

# **NATURAL RESOURCES INVENTORY REPORT**

## **FRANCIS SCOTT KEY BRIDGE REBUILD PROJECT**

**BALTIMORE CITY AND BALTIMORE COUNTY, MARYLAND**



**JUNE 2025**



## Table of Contents

1.0	Introduction, Study Area, and Project Description .....	1
2.0	Methodology.....	1
3.0	Results .....	2
3.1	Waters of the U.S., including Wetlands .....	2
3.2	Forest Stand Characterization.....	2
	<i>Tree Survey</i> .....	6
4.0	Conclusions .....	6
5.0	Literature Cited .....	6

## List of Appendices

APPENDIX A: VICINITY MAP
APPENDIX B: NATURAL RESOURCES INVENTORY FEATURES MAP
APPENDIX C: WOTUS SUMMARY TABLE
APPENDIX D: DATASHEETS
APPENDIX E: PHOTOGRAPH LOG
APPENDIX F: HEDGEROW SUMMARY TABLE
APPENDIX G: TREE TABLE

## 1.0 Introduction, Study Area, and Project Description

On March 26, 2024, the Maryland Transportation Authority (MDTA) Francis Scott Key Bridge (Key Bridge), which carries I-695 over the Patapsco River, was struck by a cargo ship leaving the Port of Baltimore, resulting in the collapse of the bridge. The collapse prompted the immediate closure of I-695 between MD 173 (exit 1) and MD 157/Peninsula Expressway (exit 43) and halted vehicle traffic across the Patapsco River as well as marine shipping to and from the Port of Baltimore. Following the incident, Executive Order 01.01.2024.09 was released by the State of Maryland, declaring a State of Emergency as a result of the Key Bridge collapse. Immediate recovery and debris removal actions were conducted.

MDTA and Maryland State Highway Administration (SHA) are proposing to replace the collapsed Francis Scott Key Bridge in the same location as the original structure, which will help alleviate the high traffic demands and restore the connectivity of the transportation network between Curtis Bay and Dundalk. As a result, Rummel, Klepper, & Kahl (RK&K) and Coastal Resources, Inc. (CRI), under contract by the MDTA, has completed a natural resources inventory, in support of the Francis Scott Key Bridge Rebuild Project (FSK Rebuild) located in Baltimore City and Baltimore County, Maryland. RK&K and CRI completed a water of the U.S. (WOTUS), including wetlands, delineation, forest stand delineation, and tree survey within the project study area (see **Appendix A**). The study area is approximately 117 acres within the Patapsco River MDE 8-digit watershed (02130903). Land use classifications within and adjacent to the study area include forest and industrial. The project area is in the Northern Coastal Plain physiographic province. The project limits extend along I-695 from Quarantine Road in Curtis Bay to Broening Highway in Dundalk and are entirely within MDTA's existing right-of-way (ROW). CRI completed the natural resources inventory in the segment between Quarantine Road and the Patapsco River. RK&K completed the natural resources inventory between the Patapsco River and Broening Highway. A wetland delineation was conducted for a separate MDTA project in February 2024 and field verified as part of the FSK Rebuild project in May of 2024.

## 2.0 Methodology

Prior to the field investigation, the RK&K and CRI field teams reviewed existing potential forest and wetland data within the project area, including but not limited to the United States Fish & Wildlife Service (USFWS) National Wetland Inventory, the Maryland Department of Natural Resources (MDNR) Wetlands, the Natural Resource Conservation Service (NRCS) Soil Survey Data and National Hydrography Dataset (NHD) Streams.

During the field investigation, wetlands were assessed in accordance with the *Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0* (USACE 2010). This methodology requires interpretation of a three-parameter approach representing hydrology, vegetation, and soils, which are known indicators of a wetland. Soils were sampled using three-inch diameter Dutch augers and Munsell Color charts were used to identify color (Munsell 1975). The wetland indicator status of the observed vegetation was identified using the National Wetland Plant List (NWPL) (USACE 2020). Wetland data were collected on Wetland Determination Data Forms (USACE 2010, 2012). A Wetland Functions and Value Evaluation form was completed for all delineated wetlands greater than 0.5 acres (USACE 1999). Matching upland test plots were also established adjacent to the wetland boundary in conjunction with wetland plots. Delineated WOTUS were flagged and surveyed using a Global Navigation Satellite System (GNSS) unit. Nontidal WOTUS, other than wetlands, were set at the ordinary

high-water mark (OHW) which was determined in the field using physical characteristics established by the fluctuations of water. Tidal WOTUS were defined by mean high water (MHW) elevation from the nearest tidal gauge and by in-situ water observations. Stream characteristics were recorded for each identified watercourse on a WOTUS datasheet. Identified WOTUS, including wetlands, were classified according to a *Classification of Wetland and Deep-Water Habitats in the United States* (USFWS 1979). Each wetland and watercourse were photographed, and a photo log was compiled.

Forest stands, hedgerows, and woody vegetation clusters were delineated and characterized with the study area in accordance with the State Forest Conservation Technical Manual and MDNR Critical Area requirements. A walk-through forest stand analysis was conducted to obtain a general overview of the species present, successional stage, and stand condition. Forest stand and hedgerow boundaries were delineated on project mapping and all forest stand characteristics were recorded on stand datasheets. Stand-alone trees (1.5" DBH or greater) and specimen trees (> 30' DBH) were measured using a diameter at breast height (DBH) tape at 4.5 feet above the ground. The species, size, and condition of stand-alone and specimen trees were recorded, and their locations were surveyed using a GNSS unit. Within the Chesapeake Bay Critical Area (CBCA), woody vegetation clusters were mapped and characterized. Additionally, stand-alone trees and shrubs of any size were identified and GPS-located.

## 3.0 Results

### 3.1 Waters of the U.S., including Wetlands

During the field investigations, ten non-tidal wetlands, four tidal wetlands, and three watercourses were identified within the study area. Wetland classifications included ten palustrine emergent wetlands (PEM), two estuarine intertidal emergent wetlands (E2EM), and two estuarine intertidal scrub shrub wetlands (E2SS). Data were collected at a total of ten representative wetland test plots that characterize the identified wetland types and Cowardin classifications. Test plots 1WETA, 1WETB, 1WETC, 1WETD, 1WETE, 1WETF, 1WETG, 1WETH, 1WETI and 2WETD characterize the PEM portion of these systems. Test plots 1WETJ and 2WETB characterize the E2EM portion of these systems. Test plot 2WETA and 2WETC characterize the E2SS portions of these systems. Delineated watercourses include one perennial, two intermittent systems, as well as the Patapsco River.

The locations of these resources and test plot locations are shown on the detailed maps provided in **Appendix B**. Details regarding wetland cover type and delineated size can be found in the WOTUS Summary Table located in **Appendix C**. Detailed wetland characteristics including cover type, indicators of hydrology, dominant vegetation, and soils are included on the datasheets provided in **Appendix D**. Characteristics of each watercourse can also be found in **Appendix C** and **Appendix D**. Photographs of all delineated resources are included in **Appendix E**.

### 3.2 Forest Stand Characterization

A total of thirteen forest stands, 15 hedgerows, and 24 woody vegetation clusters were identified within the study area. The locations of the forest stands, hedgerows, and woody vegetation clusters are displayed on the Natural Resources Inventory Map in **Appendix B**. The identified forest stands are described below, and a hedgerow summary table is included in **Appendix F**.



*Stand 1FS1 (NRI Map Sheets 2 and 3)*

Stand 1FS1 is a disturbed early successional black locust forest. Canopy closure is approximately 30 percent. The canopy is dominated by Callery pear (*Pyrus calleryana*), Siberian elm (*Ulmus pumila*), and black locust (*Robinia pseudoacacia*). Dominant size class is 2 to 6" DBH with a few 6 to 11" DBH trees scattered throughout this layer and ash-leaf maple (*Acer negundo*) is present at the bottom of the slope. Dominant species in the understory include groundsel tree (*Baccharis halimifolia*), amur honeysuckle (*Lonicera maackii*), and smooth sumac (*Rhus glabra*). Dominant species in the herbaceous layer include a broomsedge (*Andropogon* sp.), Japanese honeysuckle (*Lonicera japonica*), common reed (*Phragmites australis*), and wand panic grass (*Panicum virgatum*). Overall, the forest stand is in poor condition with high invasive species cover and moderate vine cover.

*Stand 1FS2 (NRI Map Sheets 1 and 2)*

Stand 1FS2 is a disturbed early successional black locust forest. Canopy closure is approximately 40 percent with dominant size class between 6 and 20" DBH. The canopy is dominated by black locust, white mulberry (*Morus alba*), tree-of-heaven (*Ailanthus altissima*), and Siberian elm. Dominant species in the understory include groundsel tree, amur honeysuckle, tree-of-heaven (*Ailanthus altissima*), eastern poison ivy (*Toxicodendron radicans*), black locust, Asian bittersweet (*Celastrus orbiculatus*), and Japanese honeysuckle. Dominant species in the herbaceous layer include Japanese honeysuckle, English ivy (*Hedera helix*), grape species (*Vitis* sp.) and great mullein (*Verbascum thapsus*). The understory and herbaceous layers are sparse in some areas with little herbaceous growth. Overall, the forest stand is in poor condition with high invasive species cover, moderate downed woody debris and high vine cover.

*Stand 1FS3 (NRI Map Sheets 2 and 3)*

Stand 1FS3 is a disturbed early successional black locust forest. Canopy closure is approximately 40 percent with a dominant size class of 2-6" DBH. The canopy is dominated by Callery pear and black locust. There is also one 18" DBH pin oak (*Quercus palustris*) within the stand. Dominant species in the understory include amur honeysuckle and rambler rose (*Rosa multiflora*). Smooth sumac is also present on the edge of the forest stand. Dominant species in the herbaceous layer include Japanese honeysuckle and common reed. Overall, the forest stand is in poor condition with high invasive species cover, low downed woody debris, and moderate vine cover.

