (Peach Orchard-Allnutt Property Wetland Creation Project)

REVIEW TYPE: Mandatory Referral No. 1009-SHA-1 ICC Compensatory Mitigation

APPLICANT: Maryland State Highway Administration (SHA)

APPLYING FOR: Plan Approval

RECOMMENDATION: Approve the construction of wetland creation project PB-1 in the Paint Branch Special Protection Area (SPA) as part of the ICC Environmental Stewardship and Compensatory Mitigation Program.

Background

As a part of the ICC Environmental Stewardship and Compensatory Mitigation Program, the State Highway Administration (SHA) is completing a number of stream restoration, wetland creation, and stormwater management projects throughout Montgomery County. Many of these projects focus on the Upper Paint Branch SPA to help restore this watershed's high water quality and unique self-sustaining brown trout population. The wetland creation project included in this memo, referred to as PB-1, is a proposed compensatory mitigation project located at the headwaters of Right Fork Paint Branch, a Use III trout stream. The project is direct mitigation for loss of wetlands due to the ICC mainline construction. These efforts will help improve water quality both onsite and downstream in terms of temperature and water clarity.

The PB-1 project takes place near Burtonsville, bounded on the north by Maryland Route 198 (Spencerville Road) and on the west by Peach Orchard Road (*Figure 1*). The project site includes a portion of two parcels owned by M-NCPPC, while SHA owns the remainder of the project area (*Figure 2*).

The site is the former location of two farm homesteads, and remnants of farming activities continue to impact the site, including a wet pond, three old farm road crossings, and miscellaneous channel alterations. It was then purchased by Winchester Homes and rough grading for a proposed subdivision was begun, including residential roadways and sediment control and stormwater management infrastructure. However, the development of the site was never completed and SHA purchased the property for the ICC.

The grading performed by Winchester Homes has altered the topography of the upland to be relatively flat with steep slopes down to the stream channels. Additionally, many of the previously farmed areas of the site have filled in with forest, and cleared areas of the development site and along Route 198 have been colonized by non-native invasive vegetation. Wetland creation will consist of re-grading and excavating upland areas where the topography has been altered during early construction of the residential subdivision. Invasive species removal and management are proposed for areas that have been colonized by non-native invasive species.

