WETLAND AND WATERWAY DELINEATION REPORT FOR THE I-495 AND I-270 MANAGED LANES STUDY COMPENSATORY STORMWATER QUALITY TREATMENT SITES

Wetland and Waterway Delineation Report for the I-495 and I-270 Managed Lanes Study
Compensatory Stormwater Quality Treatment Sites

INTRODUCTION

The I-495 & I-270 Managed Lanes Study (MLS) is required to comply with Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344); the State of Maryland Environment Article Title 5, Subtitles 5 and 9 of the Maryland Annotated Code; and COMAR Title 26 to protect wetlands and waterways. All impacts to wetlands and waterways that would result from the construction of the MLS are required to be included in the Final Environmental Impact Statement (FEIS) and impacts for Phase I South of the MLS are required to be included in the revised Joint Permit Application (JPA). The MLS stormwater quality treatment requirement cannot be met onsite and therefore stormwater facilities must be constructed offsite to meet the MLS stormwater quality treatment requirement. These compensatory stormwater quality treatment facilities have the potential to impact wetlands, their buffers, and waterways and therefore these resources were delineated within the potential compensatory stormwater quality treatment limits of disturbance (LODs) to determine this impact.

On behalf of the Maryland Department of Transportation State Highway Administration (MDOT SHA), the MLS Natural Resources Team conducted a review of 1,000+ potential compensatory stormwater quality treatment sites identified to meet the stormwater quality requirements of the MLS from October 2020 through October 2021. Based on the selection of the Preferred Alternative (Alternative 9 – Phase 1 South), further analysis and development of the on-site SWM, and efforts to meet stormwater quality treatment requirements closer to the Phase 1 South corridor while minimizing impacts to private properties and environmental resources, the number of compensatory stormwater quality treatment sites was reduced to 67 sites, all of which are stormwater quality treatment. The compensatory stormwater quality treatment sites selected are to support and inform the Joint Permit Application (JPA), the Final Environmental Impact Statement (FEIS), and Record of Decision (ROD). Delineation results from the selected 67 off-site compensatory stormwater quality treatment sites are presented in this appendix.

A total of 3 stream segments were delineated within the 67 compensatory stormwater quality treatment sites identified for the MDOT SHA Preferred Alternative, and are listed alphanumerically in **Attachment A**.

Supplemental information supporting the wetland and waterways delineation is included in **Attachments A** through **D**, as follows:

Attachment A:	Waterway Feature Table
Attachment B:	Agency Correspondence
Attachment C:	Field Datasheets
Attachment D:	Photo Documentation

BACKGROUND INFORMATION

The I-495 & I-270 MLS Natural Resources Team environmental scientists conducted a desktop investigation of mapped site topography; 100-year FEMA floodplain; vegetative cover; non-tidal and tidal wetlands and waterways; soil map unit boundaries; and hydric and highly erodible soils. Sources of these data included:

- The United States Geologic Survey (USGS) Geographic Information System (GIS) Quadrangle Mapping;

- The United States Department of Agriculture (USDA), NRCS *Web Soil Survey (WSS) for Montgomery, Anne Arundel, and Prince George's Counties, Maryland*;
- US Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) GIS data;
- Maryland Department of Natural Resources (MDNR) Wetlands and Waters GIS data; and FEMA GIS floodplain mapping.

Desktop investigations served as the foundation for the wetland delineation. The potential stormwater quality treatment sites are located within the Piedmont Plateau and Atlantic Coastal Plain Physiographic Provinces. Note that no potential stormwater quality treatment sites are located within the FEMA 100-year floodplain or the Chesapeake Bay Critical Area and no potential compensatory stormwater quality treatment sites are within MDE Tier II catchments.

On December 13, 2021, a USFWS IPaC online database query indicated that the federally threatened Northern Long-Eared Bat (NLEB) (*Myotis septentrionalis*) and candidate species Monarch Butterfly (*Danaus plexippus*) may occur in the compensatory stormwater quality treatment LODs. The USFWS determination key for this species concluded that the construction of the compensatory stormwater quality treatment LODs may affect the NLEB; "however, any take that may occur as a result of the Action is not prohibited under the EFA Section 4(d) rule adopted for this species at 50 CFR §17.40(o)." The verification letter produced from the determination key states that the answers provided in the key conclude the coordination under ESA Section 7(a)(2) with respect to the NLEB. Section 7 coordination is not required for the Monarch Butterfly. Requests for information on the presence of fisheries resources and RTE species were sent to the Maryland Department of Natural Resources Environmental Review Program (MDNR-ERP) and Wildlife and Heritage Section (MDNR-WH) on December 14, 2021. MDNR-ERP allows applicants to pre-screen projects using their new online Aquatic Resources Pre-Screening Tool. The pre-screening tool did not indicate the presence of any sensitive species project review areas, Tier II watersheds, or trout populations within the compensatory stormwater quality treatment LODs. A response from MDNR-WH was received on February 1, 2022, stating that there are no specific concerns or recommendations regarding potential impacts to state or federal listed, candidate, proposed, or rare plant or animal species within the 67 off-site compensatory stormwater quality treatment LODs provided. Agency correspondence documents can be found in **Attachment B**.