*Stand 1FS4 (NRI Map Sheets 3 and 4)*

Stand 1FS4 is an early successional black locust and tree-of-heaven forest. Canopy closure is approximately 75 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black locust, tree-of-heaven, white mulberry, and sweetgum (*Liquidambar styraciflua*) with climbing vines present in this layer. Dominant species in the understory include amur honeysuckle, blackberry species (*Rubus* sp.), Japanese honeysuckle, eastern poison ivy, Asian bittersweet, and English ivy. Herbaceous species are lacking due to vines being dominant as ground cover. Overall, the forest stand is in fair condition with high invasive species cover, moderate downed woody debris, and high vine cover.

*Stand 1FS5 (NRI Map Sheet 2)*

Stand 1FS5 is an early successional sweetgum and common persimmon forest. Canopy closure is approximately 25 percent with a dominant size class of 2-6" DBH. The canopy is dominated by sweetgum,

common persimmon (*Diospyros virginiana*), black locust, and Callery pear with inclusion of white mulberry. Dominant species in the understory include groundseltree, amur honeysuckle, Callery pear, white mulberry, Asian bittersweet, eastern poison ivy, and common persimmon. Autumn olive (*Elaeagnus umbellata*), grape species, blackberry species, and Virginia creeper (*Parthenocissus quinquefolia*) are also common in this layer. Dominant species in the herbaceous layer include Japanese honeysuckle, Callery pear, Asian bittersweet, and eastern poison ivy. Common reed and Virginia creeper are also present throughout this layer. Overall, the forest stand is in poor condition with high invasive species cover, moderate downed woody debris, and heavy vine coverage.

#### *Stand 1FS6 (NRI Map Sheet 2)*

Stand 1FS6 is an early successional black locust and sweetgum forest. Canopy closure is approximately 25 percent with dominant size class of 6-11" DBH. The canopy is dominated by sweetgum and black locust. Common persimmon, Callery pear, and tree-of-heaven are also common in this layer. Dominant species in the understory include Callery pear, black locust, amur honeysuckle, groundseltree, grape species, Asian bittersweet, and amur peppervine (*Ampelopsis brevipedunculata*). Dominant species in the herbaceous layer include Asian bittersweet, Japanese honeysuckle, an unknown blackberry, Virginia creeper, and amur peppervine. Common reed, rambler rose, and common wormwood (*Artemisia vulgaris*) are also scattered throughout. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this forest stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

#### *Stand 1FS7 (NRI Map Sheets 1 and 2)*

Stand 1FS7 is a mid-successional black locust and sweetgum forest. Canopy closure is approximately 60 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black locust, sweetgum, and willow oak (*Quercus phellos*). Callery pear and common hackberry (*Celtis occidentalis*) are also common in this layer. A few larger trees are scattered throughout the stand. Dominant species in the understory include Callery pear, black locust, Japanese honeysuckle, rambler rose, grape species, Asian bittersweet, and Virginia creeper. Dominant species in the herbaceous layer include common reed, rambler rose, grape species, Japanese honeysuckle, Asian bittersweet, and amur peppervine. Common wormwood is present along the stand edges and vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

#### *Stand 1FS8 (NRI Map Sheet 1)*

Stand 1FS8 is a mid-successional sweet gum and white pine forest. Canopy closure is approximately 50 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black locust, sweetgum, eastern white pine (*Pinus strobus*), Callery pear, and common persimmon. White mulberry and a few larger eastern white pine are present in this layer. Dominant species in the understory include amur peppervine, groundseltree, amur honeysuckle, Japanese honeysuckle, grape species, Asian bittersweet, eastern poison ivy, blackberry species, and rambler rose. Autumn olive, staghorn sumac (*Rhus typhina*), and tree-of-heaven are also present in this stand. Dominant species in the herbaceous layer include common reed, eastern poison ivy, Japanese honeysuckle, Virginia creeper, grape species, and amur peppervine. Vines are dominant as ground cover in this layer. Overall, this stand is in poor condition with high invasive species cover and trees are stressed/damaged from heavy vine coverage.

*Stand 1FS9 (NRI Map Sheet 1)*

Stand 1FS9 is a mid-successional black cherry and black locust forest. Canopy closure is approximately 75 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black cherry (*Prunus serotina*), black locust, and Callery pear. Northern white oak (*Quercus alba*) and mockernut hickory (*Carya tomentosa*) are also common in this layer. Tree-of-heaven and princesstree (*Paulownia tomentosa*) are scattered along the forest stand edges. Dominant species in the understory include amur peppervine, Callery pear, black cherry, grape species, American holly (*Ilex opaca*), eastern poison ivy, rambler rose, Japanese honeysuckle, Asian bittersweet, Virginia creeper, and groundseltree. Dominant species in the herbaceous layer include Asian bittersweet, eastern poison ivy, Japanese honeysuckle, Virginia creeper, and rambler rose. Common reed is scattered along the stand edges. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. The eastern portion of the stand has slightly younger but similar species and condition. Overall, this stand is in fair condition as invasive species are dominant throughout and trees have climbing vines, but moderate species diversity is present.

*Stand 1FS10 (NRI Map Sheet 1)*

Stand 1FS10 is a mid-successional tuliptree and tree-of-heaven forest. Canopy closure is approximately 80 percent with a dominant size class of 12-20" DBH. The canopy is dominated by tuliptree (*Liriodendron tulipifera*), tree-of-heaven, sweetgum, and black cherry. princesstree (*Paulownia tomentosa*), common persimmon, white mulberry, and eastern red cedar (*Juniperus virginiana*) are also common in this layer. Dominant species in the understory include white mulberry, amur honeysuckle, Japanese honeysuckle, autumn olive, eastern poison ivy, Asian bittersweet, trumpet-creeper (*Campsis radicans*), rambler rose, an unknown blackberry, English ivy, and tree-of-heaven. Dominant species in the herbaceous layer include Asian bittersweet, eastern poison ivy, Japanese honeysuckle, garlic-mustard (*Alliaria petiolata*), and English ivy. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

*Stand 1FS11 (NRI Map Sheets 1 and 2)*

Stand 1FS11 is a mid-successional black locust and Callery pear forest. Canopy closure is approximately 50 percent with a dominant size class of 2-6" DBH. The canopy is dominated by black locust, Callery pear, sweetgum, and common persimmon. Tree-of-heaven, princesstree, and eastern red cedar are also common, and willow oak is scattered throughout the stand. Dominant species in the understory include groundseltree, amur honeysuckle, Callery pear, grape species, sweetgum, amur peppervine, and eastern poison ivy. Autumn olive is also common in this layer. Dominant species in the herbaceous layer include Asian bittersweet, eastern poison ivy, Japanese honeysuckle, rambler rose, blackberry species, and common wormwood. Common reed is scattered throughout and along the forest stand edge. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

*Stand 1FS12 (NRI Map Sheet 2)*

Stand 1FS12 is a mid-successional willow oak and black locust forest. Canopy closure is approximately 75 percent with a dominant size class of 20-30" DBH. The canopy is dominated by willow oak, black locust,

and sweetgum. Southern red oak (*Quercus falcata*), black cherry, Callery pear, northern red oak (*Quercus rubra*), white mulberry, and red maple (*Acer rubrum*) are also common in this layer. Dominant species in the understory include eastern poison ivy, Japanese honeysuckle, rambler rose, groundsel tree, horsebrier (*Smilax rotundifolia*), American holly, Virginia creeper, Asian bittersweet, and blackberry species. Dominant species in the herbaceous layer include Japanese honeysuckle, English ivy, eastern poison ivy, Asian bittersweet, and goldenrod species (*Solidago* sp.). Common reed is scattered and along the forest stand edge. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in fair condition. Canopy trees are in good health, however, invasives species are prevalent throughout the stand with some climbing vines.

#### *Stand 1FS13 (NRI Map Sheet 2)*

Stand 1FS13 is a mid-successional willow oak and southern red oak forest. Canopy closure is approximately 90 percent and a dominant size class of 12-20" DBH. The canopy is dominated by willow oak, southern red oak, northern white oak, and sweetgum. Red maple and black cherry are also common in this layer. Dominant species in the understory include horsebrier, Virginia creeper, eastern poison ivy, trumpet-creeper, rambler rose, blackberry species, and highbush blueberry (*Vaccinium corymbosum*). The forest interior has a more open understory. Dominant species in the herbaceous layer include eastern poison ivy, Japanese honeysuckle, and Virginia creeper. Common reed is dominant along the forest stand edge. Invasive species cover is medium throughout this stand. Overall, this stand is in fair condition as the forest interior is diverse with an open understory, but the forest stand edge is more disturbed with heavier vine and invasive cover.

#### Tree Survey

A total of 120 trees were identified within the study area. This includes 112 stand-alone trees and 8 specimen trees located within forest stands. An additional 16 trees or shrubs with a DBH of less than 1.5" were identified within the CBCA. The locations of these trees are included on the maps in **Appendix B**. Information regarding the species, size, and condition of each identified tree is included on the table in **Appendix G**.

## 4.0 Conclusions

A total of 10 WOTUS features were identified within the study area. Impacts to these resources may require authorization from the United States Army Corps of Engineers (USACE) and/or the Maryland Department of the Environment (MDE). Thirteen forest stands, 15 hedgerows, 24 woody vegetation clusters, 112 stand-alone trees, 8 specimen trees, and 16 small trees or shrubs were identified within the study area. Impacts to trees and/or forest may require authorization from Maryland Department of Natural Resources (DNR).