Design

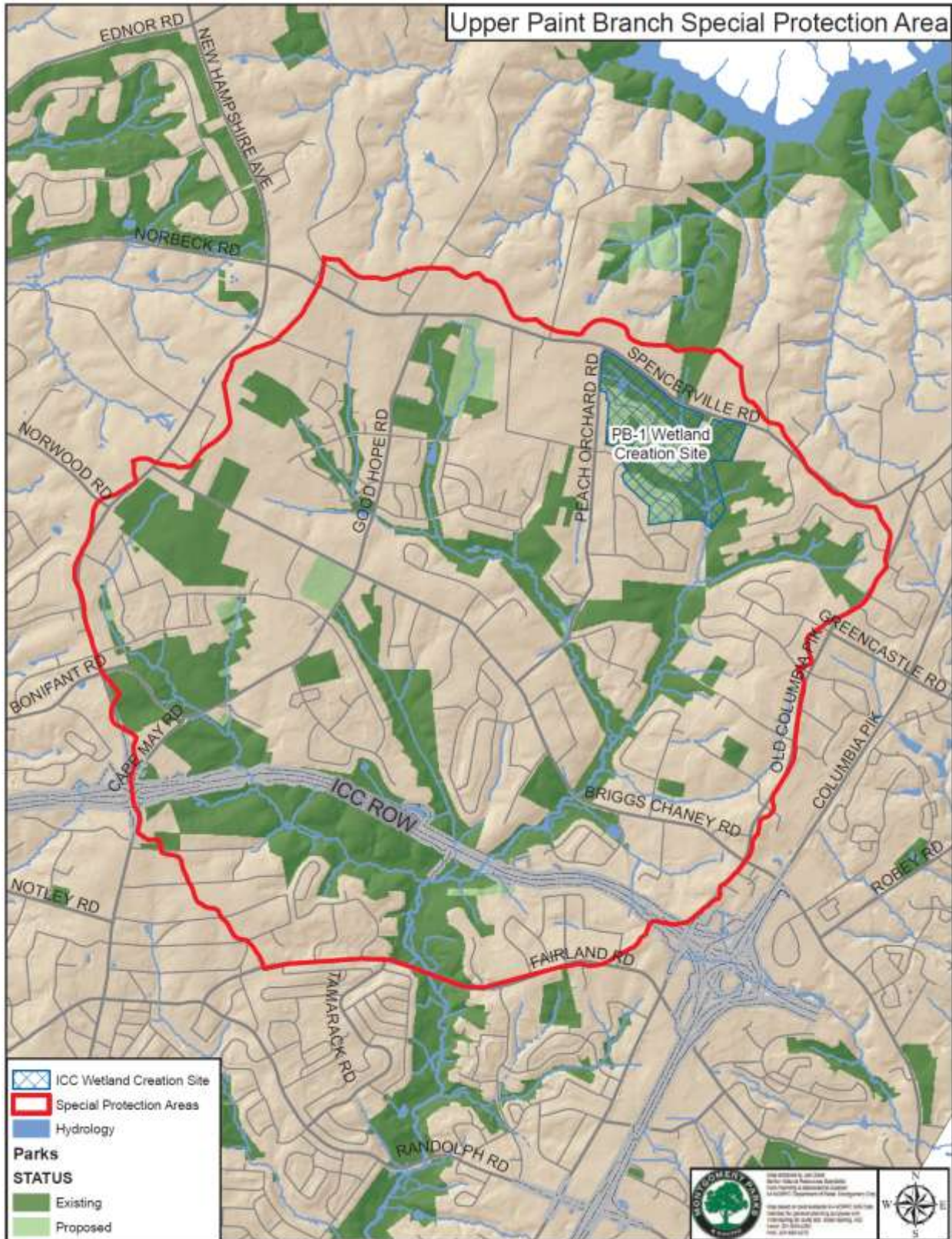
The collection and analysis of design data has been continuous since 2005 when the site was identified for restoration. In order to understand the stream and wetland systems, identify concerns, and ultimately set reachable restoration goals, these studies incorporate hydraulic modeling, hydrology, watershed history, geomorphic assessment, and habitat and biological assessments. Concept designs for this site were developed and reviewed by state and federal agencies as well as Montgomery County Department of Environmental Protection (MCDEP) and M-NCPPC.

The restoration concept for PB-1 includes the following efforts:

- Enhance infiltration to supplement groundwater hydrology and reduce thermal impacts downstream
- Re-establish pre-development contours for consistency with adjacent landforms and to maximize wetland area
- Reduction of sediment sources on-site
- Remove and manage invasive species, including reforestation with a mix of native wetland and upland species.

Cumulatively, the project consists of the creation of 12.3 acres of wetlands (7.9 acres of forested wetlands, 4.2 acres of scrub-shrub wetlands, 0.2 acres of emergent wetlands), approximately 45 acres of upland reforestation and 1.3 acres of riparian buffer plantings. The new wetlands will receive hydrology primarily from surface water runoff, and will be planted with native vegetation. The majority of the wetland creation will take place in the relic farm ponds and Winchester Homes' sediment basins that currently occupy the landscape. Stream activities consist of the removal of three failing culverts (one on the South Branch, and two on the North Branch) and replacement with open-channel constructed riffles, therefore improving 187 linear feet of stream channel. Floodplain areas immediately adjacent to the culverts will be graded to a natural topography and planted with native riparian vegetation. The PB-1 project will promote infiltration of surface water and groundwater recharge at the site.

Figure 1: PB-1 Site Location



The project will also include extensive removal and treatment of Bradford Pear (*Pyrus calleryana*) and Autumn Olive (*Elaeagnus umbellata*); both are non-native invasive species that are dominant in portions of the site. Planting of native trees will occur throughout the non-native invasive species removal and treatment areas.

In addition to the stated restoration objectives and concepts, the importance of this site with regard to the water quality in Upper Paint Branch Special Protection Area (SPA) and the target species of brown trout is recognized. The design approach focuses on the importance of this coldwater fishery and the analysis of data to promote positive effects on physical conditions (e.g. groundwater recharge, coldwater input, reduction in fine sediment inputs), which are known to sustain biological conditions for brown trout.