FIELD ASSESSMENTS – WETLAND DELINEATION

METHODS

The study area was split into 11 field sub-segments, Sub-segments 30-40, for the purposes of the off-site compensatory stormwater site wetlands and waterways field investigation, and field sub-segment numbers were incorporated into the naming convention of features within each sub-segment. Wetlands and waterways were delineated if identified within the potential stormwater quality treatment LODs and within a 25-foot buffer of each of the LODs to ensure that any wetland buffers were delineated within the LODs.

Wetland features were delineated in accordance with the following:

- U. S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0.* Ed. J.F. Berkowitz, J.S. Wakeley, R.W. Lichvar, C.V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: US Army Engineer Research and Development Center;
- U. S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0.* Ed. J.F. Berkowitz, J.S.

Wakeley, R.W. Lichvar, C.V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: US Army Engineer Research and Development Center; and,

- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. Technical Report Y-87-1.

These manuals employ a three-parameter approach to wetland identification using (1) hydrology, (2) hydrophytic vegetation, and (3) hydric soils. All three parameters must be present for an area to be considered a jurisdictional wetland under Section 404 of the Clean Water Act (CWA). Routine wetland determination methods with onsite inspection were used to determine the presence of wetlands in the study area.

Wetland scientists completed a functions and values assessment for all delineated wetlands using the USACE New England Method as presented in The Highway Methodology Workbook Supplement – Wetland Functions and Values; A Descriptive Approach (USACE, 1999). Along with the best professional judgment of an experienced wetland scientist, this method uses the presence of certain physical characteristics broadly understood to indicate the presence of related functions. The functions and values assessed include:

- Groundwater recharge/discharge,
- Floodflow alteration,
- Fish and shellfish habitat,
- Sediment/toxicant/pathogen retention,
- Nutrient removal/retention/transformation,
- Production export,
- Sediment/shoreline stabilization,
- Wildlife habitat,
- Recreation,
- Educational/scientific value,
- Uniqueness/heritage,
- Visual quality/aesthetics, and
- Endangered species habitat.

Waterways features were delineated using the limits defined in 33 Code of Federal Regulations (CFR) § 328. The boundaries of nontidal waterways features were set at the ordinary high water (OHW) mark and include, but are not limited to: palustrine open water (POW or ponds), stream systems (waterways), and some disturbed areas. The OHW mark was determined in the field using physical characteristics established by the fluctuations of water (e.g., change in plant community, changes in the soil character, shelving) in accordance with USACE Regulatory Guidance Letter No. 05-05. Federal jurisdiction of delineated features was determined in accordance with the pre-2015 regulatory definition of Waters of the US, which went into effect on August 31, 2021, and previously delineated feature data was supplemented to determine likely jurisdiction under the pre-2015 definition. Waterway functional assessment was completed in accordance with Beta version of the Maryland Stream Mitigation Framework which requires the use of EPA Rapid Habitat Assessment methods for stream segments less than 300 feet in length. The EPA Rapid Habitat Assessment datasheets for each feature are included in **Attachment C**.

Potential stormwater quality treatment sites that were almost entirely covered by wetlands and waterways features were not delineated, but instead the location, size, and basic information of features was noted and they were considered "walkthrough wetlands" or "walkthrough waterways." Data forms were not completed for the walkthrough features because the potential stormwater quality treatment sites with a high concentration of wetlands and waterways were subsequently eliminated from the site search based on their significant impacts to wetlands and waterways.

As part of the avoidance and minimization process, each stormwater quality treatment LOD was rated based on its relative impact to wetlands and waterways to determine whether it could be considered for

compensatory stormwater quality treatment. Stormwater quality treatment LODs that would result in zero functional loss to wetlands or waterways were given a rating of "no impact" and were considered viable stormwater quality treatment sites from a wetlands and waterways perspective. Stormwater quality treatment LODs that would have minor impact to wetlands and/or waterways, where the functional loss would be partially compensated by the stormwater activity, were rated as "minor impact" sites and were included in the potential compensatory stormwater quality treatment site list. Sites rated as having a "moderate impact" had wetlands and/or waterways covering less than 50% of the site, and potential re-configuration of the site by the SWM Team could potentially reduce impacts to a level that would be acceptable to the regulatory agencies. These sites were either re-configured to remove much of the wetland and waterway impact or they were dropped from consideration. Sites were rated as having "significant impact" when greater than 50% of the site was covered by wetlands and/or waterways and construction of the site would result in functional loss to wetlands and/or waterways. These sites were either majorly re-configured or dropped from consideration as a compensatory stormwater quality treatment site.

Datasheets for waterways delineated within the 67 selected off-site compensatory stormwater quality treatment LODs are included in **Attachment C** and photo documentation is included in **Attachment D**.

RESULTS

The I-495 & I-270 MLS Natural Resources Team conducted a wetlands and waterways delineation within the study area from October 2020 through October 2021. Detailed delineation results for the selected off-site compensatory stormwater quality treatment sites are summarized in **Attachment A**, organized by sub-segment and listed alphanumerically. Locations of these delineated features are included in the stormwater quality treatment site mapping in Appendix L of the *Compensatory SWM Mitigation Plan* (FEIS, Appendix D). Field datasheets and photographs for the delineated features can be found in **Attachments C** and **D,** respectively. Waterways impact data is summarized in Appendix M of the *Compensatory SWM Mitigation Plan* (FEIS, Appendix D) and detailed in the Compensatory Stormwater JPA Impact Tables.