## 5.0 Literature Cited

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## **APPENDIX A: VICINITY MAP**





## Francis Scott Key Bridge Rebuild Project

### Vicinity Map

Baltimore City and Baltimore County, Maryland  
June 2024

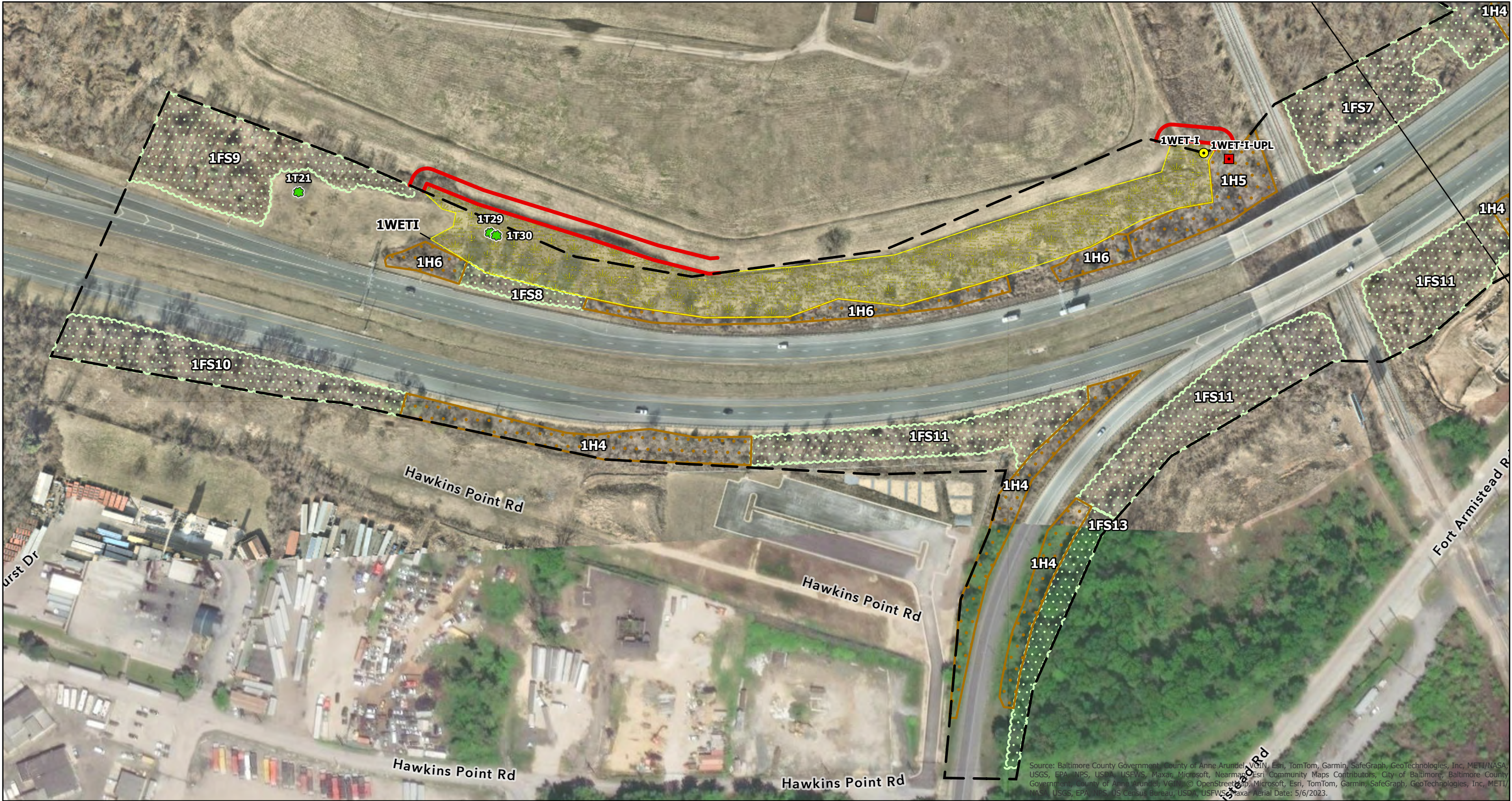


- Study Area
- County Boundaries


0 1,000 2,000  
Feet

## **APPENDIX B: NATURAL RESOURCES INVENTORY MAP**







Source: Baltimore County Government, County of Anne Arundel, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Maxar, Microsoft, Nearmap, Esri Community Maps Contributors, City of Baltimore, Baltimore County Government, County of Anne Arundel, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Maxar Aerial Date: 5/6/2023.



**MDOT**  
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STATE HIGHWAY  
ADMINISTRATION



**MDTA**  
Maryland  
Transportation  
Authority



U.S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY ADMINISTRATION

### Francis Scott Key Bridge Rebuild


















#### Appendix B:

#### Natural Resources Inventory Maps

Sheet 1 of 7




Baltimore City and Baltimore County, Maryland

June 2025






 Upland Test Plot	 Wetland Test Plot	 Specimen Tree	 Individual Tree	 Individual Shrub	 Feature Continues Beyond Study Area	 Map Sheet	 County Boundaries	 Study Area
 Mean High Water (MHW) - 0.528ft - NAVD88	 Mean Higher High Water (MHHW) - 0.827ft - NAVD88	 Chesapeake Bay Critical Area Boundary	 CRZ	 Forest Stand	 Hedgerow	 Woody Vegetation	 Field Identified MDTA Planting Area	


*\*Feature exists below bridge approach span, or portion of feature extends below bridge approach span.*

#### Delineated Streams

 Intermittent	 Perennial	 Estuarine Sub-Tidal
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#### Delineated Wetlands

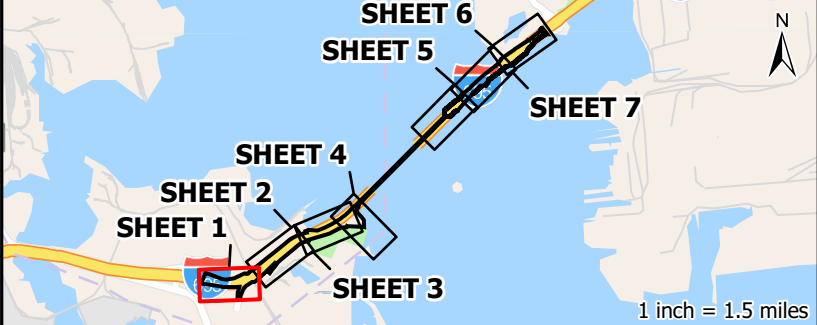
 Estuarine Emergent	 Estuarine Scrub-shrub	 Palustrine Emergent	 Palustrine Open Water
 Non Tidal Wetland Buffer (25ft)			



W N E  
S

0 75 150  
feet  
1 inch = 150 feet

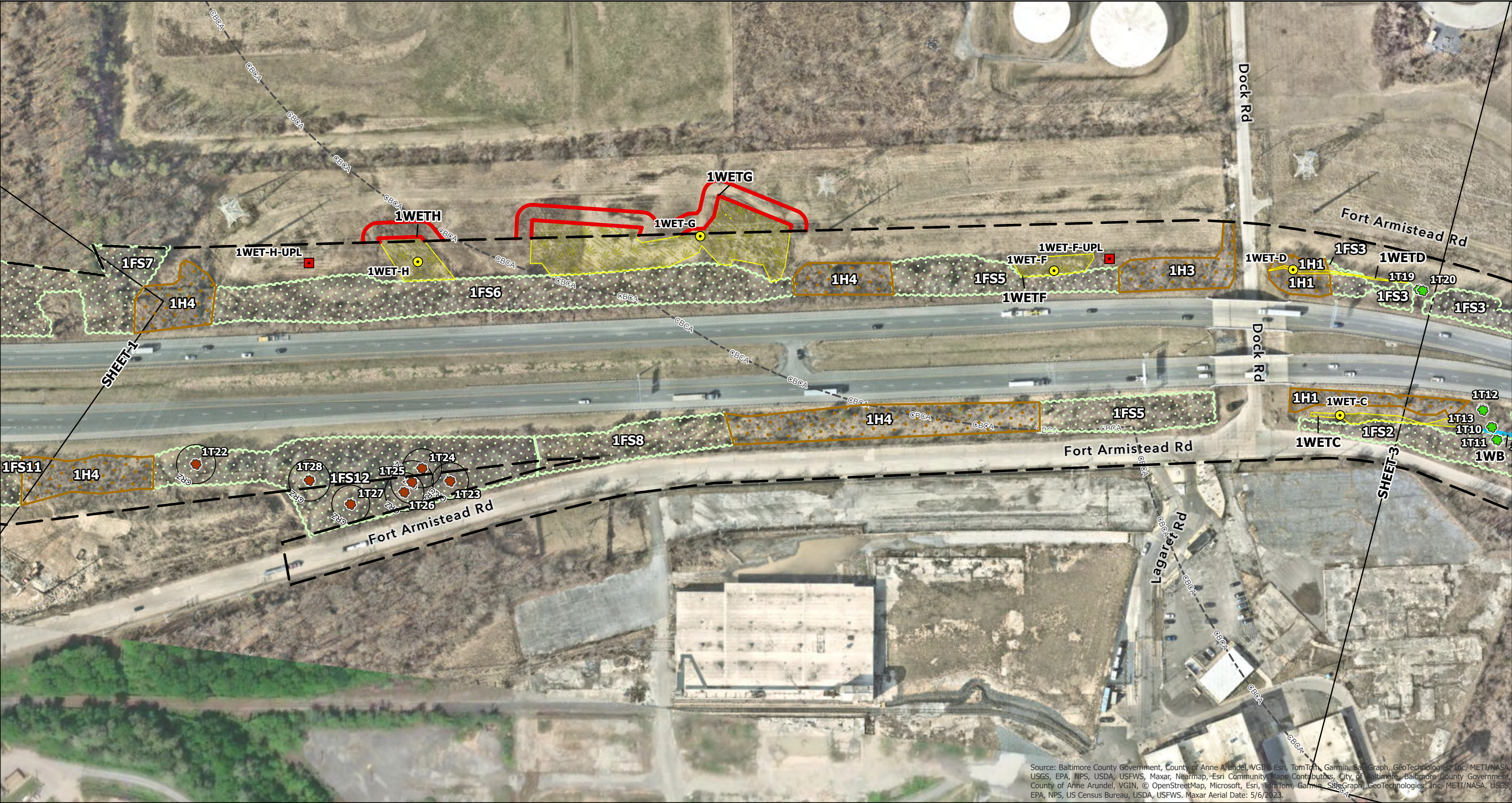
Map Center, NAD83  
39.2038°, -76.5524°




**SHEET 6**  
**SHEET 5**  
**SHEET 7**  
**SHEET 4**  
**SHEET 2**  
**SHEET 1**  
**SHEET 3**

1 inch = 1.5 miles






Source: Baltimore County Government, County of Anne Arundel, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Maxar, Nearmap, Esri Community Maps Contributors, City of Baltimore, Baltimore County Government, County of Anne Arundel, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS. Maxar Aerial Date: 5/6/2023.