Access

Access to the restoration areas will require specialized access routes that are designed to protect natural resources while providing the minimum space required for constructing the proposed improvements. Access for this project has been closely coordinated with M-NCPPC staff to minimize forest and other natural resource impacts.

Construction access to the project area is proposed from four locations (*Figure 2*). One construction access point to the project is off of Peach Orchard Road south of Spencerville Road (MD 198) from the entrance graded by Winchester Homes. There are two access points off of Spencerville Road (MD 198) onto existing dirt roads. The final construction access point is at the southern tip of the site at the dead end of Timberlake Drive. Construction access points will be temporary.

A permanent access will be created in order to provide maintenance access for MCDEP and M-NCPPC to the stormwater facilities in the southern portion of the site. This will be from the dead end of Hildegard Lane.

All staging areas located near site access points will allow for deliveries to take place safely and with minimal impact to traffic. These areas will be fenced properly to prevent community access to the construction site.

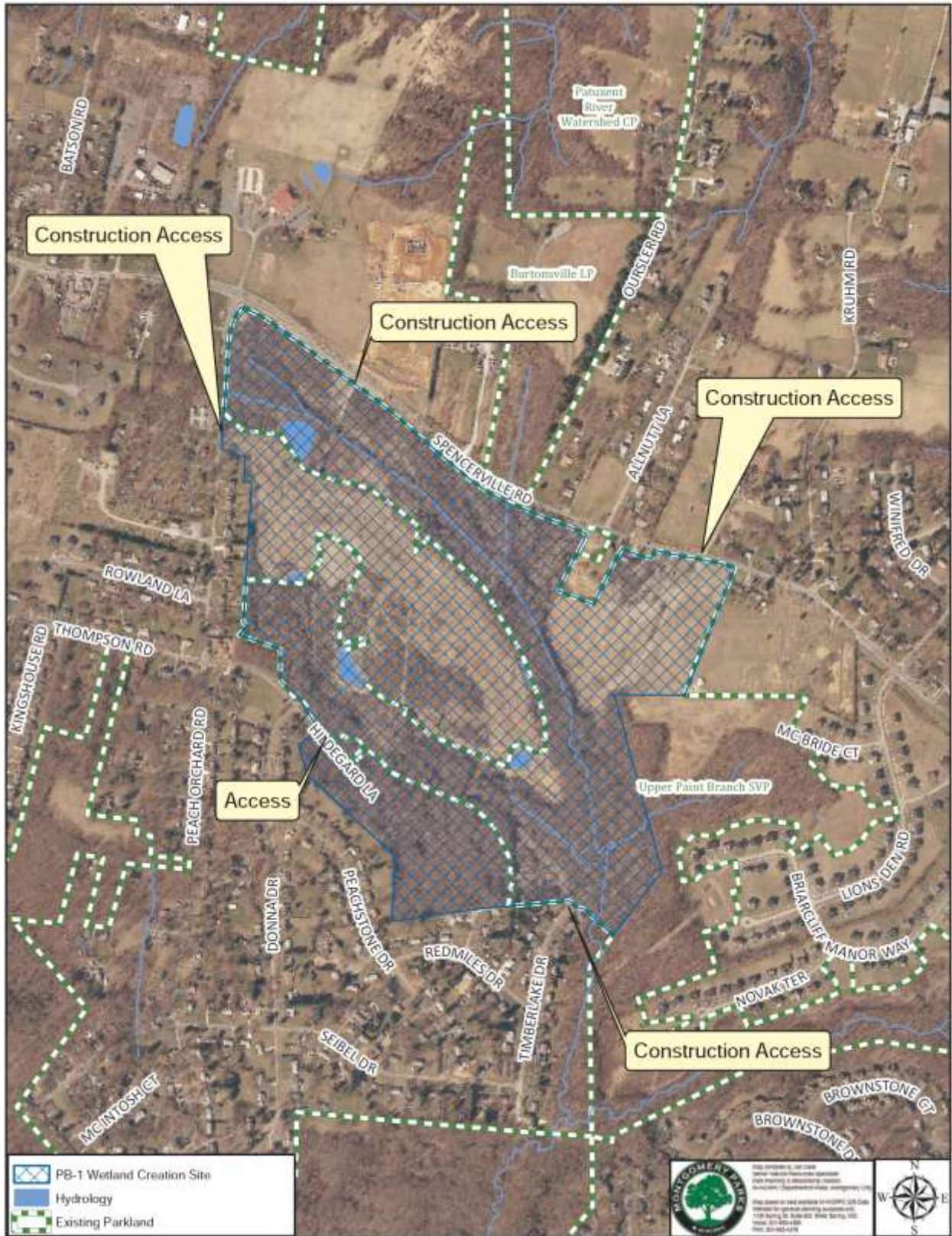
Traffic Control

SHA will coordinate with the appropriate staff of the Montgomery County Department of Transportation for construction access and materials transport. The project plans address maintenance of traffic and safety considerations for access from residential streets and county roads. In areas where communities are adjacent to work areas, blaze orange fencing and signage will be installed for safety purposes. As discussed above under *Access*, temporary staging areas for this project have been proposed in areas that will allow deliveries to take place safely and with minimal impact to local traffic.

Implementation

Construction is expected to begin in June 2011 following the award of the contract under the normal SHA bid process that is used for similar environmental contracts.

Figure 2: Access to PB-1 Site



Wetland and Stream Impacts

SHA and the Department of Parks have coordinated efforts to ensure that natural resource impacts are avoided or minimized to every extent possible while still meeting the goals of the restoration. Numerous field reviews have taken place to ensure that access, stream work, and landscaping do not unduly impact natural resources.

Temporary impacts to jurisdictional waters including wetlands or their buffers will occur as a result of this project. Approximately 187 linear feet of temporary stream impact will occur to waters of the U.S. associated with removal of the three culverts and stabilization/restoration to a natural open-channel through construction of riffle grade control structures. There is also approximately 0.64-acre of temporary impact to wetlands associated with access and wetland enhancement/expansion opportunities. These impacts have been minimized to the greatest extent practicable during field reviews of the design plans. All temporary access paths where construction equipment will traverse wetlands will require the placement of protective wood mats. These mats will distribute the weight of the equipment to protect the integrity of the wetland. When access through these areas is no longer needed, the wood mats will be removed and the area re-stabilized with vegetation as necessary. Canopy trees adjacent to wetlands were avoided whenever possible.