**MDOT**  
MARYLAND DEPARTMENT  
OF TRANSPORTATION

STATE HIGHWAY  
ADMINISTRATION



**MDTA**  
Maryland  
Transportation  
Authority



STATE HIGHWAY  
ADMINISTRATION

### Francis Scott Key Bridge Rebuild

#### Appendix B:

#### Natural Resources Inventory Maps

Sheet 2 of 7

Baltimore City and Baltimore County, Maryland

June 2025

- Upland Test Plot
- Wetland Test Plot
- Specimen Tree
- Individual Tree
- Individual Shrub
- Feature Continues Beyond Study Area
- Map Sheet
- County Boundaries
- Study Area


- Mean High Water (MHW) - 0.528ft - NAVD88
- Mean Higher High Water (MHHW) - 0.827ft - NAVD88
- CBCA Chesapeake Bay Critical Area Boundary
- CRZ
- Forest Stand
- Hedgerow
- Woody Vegetation
- Field Identified MDTA Planting Area

#### Delineated Streams

- Intermittent
- Perennial
- Estuarine Sub-Tidal

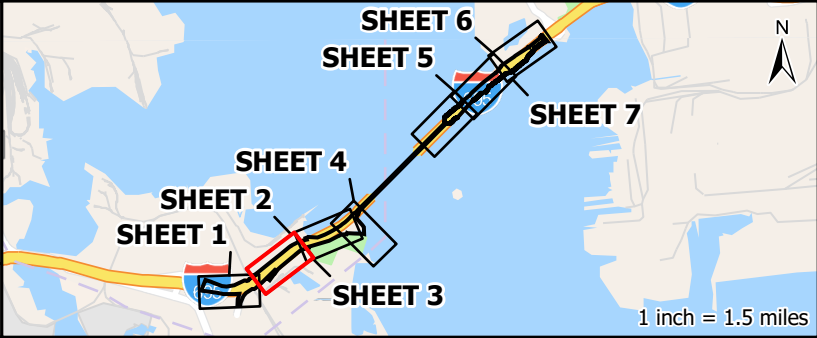
#### Delineated Wetlands

- Estuarine Emergent
- Estuarine Scrub-shrub
- Palustrine Emergent
- Palustrine Open Water
- Non Tidal Wetland Buffer (25ft)



0 75 150  
feet  
1 inch = 150 feet

Map Center, NAD83  
39.207°, -76.545°



SHEET 6  
SHEET 5  
SHEET 7  
SHEET 4  
SHEET 2  
SHEET 1  
SHEET 3

1 inch = 1.5 miles

\*Feature exists below bridge approach span, or portion of feature extends below bridge approach span.









**Project Area Within Chesapeake Bay Critical Area.**

Source: Baltimore County Government, County of Anne Arundel, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, USDA, USFWS, Maxar, Nearmap, Esri Community Maps Contributors, City of Baltimore, Baltimore County Government, County of Anne Arundel, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Maxar Aerial Date: 5/6/2023.

**Francis Scott Key Bridge Rebuild**

**Appendix B:**  
Natural Resources Inventory Maps  
Sheet 4 of 7

Baltimore City and Baltimore County, Maryland  
June 2025

Upland Test Plot

Wetland Test Plot

Specimen Tree

Individual Tree

Individual Shrub

Feature Continues Beyond Study Area

Map Sheet

County Boundaries

Study Area

Mean High Water (MHW) - 0.528ft - NAVD88

Mean Higher High Water (MHHW) - 0.827ft - NAVD88

Chesapeake Bay Critical Area Boundary

CRZ

Forest Stand

Hedgerow

Woody Vegetation

Field Identified MDTA Planting Area

**Delineated Streams**

Intermittent

Perennial

Estuarine Sub-Tidal

**Delineated Wetlands**

Estuarine Emergent

Estuarine Scrub-shrub

Palustrine Emergent

Palustrine Open Water

Non Tidal Wetland Buffer (25ft)

0 75 150  
feet  
1 inch = 150 feet

Map Center, NAD83  
39.2103°, -76.5328°

1 inch = 1.5 miles











**Project Area Within Chesapeake Bay Critical Area.**

Source: Baltimore County Government, County of Anne Arundel, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri Community Maps Contributors, Baltimore County Government, County of Anne Arundel, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USBA, USFWS, Maxar, Nearmap, Maxar Aerial Date: 5/6/2023.



**Francis Scott Key Bridge Rebuild**

**Appendix B:**  
Natural Resources Inventory Maps  
Sheet 6 of 7

Baltimore City and Baltimore County, Maryland  
June 2025

- Upland Test Plot
- Wetland Test Plot
- Specimen Tree
- Individual Tree
- Individual Shrub
- Feature Continues Beyond Study Area
- Map Sheet
- County Boundaries
- Study Area

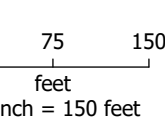

- Mean High Water (MHW) - 0.528ft - NAVD88
- Mean Higher High Water (MHHW) - 0.827ft - NAVD88
- Chesapeake Bay Critical Area Boundary
- CRZ
- Forest Stand
- Hedgerow
- Woody Vegetation
- Field Identified MDTA Planting Area

**Delineated Streams**

- Intermittent
- Perennial
- Estuarine Sub-Tidal

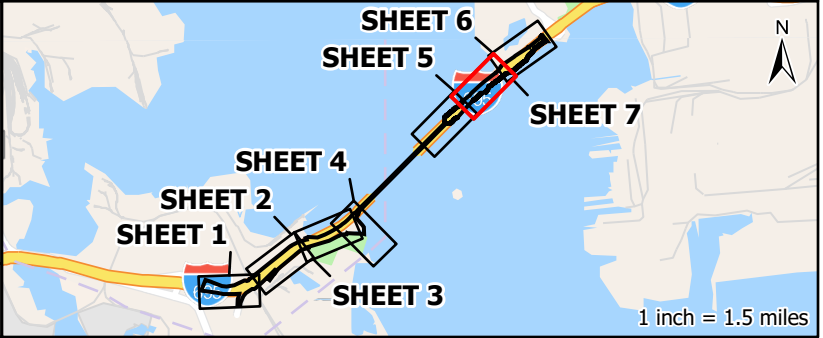
**Delineated Wetlands**

- Estuarine Emergent
- Estuarine Scrub-shrub
- Palustrine Emergent
- Palustrine Open Water
- Non Tidal Wetland Buffer (25ft)



1 inch = 150 feet

Map Center, NAD83  
39.2269°, -76.5153°




1 inch = 1.5 miles






**Project Area Within Chesapeake Bay Critical Area.**


Source: Baltimore County Government, County of Anne Arundel, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, USDA, USFWS, Esri Community Maps Contributors, Baltimore County Government, County of Anne Arundel, VGIN, Esri, OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Maxar, Nearmap, Maxar Aerial Data, 5/6/2023.



**MDOT**  
MARYLAND DEPARTMENT  
OF TRANSPORTATION  
STATE HIGHWAY  
ADMINISTRATION



**MDTA**  
Maryland  
Transportation  
Authority



DEPARTMENT OF TRANSPORTATION  
VIRGINIA HIGHWAY ADMINISTRATION

**Francis Scott Key Bridge Rebuild**

**Appendix B:**  
Natural Resources Inventory Maps  
Sheet 7 of 7

Baltimore City and Baltimore County, Maryland  
June 2025

- Upland Test Plot
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- Specimen Tree
- Individual Tree
- Individual Shrub
- Feature Continues Beyond Study Area
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- Mean High Water (MHW) - 0.528ft - NAVD88
- Mean Higher High Water (MHHW) - 0.827ft - NAVD88
- Chesapeake Bay Critical Area Boundary
- CRZ
- Forest Stand
- Hedgerow
- Woody Vegetation
- Field Identified MDTA Planting Area

**Delineated Streams**

- Intermittent
- Perennial
- Estuarine Sub-Tidal

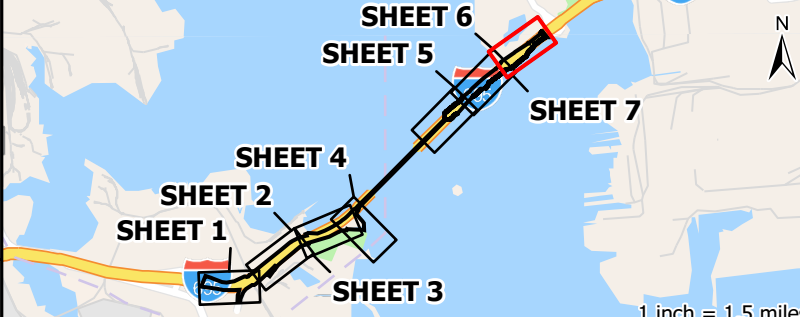
**Delineated Wetlands**

- Estuarine Emergent
- Estuarine Scrub-shrub
- Palustrine Emergent
- Palustrine Open Water
- Non Tidal Wetland Buffer (25ft)



0 75 150  
feet  
1 inch = 150 feet

Map Center, NAD83  
39.2309°, -76.5096°



**SHEET 6**  
**SHEET 5**  
**SHEET 7**  
**SHEET 4**  
**SHEET 2**  
**SHEET 1**  
**SHEET 3**

1 inch = 1.5 miles

\*Feature exists below bridge approach span, or portion of feature extends below bridge approach span.



## APPENDIX C: WOTUS SUMMARY TABLE

Appendix C: Francis Scott Key Bridge Rebuild Project  
Wetland Summary Table

Wetland Number	Delineated Area (AC)	Cowardin Classification/Wetland Type	Hydrology	Dominant Vegetation			Soils
				Scientific Name	Common Name	Indicator Status	
1WETA (NRI Map Sheet 3)	0.02	PEM1C (Depression/Toe-of-Slope)	Surface Water, High Water Table, Saturation, Drainage Patterns, Geomorphic Position, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, loamy, very deep, 0 to 8% slopes  Depleted Below Dark Surface (A11) and Depleted Matrix (F3) 0-3 inches of 7.5YR3/2, clay, and 3-12 inches of 7.5YR 4/1, with 7.5YR5/8 redox concentrations, clay
1WETB (NRI Map Sheet 3)	0.003	PEM1C (Toe-of-Slope)	Surface Water, High Water Table, Saturation, Sediment Deposits, Geomorphic Position, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, loamy, very deep, 0 to 8% slopes  Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) 0-6 inches of 2.5YR3/2 with 2.5YR4/8 redox concentrations, clay, and 6-12 inches of 2.5YR4/1 with 2.5YR4/8 redox concentrations, clay loam
1WETC (NRI Map Sheet 2 and 3)	0.05	PEM1C (Toe-of-Slope)	Surface Water, High Water Table, Saturation, Drainage Patterns, Geomorphic Position, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, loamy, very deep, 0 to 8% slopes  Redox Dark Surface (F6) 0-9 inches of 10Y 3/2 with 10Y 5/8 redox concentrations, clay loam
1WETD (NRI Map Sheet 2)	0.02	PEM1C (Toe-of-slope/Ditch)	Surface Water, High Water Table, Saturation, Sediment Deposits, Algal Mat or Crust, Geomorphic Position, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Urban Land, 0 to 15% slopes  Depleted Matrix (F3) 0-6 inches of 10YR 4/2 with 2.5 YR5/6 redox concentrations, clay
1WETE (NRI Map Sheets 3, 4 and 5)	6.21	PEM1F (Impoundment)	Surface Water, Water Marks, Inundation Visible on Aerial Imagery, Aquatic Fauna, Geomorphic Position, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, smoothed, 0-35% slopes.  Sandy Mucky Mineral (S1) 0-12 inches of 10YR3/2, loamy sand with organics
1WETF (NRI Map Sheet 2)	0.08	PEM1A/B (Depression)	High Water Table, Saturation, Saturation Visible on Aerial Imagery, Geomorphic Position, FAC-Neutral Test	<i>Diospyros virginiana</i> <i>Baccharis halimifolia</i> <i>Phragmites australis</i>	Common Persimmon Groundseltree Common Reed	FAC FAC FACW	Udorthents, clayey, very deep, 0-15% slopes.  Redox Dark Surface (F6) 0-8 inches of 10YR 3/2 with 5YR 4/4 redox concentrations, fine sandy loam
1WETG (NRI Map Sheet 2)	0.70	PEM1A/B (Depression)	Surface Water, High Water Table, Saturation, Saturation Visible on Aerial Imagery, Geomorphic Position	<i>Baccharis halimifolia</i> <i>Phragmites australis</i> <i>Holcus lanatus</i> <i>Toxicodendron radicans</i> <i>Smilax rotundifolia</i>	Groundseltree Common Reed Common Velvet Grass Eastern Poison Ivy Horsebrier	FAC FACW FACU FAC FAC	Udorthents, clayey, very deep, 0-15% slopes  Redox Dark Surface (F6) 0-4 inches of 10YR 3/2 with 5YR4/6 redox concentrations, silt loam
1WETH (NRI Map Sheet 2)	0.13	PEM1A/B (Depression)	Surface Water, High Water Table, Saturation, Saturation Visible on Aerial Imagery, FAC-Neutral Test	<i>Baccharis halimifolia</i> <i>Liquidambar styraciflua</i> <i>Phragmites australis</i>	Groundseltree Sweet-Gum Common Reed	FAC FAC FACW	Udorthents, clayey, very deep, 0-15% slopes  Depleted Matrix (F3) 0-8 inches of 7.5YR4/2 with 5YR4/6 redox concentrations, sandy clay loam

Wetland Number	Delineated Area (AC)	Cowardin Classification/Wetland Type	Hydrology	Dominant Vegetation			Soils
				Scientific Name	Common Name	Indicator Status	
1WETI (NRI Map Sheet 1)	2.55	PEM1A/B (Depression/Swale)	High Water Table, Saturation, Water-Stained Leaves, Saturation Visible on Aerial Imagery	<i>Populus alba</i> <i>Baccharis halimifolia</i> <i>Phragmites australis</i>	White poplar Groudseltree Common Reed	N/A FAC FACW	Udorthents, clayey, very deep, 0-15% slopes  Redox Dark Surface (F6) 0-4 inches of 10YR2/2 with 7.5YR4/4 redox concentrations, sandy clay loam
1WETJ (NRI Map Sheets 3 and 4)	0.01	E2EM1 (Intertidal)	Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Geomorphic Position, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, smoothed, 0-35% slopes  Histosol (A1) 0-18+ inches of 10YR2/1, silt loam with organics, tidal muck
2WETA (NRI Map Sheet 6)	0.05	E2SS1 (Depression)	Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Algal Mat or Crust	<i>Baccharis halimifolia</i> <i>Phragmites australis</i>	Groundseltree Common Reed	FAC FACW	Udorthents, highway, 0 to 65% slopes  Sandy Redox (S5) 3-16 inches of 2.5Y6/2 with 7.5YR4/6 redox concentrations, loamy sand
2WETB (NRI Map Sheet 6)	0.12	E2EM5 (Depression)	Surface Water, High Water Table, Saturation, Drift Deposits, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, highway, 0 to 65% slopes  Sandy Redox (S5) 3-12 inches of 10YR5/2 with 5YR4/6 redox concentrations, loamy sand
2WETC (NRI Map Sheet 6)	0.14	E2SS1 (Shoreline)	Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Algal Mat or Crust, FAC-Neutral	<i>Baccharis halimifolia</i> <i>Spartina alternifolia</i>	Groundseltree Saltwater cord grass	FAC OBL	Udorthents, highway, 0 to 65% slopes  Sandy Redox (S5) 0-4 inches of 2.5Y7/2 with 7.5YR4/6 redox concentrations, loamy sand
2WETD (NRI Map Sheet 7)	0.05	PEM5 (Toe-of-slope)	Oxidized Rhizospheres along Living Roots, FAC-Neutral Test	<i>Phragmites australis</i>	Common Reed	FACW	Udorthents, highway, 0 to 65% slopes  Depleted Matrix (F3) 0-6 inches of 10YR4/1 with 2.5YR3/4 redox concentrations,

Francis Scott Key Bridge Rebuild Project  
Watercourse Summary Table

Watercourse Number	Delineated Size (LF/AC)	Cowardin Classification	Nearest Downstream Named Stream	Use Class	Channel Characteristics		Comments
					Average Channel Width	Average Channel Depth	
1WA (NRI Map Sheet 3)	112 LF	R4UB1	Patapsco River	I	3’	1” – 8”	Intermittent stream that flows from a culvert to 1WC and abuts 1WETA and 1WB.
1WB (NRI Map Sheets 2 and 3)	187 LF	R4UB1	Patapsco River	I	1’ – 4’	1’ – 4’	Intermittent stream that flows from 1WETC to 1WA and abuts 1WETB
1WC (NRI Map Sheets 3 – 7)	1.66 AC	E1UB	Chesapeake Bay	I	5,500’	50’	Patapsco River, begins and ends outside the study area.



## **APPENDIX D: DATASHEETS**

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: MDTA Inner Loop Rills City/County: Balt City Sampling Date: 2/20/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 4WETA  
 Investigator(s): SLY/EH Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): none Slope (%): 1  
 Subregion (LRR or MLRA): 149A Lat: 39.209177 Long: -76.54069 Datum: NAD1983  
 Soil Map Unit Name: 40B Understorey, loamy, very deep, 0 to 8 percent slopes NWI classification: DEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Wetland collecting sheet flow from east and toe of slope. Runs west to WB Photos 8087-88</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (Inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (Inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (Inches): <u>4"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 1WET-A

Tree Stratum (Plot size: <u>N/A</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NA</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>N/A</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NA</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5x1.0'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

\_\_\_\_\_ = Total Cover

50% of total cover: 32.5 20% of total cover: 13

Woody Vine Stratum (Plot size: <u>NA</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NA</u>			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: 1WETA

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	7.5YR3/2	100					clay	fine roots in upper inch
3-12	7.5YR4/1	90	7.5YR5/2	10	C	M	clay	gravel present

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☒ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: MDTA City/County: Baltimore City Sampling Date: 2/20/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2WETB  
 Investigator(s): SLY ECH Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): bottom of hillslopes Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR or MRA): 149A Lat: 39.208999 Long: -76.541285 Datum: NAD 1983  
 Soil Map Unit Name: H08 Underneath, loamy, very deep 0 to 8 percent slopes NWI classification: DEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:  <u>photos- 8100 - 8101</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 1WETB

Tree Stratum (Plot size: <u>NA</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NA</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: NA)

1. <u>NA</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: 5' x 10')

1. <u>Phragmites australis</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>
2. <u>Lonicera japonica</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

\_\_\_\_\_ = Total Cover

50% of total cover: 40 20% of total cover: 16

Woody Vine Stratum (Plot size: NA)

1. <u>NA</u>			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐



## SOIL

Sampling Point: LWETB

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	2.5YR3/2	80	2.5YR4/8	20	C	M	clay loam	
6-12	2.5YR4/1	75	2.5YR4/8	25	C	M	clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☒ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☒ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: MDTA City/County: Baltimore City Sampling Date: 2/20/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 1WETC  
 Investigator(s): SLY, ECH Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): bottom of hillslope Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): 149A Lat: 39.208546 Long: -76.542296 Datum: NAD1983  
 Soil Map Unit Name: 408 Udothents, loamy, very deep, 0 to 8 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>phragmites ditch at toe of slope,</u> <u>photos - 8103-8104</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)

Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (Inches): <u>1</u>	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____	Depth (Inches): <u>7</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____	Depth (Inches): <u>5</u>	
(includes capillary fringe)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 1WETC

Tree Stratum (Plot size: <u>NA</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>NA</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: NA)

1. <u>NA</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: 5' x 10')

1. <u>Phragmites australis</u>	<u>85</u>	<u>Y</u>	<u>FACW</u>
2. <u>Lonicera japonica</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
3. <u>Baccharis halimifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
4. <u>Rubus phoenicolasius</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

\_\_\_\_\_ = Total Cover

50% of total cover: 52.5 20% of total cover: 21

Woody Vine Stratum (Plot size: NA)

1. <u>NA</u>			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes ✓ No \_\_\_\_\_

## SOIL

Sampling Point: **1WETC**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-9	10YR 3/2	90	10YR 5/8	10	C	M	clay loam
9-13	10YR 3/2	100					clay loam