Wetland and stream impacts are being coordinated and permitted as required with the Maryland Department of the Environment and the U.S. Army Corps of Engineers.

Maryland Historical Trust

In April 2008, a Phase I archeological survey was completed of a 129-acre parcel referred to as PB-1. The project area is situated within the Council for Maryland Archeology Research Unit 12, the Potomac Drainage. The archeological investigation included pedestrian survey and excavation of 1,106 shovel test pits.

Two historic sites were identified as well as four prehistoric and 38 historic and modern isolated finds. Site 18MO670 represents the remains of Griffith Search, a farmstead that was occupied from the mid 19th to the late 20th century. The archeological site is approximately 160 by 70 meters in size and includes a low-density deposit of mid 19th to late 20th century artifacts. Artifacts representing the entire occupation span were recovered from all artifact-bearing strata; no temporally stratified deposits were present, and no features were found. The site has been significantly disturbed as a result of demolition of the standing buildings after 1996 and subsequent grading and filling in preparation for development.

Site 18MO671 represents the remains of an outbuilding likely associated with the Waters farmstead, which was occupied from the late 19th to the late 20th century. The site is 20 by 30 meters in size and includes the cinderblock foundation of an outbuilding and a low-density scatter of early to late 20th century artifacts. Due to extensive disturbance, no archeological evidence was found of the Waters house itself.

A light scatter of late 19th through 21st century artifacts was found across the project area, with the majority of the material present on the ridge top. These materials represent isolated finds and later disturbance.

Sites 18MO670 and 18MO671 do not have potential to yield significant information about area history and do not retain integrity. In addition, the isolated finds do not have the potential to yield significant information about history.

No further archeological investigation was recommended for the PB-1 project area. SHA coordinated this Determination of Eligibility and Effect, as well as the finding that there are no historic structures identified with this site, with MHT by letter dated May 27, 2009 and received concurrence from MHT dated July 2, 2009. A letter from SHA to MHT, dated February 14, 2011, states that there will be no adverse effect to historic standing structures or to archaeological resources and that no further investigation is warranted.