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

wetland has hydric soils but areas w/ fill  
soils are disturbed

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: MDTA Inner Loop Bills City/County: Baltimore Sampling Date: 3/20/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 1WETD  
 Investigator(s): SLY, LAP Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): fill of slope/ditch Local relief (concave, convex, none): concave Slope (%): 2%  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.209070 Long: -76.542730 Datum: NAD1983  
 Soil Map Unit Name: Urban land, 0 to 15 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Photos: 6560-6561</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C6) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>standing water west end of wetland</u> <u>collects water from slope &amp; road runoff</u>		

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 1WETD

Tree Stratum (Plot size: <u>N/A</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

 Sapling/Shrub Stratum (Plot size: N/A)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

 Herb Stratum (Plot size: 5'x10')

1. <u>Phragmites australis</u>	<u>90%</u>	<u>Y</u>	<u>FACW</u>
2. <u>Lonicera japonica</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

 50% of total cover: 47.5% 20% of total cover: 19%

Woody Vine Stratum (Plot size: \_\_\_\_\_)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

 Total Number of Dominant Species Across All Strata: 1 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**
☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

 Yes ☒ No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: QWETD

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6"	10YR 4/2	90%	2.5YR 5/6	10%	C	M	clay	
6-14"	10YR 6/8	70%	5YR 5/8	30%	C	M	clay	fill soils

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☒ Depleted Below Dark Surface (A11)  
☒ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S8)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

- evidence of fill material
- fill soils



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore City Sampling Date: 5/3/24  
 Applicant/Owner: MDTA State: MD Sampling Point: IWETE-1  
 Investigator(s): D. Smith, K. Mathews Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Impoundment Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.211816 Long: -76.53388 Datum: NAD83  
 Soil Map Unit Name: Udorthents, smoothed, 0-35% slopes NWI classification: PEMICd  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? N Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Photo IWETE-1 Upl. plot is same as for IWETE-1</u> <u>PEMIF</u>		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input checked="" type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6-12+</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		

Remarks:  
Appears to be palustrine impoundment, with seasonal tidal influence

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: WETE-1

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>100</u>	<u>Y</u>	<u>FACW</u>
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 20 20% of total cover: 50

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is  $\leq 3.0^1$

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).



## SOIL

Sampling Point: WETP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
<u>D-12</u>	<u>M2R3/2</u>	<u>100</u>					<u>LS</u>	<u>w/organics</u>

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input checked="" type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Permanent inundation likely. Very little soil extracted in auger. Soil w/ considerable muck.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Bridge City/County: Baltimore City Sampling Date: 5/6/24  
 Applicant/Owner: MDTA State: MD Sampling Point: WETF  
 Investigator(s): EB, GS Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.208284 Long: -76.544114 Datum: NAD83  
 Soil Map Unit Name: Udorthents, clayey, very deep, 0-15% slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Soils disturbed from 695 + B6E ROW</u> <u>PEM1A/B</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>Rain in past 24 hrs.</u>		

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 1 WETP

Tree Stratum (Plot size: <u>20x50</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>20x50</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Diospyros virginiana</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Baccharis halimifolia</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3.			
4.			
5.			
6.			
7.			
8.			

= Total Cover

 50% of total cover: 5 20% of total cover: 2

Herb Stratum (Plot size: <u>10x25</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>90</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Lonicera japonica</u>	<u>3</u>		<u>FACU</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

= Total Cover

 50% of total cover: 46.5 20% of total cover: 18.6

Woody Vine Stratum (Plot size: <u>20x50</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

**Dominance Test worksheet:**

 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species	x 2 = _____
FAC species	x 3 = _____
FACU species	x 4 = _____
UPL species	x 5 = _____
Column Totals:	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

 Yes ☒ No \_\_\_\_\_



## SOIL

Sampling Point: WETF

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	95	5YR 4/4	5	C	M	Fine Sal	
2-8	10YR 3/2	80	5YR 4/4	20	C	M	Fine Sal	
8-12+	10YR 7/2	95	2.5YR 5/6	5	C	M	Sal	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☒ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Bridge City/County: AA Co Sampling Date: 5/6/2024  
 Applicant/Owner: MDTA State: MD Sampling Point: WETF-UP1  
 Investigator(s): EB, GS Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.208474 Long: -76.543899 Datum: NAD83  
 Soil Map Unit Name: udorthents, clayey, very deep 0-157 slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? N Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Upslope of wetland within depression that runs along the toe of slope of 695 embankment. Receives significant stormwater run off from highway. Soils disturbed from 695 + BGE ROW</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Rain within past 24 hrs</u>		

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: WETF-UPL

Tree Stratum (Plot size: <u>20x50</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Robinia pseudoacacia</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Liquidambar styraciflua</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Prevalence Index worksheet:
8. _____	_____	_____	_____	
50% of total cover: <u>3.5</u> 20% of total cover: <u>1.4</u> <u>7</u> = Total Cover				Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: <u>20x50</u> )				OBL species _____ x 1 = _____
1. <u>Baccharis hamifolia</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FACW species _____ x 2 = _____
2. <u>Liquidambar styraciflua</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FAC species _____ x 3 = _____
3. <u>Rubus argutus</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	FACU species _____ x 4 = _____
4. _____	_____	_____	_____	UPL species _____ x 5 = _____
5. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Prevalence Index = B/A = _____
8. _____	_____	_____	_____	
50% of total cover: <u>9</u> 20% of total cover: <u>3.6</u> <u>18</u> = Total Cover				Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: <u>10x25</u> )				<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
1. <u>Phragmites australis</u>	<u>65</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	<input type="checkbox"/> 2 - Dominance Test is >50%
2. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
3. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
4. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	Definitions of Four Vegetation Strata:
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
9. _____	_____	_____	_____	<b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
10. _____	_____	_____	_____	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11. _____	_____	_____	_____	<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
12. _____	_____	_____	_____	
50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u> <u>65</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>20x50</u> )				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. <u>Lonicera japonica</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Parthenocissus quinquefolia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>25</u> 20% of total cover: <u>10</u> <u>50</u> = Total Cover				
Remarks: (If observed, list morphological adaptations below).				



## SOIL

Sampling Point: 1 MTF-UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-1	10YR 3/3	98	7.5YR 4/4	2	C	M	Fine SCL	
1-4	10YR 3/3	93	7.5YR 4/4	7	C	M	Fine SCL	
4-12+	5YR 5/4	99	2.5YR 5/6	1	C	M	SaL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore City Sampling Date: 5/8/24  
 Applicant/Owner: MDTA State: MD Sampling Point: WETG  
 Investigator(s): EB, TI Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): MLRA 1149A Lat: 39.207451 Long: -76.545866 Datum: NAD83  
 Soil Map Unit Name: Udorthents, clayey, very deep, 0-57 slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Soils disturbed from 695 + BGE ROW</u> <u>PEM1A/B</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.5"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: WETG

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Baccharis hamifolia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Sambucus nigra</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: 12 20% of total cover: 2.4

Herb Stratum (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Holcus lanatus</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3. <u>Toxicodendron radicans</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
4. <u>Juncus effusus</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>OBL</u>
5. <u>Dichanthelium clandestinum</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			

\_\_\_\_\_ = Total Cover

50% of total cover: 43.5 20% of total cover: 17.4

Woody Vine Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Smilax rotundifolia</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Toxicodendron radicans</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: 5 20% of total cover: 2

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species	x 2 = _____
FAC species	x 3 = _____
FACU species	x 4 = _____
UPL species	x 5 = _____
Column Totals:	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).



## SOIL

Sampling Point: 1WETG

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	10YR 3/2	95	5YR 4/6	5	C	m/pl	SIL	
4-8	10YR 5/3	80	7.5YR 5/6	20	C	m	C	
8-12+	2.5YR 4/6	95	7.5YR 5/8	5			JaCL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☒ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: AA Co Sampling Date: 5/8/24  
 Applicant/Owner: MDTA State: MD Sampling Point: WETH  
 Investigator(s): EB, TT Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.206594 Long: -76.547079 Datum: NAD83  
 Soil Map Unit Name: Udorthents, clayey, very deep, 0-15% slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Soils disturbed from 695 + B6E</u> <u>PEM1A/B</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WETH

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Baccharis hamifolia</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Liquidambar styraciflua</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Sambucus nigra</u>	<u>2</u>		<u>FACW</u>
4.			
5.			
6.			
7.			
8.			

= Total Cover

50% of total cover: 7.5 20% of total cover: 3

Herb Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Oenothera sensibilis</u>	<u>10</u>		<u>FACW</u>
3. <u>Toxicodendron radicans</u>	<u>5</u>		<u>FAC</u>
4. <u>Lonicera japonica</u>	<u>5</u>		<u>FACW</u>
5. <u>Smilax rotundifolia</u>	<u>3</u>		<u>FAC</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			

= Total Cover

50% of total cover: 51.5 20% of total cover: 20.6

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).