Forest Impacts and Conservation

Disturbance to the forest floor will occur during this project for construction access and grading. An extensive reforestation/planting plan has been developed as part of this project and impacts are being coordinated with the Maryland Department of Natural Resources (DNR) as required in accordance with the State of Maryland Forest Conservation Act (MDFCA). A Forest Stand Delineation for DNR has been completed and approved by DNR on February 16, 2011 (FCA# C11-27).

Limited impacts to forested areas are required for construction of the project and are being coordinated with DNR, including mitigation required under the MDFCA. Under MDFCA requirements, both afforestation and reforestation are required and will be mitigated on site as part of the proposed State of Maryland Forest Conservation Plan (MDFCP). The MDFCP has been prepared and is currently under review by DNR. Based on the afforestation and reforestation ratios applied to the project, the MDFCP specifies approximately 19.0 acres of forest retention will be preserved under a long-term protection agreement with DNR. Impacts to both native and non-native dominated forest stands will be mitigated for as part of the MDFCP. The project will include the removal of 8.9 acres of four forest stands that are dominated (85 to 90%) by non-native invasive Bradford Pear (*Pyrus calleryana*) and Autumn olive (*Elaeagnus umbellata*). Approximately 0.2 acres of impacts to Stand 2, which is dominated by red maple (*Acer rubrum*) and tulip poplar (*Liriodendron tulipifera*), will be required in order to access one of the stream culverts for removal and stabilization. A detailed tree survey has been conducted for this access area in order to minimize and avoid impacts to trees that are 6" or greater in diameter at breast height (DBH). Extensive planting of trees and shrubs will occur as a part of the PB-1 project for both restoration of project impacts and reforestation of non-forested areas. Upland reforestation is proposed in areas currently dominated by Bradford Pear (28.8 acres). Approximately 38.9 acres of reforestation are proposed within areas area previously cleared for the Winchester Homes development. A total of 45 acres of upland reforestation is proposed in conjunction with the wetland mitigation.

A Montgomery County Forest Conservation Plan (FCP) was approved by the Montgomery County Planning Board on July 24, 1997 for the Peach Orchard and Allnutts properties. Since SHA has purchased those properties and is proposing to clear and grade on the subdivisions' sites, SHA will submit an amendment to the approved Final FCP for review and approval by M-NCPPC prior to the start of its PB-1 project.

SHA and the Department of Parks have coordinated efforts to ensure that natural resource impacts are avoided or minimized to every extent possible while still meeting the goals of the restoration. Numerous field reviews have taken place to ensure that access, site work, and landscaping do not unduly impact natural resources.

Air and Noise

As proposed, the project is not expected to have any significant effect on traffic within the adjacent communities. Therefore, an environmental traffic noise analysis and assessment was not conducted. The construction phase of the project has the potential to temporarily impact the local ambient air quality by generating dust through activities such as vehicle traffic, excavation, and materials handling. SHA has addressed this possibility by establishing “*Standard Specifications for Construction and Materials*” that specifies procedures to be followed by contractors involved in site work.

Public Meetings

A public meeting was held on May 25, 2010 to provide the community an opportunity to review and comment on plans for the project. Representatives from SHA were in attendance.

Funding

The proposed compensatory mitigation project is being funded by the Maryland State Highway Administration.

Maintenance

Following construction, the maintenance and monitoring of the site will be conducted by SHA for five years, or until deemed successful by the regulatory agencies. Upon completion of the maintenance and monitoring period, the entire project, including areas currently owned by M-NCPPC and areas currently owned by SHA, will be transferred to M-NCPPC in accordance with the Master MOU. The stream stabilization and wetland restoration techniques proposed are designed to be self-sustaining, so long-term maintenance of these areas should be minimal.

The stormwater facility on the southern portion of the site (under M-NCPPC ownership) actively collects offsite drainage from impervious areas. Following any work in this area, the initial period of maintenance and monitoring of the site would be conducted by SHA until the pond is accepted by the County. MCDEP is responsible for structural maintenance of all SWM within the right-of-way and on parkland. M-NCPPC is responsible for all non-structural maintenance (i.e. landscaping, mowing, and trash/debris removal) for all SWM facilities on parkland.

PC:

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