## SOIL

Sampling Point: 1-WETH

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	7.5YR 4/2	98	5YR 4/6	2	C	M	SCL	
8-12+	5YR 4/4	95	2.5YR 4/6	5	C	M	SCL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)<br><input type="checkbox"/> Histic Epipedon (A2)<br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)<br><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)<br><input type="checkbox"/> Muck Presence (A8) (LRR U)<br><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)<br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input type="checkbox"/> Thick Dark Surface (A12)<br><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)<br><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)<br><input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)<br><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)<br><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input checked="" type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8)<br><input type="checkbox"/> Marl (F10) (LRR U)<br><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)<br><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)<br><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)<br><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)<br><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)<br><input type="checkbox"/> 2 cm Muck (A10) (LRR S)<br><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)<br><input type="checkbox"/> Red Parent Material (TF2)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><input type="checkbox"/> Other (Explain in Remarks) |
|--|---|---|

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore City Sampling Date: 5/8/24  
 Applicant/Owner: MDTA State: MD Sampling Point: WETH-WPL  
 Investigator(s): EB, TT Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.206297 Long: -76.547577 Datum: NAD83  
 Soil Map Unit Name: Udorthents, clayey, very deep, 0-15% slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <u>Soils disturbed from 695 + R66 ROW</u>			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0.5" *</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-6"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Even though there is a HWT, surface hydrology is perched over dense clay.</u> <u>* Surface water in ~ 5% of plot</u>		



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: WETA-UPL

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>50</u>	<u>✓</u>	<u>FACW</u>
2. <u>Holcus lanatus</u>	<u>5</u>		<u>FACU</u>
3. <u>Juncus effusus</u>	<u>8</u>		<u>OBL</u>
4. <u>Toxicodendron radicans</u>	<u>20</u>	<u>✓</u>	<u>FAC</u>
5. <u>Parthenocissus quinquefolia</u>	<u>5</u>		<u>FACU</u>
6.			
7.			
8.			
9.			
10.			
11.			
12.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 44 20% of total cover: 17.4

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species	x 2 = _____
FAC species	x 3 = _____
FACU species	x 4 = _____
UPL species	x 5 = _____
Column Totals:	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ✓ No \_\_\_\_\_

## SOIL

Sampling Point: WETH-LPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	5y2 4/4	100					Scl	
7-12	2.5y2 4/6	93					C	
12-20+	7.5y2 5/8	7					C	
	WHITE PAGES 8.5 (10)						C	
	2.5y2 2.5/4	40					C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

# **WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: FSK Rebuild City/County: AA Co Sampling Date: 5/8/24  
 Applicant/Owner: MDTA State: MD Sampling Point: WET I  
 Investigator(s): EB, TT Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression / Swale Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): MLRA 149 A Lat: 39.205025 Long: -76.549892 Datum: NAD83  
 Soil Map Unit Name: Udorthents, clayey, very deep, 0-15% slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? N Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## **SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>DEM 1A/B</u>	

## **HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: INET I

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None</u>	<u>✓</u>			Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67.7</u> (A/B)
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: <u>30</u>)</b>				
1. <u>Populus alba</u>	<u>5</u>	<u>✓</u>	<u>-</u>	
2. <u>Baccharis hammonifolia</u>	<u>10</u>	<u>✓</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				
<b>Herb Stratum (Plot size: <u>15</u>)</b>				
1. <u>Phragmites australis</u>	<u>90</u>	<u>✓</u>	<u>FACW</u>	
2. <u>Toxicodendron radicans</u>	<u>15</u>		<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				
50% of total cover: <u>54.5</u> 20% of total cover: <u>21</u>				
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>				
1. <u>None</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Hydrophytic Vegetation Present?</b> Yes <u>✓</u> No _____				
<b>Remarks:</b> (If observed, list morphological adaptations below). <u>Populus alba does not have an indicator status but prefers more upland conditions. Plot meets dominance test at 67.7% if Populus alba assumed UPL.</u>				



## SOIL

Sampling Point: WETI

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4	10YR 2/2	95	7.5YR 4/4	5	C	M	S <sub>2</sub> CL	
4-10	7.5YR 5/3	95	5YR 5/4	5	C	M	S <sub>2</sub> CL	
10-16	CLAY FILL							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</li> <li><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</li> <li><input type="checkbox"/> Muck Presence (A8) (LRR U)</li> <li><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input type="checkbox"/> Depleted Matrix (F3)</li> <li><input checked="" type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input type="checkbox"/> Redox Depressions (F8)</li> <li><input type="checkbox"/> Marl (F10) (LRR U)</li> <li><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</li> <li><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</li> <li><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</li> <li><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</li> <li><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</li> </ul>	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</li> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</li> <li><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</li> <li><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</li> <li><input type="checkbox"/> Red Parent Material (TF2)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul>
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____ Remarks: _____	Hydric Soil Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: AA Co Sampling Date: 5/8/24  
 Applicant/Owner: MDTA State: MD Sampling Point: WETI-WPL  
 Investigator(s): EB, TI Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR or MLRA): MLRA 149A Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: Udorthents, clayey, very deep, 0-15% slopes NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? N Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>✓</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>✓</u>
Hydric Soil Present?	Yes _____ No <u>✓</u>		
Wetland Hydrology Present?	Yes _____ No <u>✓</u>		
Remarks:			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators</b> (minimum of one is required; check all that apply)		<b>Secondary Indicators</b> (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>✓</u> Depth (inches): _____ Water Table Present? Yes <u>✓</u> No _____ Depth (inches): <u>14"</u> Saturation Present? Yes _____ No <u>✓</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>✓</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: WETI-UPL

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Populus alba</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>-</u>
2. <u>Populus deltoides</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

50% of total cover: 7.5 20% of total cover: 3  
15 = Total Cover

Sapling/Shrub Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Populus alba</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>-</u>
2. <u>Baccharis hamifolia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Diospyros virginiana</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

50% of total cover: 37.5 20% of total cover: 15  
75 = Total Cover

Herb Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Populus alba</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>-</u>
2. <u>Toxicodendron radicans</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Ampelopsis brevipedunculata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>UPL</u>
4. <u>Phragmites australis</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
5. <u>Lonicera japonica</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
6. <u>Panicum virgatum</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
7. <u>Solidago sp.</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>-</u>
8. <u>Poaceae sp.</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>-</u>
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

50% of total cover: 60 20% of total cover: 24  
120 = Total Cover

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>None</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_  
 \_\_\_\_\_ = Total Cover

Remarks: (If observed, list morphological adaptations below).

Populus alba has no status, assumed UPL; unable to ID  
Poaceae sp., likely FACU or UPL species due to location  
 and lack of wetland hydrology + hydric soils.

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 4 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation  
☐ 2 - Dominance Test is >50%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic  
 Vegetation  
 Present?

Yes \_\_\_\_\_ No ☒

## SOIL

Sampling Point: WETI-UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-4	7.5YR 4/3	98	5YR 4/4	2	C	M	SeCL	
4-12	5YR 4/4	95	2.5YR 5/6	5	C	M	SeC	
12-16+	10YR 4/2	95	7.5YR 5/6	5	C	M	SeC	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore City Sampling Date: 5/3/24  
 Applicant/Owner: MDIA State: MD Sampling Point: WEST-1  
 Investigator(s): D. Smith, K. Mathews Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Interfidal Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.210446 Long: -76.535154 Datum: NAD83  
 Soil Map Unit Name: Udorthents, smoothed, 0-35% slopes NWI classification: E1WBL  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? ☒ Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? ☒ Yes ☒ No \_\_\_\_\_ (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Photo WEST-1: Wetland is small patch of Phragmites between rocky shore areas. E2EMI	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3*</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: * 40% of plot on incoming tide. No recent rain, but wetland is hydrologically influenced by twice daily tidal flooding.		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: WETA

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2.				
3.				
4.				
5.				
6.				
7.				
8.				
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30</u> )				
1. <u>None</u>				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>15</u> )				
1. <u>Phragmites australis</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
50% of total cover: _____ 20% of total cover: _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u> )				
1. <u>None</u>				
2.				
3.				
4.				
5.				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



## SOIL

Sampling Point: WET J1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>		
0-18"	10YR 2/1	100					silty clay	Tidal muck

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	<sup>3</sup> Indicators of hydrophytic vegetation and
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	wetland hydrology must be present,
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Tidal muck.

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore City Sampling Date: 5/3/14  
 Applicant/Owner: MDTA State: MD Sampling Point: WETS-UP1  
 Investigator(s): D. Smith, K. Matthews Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): CONVEX Slope (%): 3  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.21043 Long: -76.535253 Datum: NAD83  
 Soil Map Unit Name: Udorthents, smoothed, 0-35% slopes NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? ☒ Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? ☒ (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Photo 1WETS-UP-1</u> <u>upland plot for 1-WET-J + 1-WET</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>Above MHW line but w/in storm surge zone.</u>		



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: WET-0PL

Tree Stratum (Plot size: <u>30'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Ulmus americana</u>	<u>65</u>	<u>Y</u>	<u>FAC</u>
2.	<u>Koeleria paniculata</u>	<u>10</u>		
3.	<u>Rubia pseudocarya</u>	<u>18</u>		<u>UPL</u>
4.	<u>Rhus alba</u>	<u>5</u>		<u>FAC</u>
5.	<u>Prunus serotina</u>	<u>5</u>		<u>FACU</u>
6.				
7.				
8.				
50% of total cover: <u>20.6</u>		<u>103</u> = Total Cover	20% of total cover: <u>51.5</u>	
Sapling/Shrub Stratum (Plot size: <u>30'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Baccharis halimifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>
2.	<u>Lonicera maackii</u>	<u>3</u>		
3.	<u>Rubia pseudocarya</u>	<u>5</u>	<u>Y</u>	<u>UPL</u>
4.	<u>Acer negundo</u>	<u>3</u>		<u>FAC</u>
5.				
6.				
7.				
8.				
50% of total cover: <u>3.2</u>		<u>16</u> = Total Cover	20% of total cover: <u>8</u>	
Herb Stratum (Plot size: <u>15'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Phragmites australis</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
2.	<u>Clematis terniflora</u>	<u>12</u>	<u>Y</u>	<u>FACU</u>
3.	<u>Phalaris pseudocarya</u>	<u>7</u>		<u>FACU</u>
4.	<u>Toxicodendron radicans</u>	<u>12</u>	<u>Y</u>	<u>FAC</u>
5.	<u>Rubia pseudocarya</u>	<u>5</u>		<u>UPL</u>
6.	<u>Parthenocissus quinquefolia</u>	<u>3</u>		<u>FACU</u>
7.	<u>Lonicera japonica</u>	<u>2</u>		<u>FACU</u>
8.				
9.				
10.				
11.				
12.				
50% of total cover: <u>11.2</u>		<u>56</u> = Total Cover	20% of total cover: <u>28</u>	
Woody Vine Stratum (Plot size: <u>15'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Toxicodendron radicans</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2.	<u>Parthenocissus quinquefolia</u>	<u>5</u>		<u>FACU</u>
3.	<u>Clematis terniflora</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
4.	<u>Lonicera japonica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
5.	<u>Vitis sp.</u>	<u>5</u>		
50% of total cover: <u>10</u>		<u>50</u> = Total Cover	20% of total cover: <u>25</u>	

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)  
 Total Number of Dominant Species Across All Strata: 9 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 55.5 (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
☒ 1 - Rapid Test for Hydrophytic Vegetation  
☒ 2 - Dominance Test is >50%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: WETS-0PL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	7.5 yr 2.42	100					SL	
5-12+	10R 5/6	100					C	Rejected by garbage

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:

Considerable trash in boring



Tidal

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ESK Behuild City/County: Baltimore Sampling Date: 5/17/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2 WETA  
 Investigator(s): LAP, ET Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1%  
 Subregion (LRR or MLRA): LRRS, MLRA 149A Lat: 39.226665°N Long: -76.514840°W Datum: NAD 83  
 Soil Map Unit Name: Udorthents highway, 0 to 65 percent slopes (UcF) NWI classification: E2SS1  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>✓</u> No _____	Is the Sampled Area within a Wetland? Yes <u>✓</u> No _____
Hydric Soil Present? Yes <u>✓</u> No _____	
Wetland Hydrology Present? Yes <u>✓</u> No _____	
Remarks: <u>wetland visited at mid-tide, used visual indicators of tidal boundary in lieu of tidal elevation data</u> <u>- indicators include: physical markings, wrack line</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <u>✓</u> No _____ Depth (inches): <u>varies</u> Water Table Present? Yes <u>✓</u> No _____ Depth (inches): <u>0"</u> Saturation Present? Yes <u>✓</u> No _____ Depth (inches): <u>0"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>✓</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <u>tidal scrub-shrub wetland, abutting emergent tidal wetland to west and Patapsco River to east</u> <u>- Tide nearly one foot above normal elevation on this day</u>		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 2WETA

Tree Stratum (Plot size: <u>10x20'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>10x20'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Baccharis halimifolia</u>	<u>80%</u>	<u>Y</u>	<u>FAC</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 40% 20% of total cover: 16%

Herb Stratum (Plot size: <u>10x20'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>40%</u>	<u>Y</u>	<u>FACW</u>
2. <u>Baccharis halimifolia</u>	<u>10%</u>	<u>Y</u>	<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 25% 20% of total cover: 10%

Woody Vine Stratum (Plot size: <u>10x20'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 3/3 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐



## SOIL

Sampling Point: 2WETA

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3"	10YR 2/2	80%					sandy loam	
	10YR 4/3	20%						
3-16"	2.5Y 6/2	95%	7.5YR 4/6	5%	C	M	loamy sand	
	?							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☒ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_
Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore Sampling Date: 5/7/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2WETB  
 Investigator(s): LP, ET Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 12  
 Subregion (LRR or MLRA): LRRS, MLRA 149A Lat: 39.2264587° N Long: -76.515097° W Datum: NA083  
 Soil Map Unit Name: Udorthents, highway, 0 to 65 percent slopes (UcF) NWI classification: E2EM5  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>photos 9346-47</u> <u>emergent tidal wetland at mid-tide; use visual indicators of tidal boundary in lieu of tidal elevation data; indicators include physical markings, wrack line; precise limit of tide difficult to determine due to heavy litter &amp; driftwood deposition; dense phragm rhizomes</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>varies (tidal)</u>	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0"</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0"</u>	
(Includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

## Remarks:

\* tide nearly one foot above normal elevation on this day



# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 2WETB

Tree Stratum (Plot size: <u>20' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: 20' radius)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: 20' radius)

1. <u>Phragmites australis</u>	<u>100%</u>	<u>Y</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

100% = Total Cover

50% of total cover: 50% 20% of total cover: 20%

Woody Vine Stratum (Plot size: 20' radius)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1/1 (A/B)

## Prevalence Index worksheet:

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

## Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

## Hydrophytic

Vegetation

Present?

Yes ☒ No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: 2WETB

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3"	7.5YR <sup>3/2</sup>	100%					muck	
3-12"	10YR <sup>5/2</sup>	95%	5YR <sup>4/6</sup>	5%	C	M	loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☒ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (Inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

root masses



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ESK Rebuild City/County: Baltimore Sampling Date: 5/3/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2+UPLA  
 Investigator(s): ET, LP Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): CONCAVE Slope (%): 1%  
 Subregion (LRR or MLRA): LRRS, MLRA 149A Lat: 39.2325554°N Long: -76.5065712 Datum: NAD83  
 Soil Map Unit Name: Udorthents, highway, 0 to 65 percent slopes (UcF) NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <u>photos - 9329, 9330</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (Includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		

Remarks: Roadside ditch constructed in dense fill material allowing water to pond.  
No hydric soils observed.

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 2 UPLA

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5x5</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ranunculus sceleratus</u>	<u>80%</u>	<u>Y</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

80% = Total Cover  
 50% of total cover: 40% 20% of total cover: 16%

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1/1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
- ☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).



## SOIL

Sampling Point: 21-10 PLA

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-10"	10YR 5/3	75%					silty clay loam	gravel refusal at 10"
	7.5YR 4/6	25%						fill material

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodles (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If observed):

 Type: gravel  
 Depth (inches): 10"
Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore Sampling Date: 5/7/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2WETA/B-UPL  
 Investigator(s): LP, ET Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 0%  
 Subregion (LRR or MLRA): LRR9, MLRA149A Lat: 39.2263219°N Long: -76.5151510°W Datum: NAD83  
 Soil Map Unit Name: Udorthents, highway, 0 to 65 percent slopes (UcF) NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>photos: 9348-50</u> <u>berm between 2WETA + 2WETB + Patapsco River</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 2WETA-B-UPL

Tree Stratum (Plot size: <u>10 x 20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Morus alba</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>
2.	<u>Ulmus parvifolia</u>	<u>30%</u>	<u>Y</u>	<u>FACU</u>
3.	<u>Robinia pseudoacacia</u>	<u>30%</u>	<u>Y</u>	<u>UPL</u>
4.				
5.				
6.				
7.				
8.				

80% = Total Cover  
50% of total cover: 40% 20% of total cover: 16%

Sapling/Shrub Stratum (Plot size: <u>10 x 20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Amorpha fruticosa</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>
2.	<u>Rosa multiflora</u>	<u>15%</u>	<u>Y</u>	<u>FACU</u>
3.	<u>Ligustrum sinense</u>	<u>15%</u>	<u>Y</u>	<u>FAC</u>
4.				
5.				
6.				
7.				
8.				

35% = Total Cover  
50% of total cover: 17.5% 20% of total cover: 7%

Herb Stratum (Plot size: <u>10 x 20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Toxicodendron radicans</u>	<u>10%</u>	<u>N</u>	<u>FAC</u>
2.	<u>Pumex crispus</u>	<u>10%</u>	<u>N</u>	<u>FAC</u>
3.	<u>Cinna arundinacea</u>	<u>80%</u>	<u>Y</u>	<u>FACW</u>
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

100% = Total Cover  
50% of total cover: 50% 20% of total cover: 20%

Woody Vine Stratum (Plot size: <u>10 x 20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				

\_\_\_\_\_ = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

 Total Number of Dominant Species Across All Strata: 4 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 2/4 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**
☐ 1 - Rapid Test for Hydrophytic Vegetation

☐ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

 Yes \_\_\_\_\_ No X

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: 2WETA/R-UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	10YR 3/3	100%					sandy loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore Sampling Date: 5/7/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2WETC  
 Investigator(s): LP, ET Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): shoreline Local relief (concave, convex, none): none Slope (%): 2%  
 Subregion (LRR or MLRA): LRRS, MLRA 149A Lat: 39.2278169° N Long: -76.539756° W Datum: NAD83  
 Soil Map Unit Name: Udorthents, highway, 0 to 65 percent slopes (UcF) NWI classification: E2SS1  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>photos = 9353-56</u> <u>* wetland visited at low tide</u> <u>- areas surrounding wetlands include rock shoreline with no vegetation or soils;</u> <u>no upland point was collected</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations:		
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>varies (tidal)</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0"</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0"</u>	
(Includes capillary fringe)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

\* Tide nearly one foot above normal elevation on this day



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 2WETC

Tree Stratum (Plot size: <u>10x20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>10x20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Baccharis hamifolia</u>	<u>50%</u>	<u>Y</u>	<u>FAC</u>
2.				
3.				
4.				
5.				
6.				
7.				
8.				

\_\_\_\_\_ = Total Cover

 50% of total cover: 25% 20% of total cover: 10%

Herb Stratum (Plot size: <u>10x20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Spartina alterniflora</u>	<u>60%</u>	<u>Y</u>	<u>OBL</u>
2.	<u>Baccharis hamifolia</u>	<u>10%</u>	<u>N</u>	<u>FAC</u>
3.	<u>Phragmites australis</u>	<u>10%</u>	<u>N</u>	<u>FACW</u>
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

\_\_\_\_\_ = Total Cover

 50% of total cover: 40% 20% of total cover: 16%

Woody Vine Stratum (Plot size: <u>10x20'</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

 Total Number of Dominant Species Across All Strata: 2 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 2/2 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**
☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic  
Vegetation  
Present?**

 Yes ☒ No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point: 2WETC

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-4"	2.5Y7/2	80%	7.5YR4/6	20%	C	M	loamy sand	stone refusal

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☒ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☒ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

 Type: Stone  
 Depth (inches): 4"
Hydric Soil Present? Yes ☒ No ☐

Remarks:

deposited sediment atop of rocky shoreline

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore Sampling Date: 5/7/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2WETD  
 Investigator(s): LP, ET Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): TOE OF SLOPE Local relief (concave, convex, none): concave Slope (%): 1%  
 Subregion (LRR or MLRA): LRRS, MLRA 149A Lat: 39.2286799°N Long: -76.5117316°W Datum: NAD 83  
 Soil Map Unit Name: Udorthents, highway, 0 to 65 percent slopes (UcF) NWI classification: FEM5  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>PHOTOS: 9358-59</u> <u>toe of slope wetland at storm drain outfall - likely provides primary hydrology;</u> <u>perched above clay fill</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 2NETD

Tree Stratum (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	<u>85%</u>	<u>Y</u>	<u>FACW</u>
2. <u>Toxicodendron radicans</u>	<u>20%</u>	<u>N</u>	<u>FAC</u>
3. <u>Leersia oryzoides</u>	<u>20%</u>	<u>N</u>	<u>OBL</u>
4. <u>Lonicera japonica</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

125 = Total Cover

50% of total cover: 62.5% 20% of total cover: 25%

Woody Vine Stratum (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1/1 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

☐ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_

Remarks: (If observed, list morphological adaptations below).

## SOIL

Sampling Point:

2WETD

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6"	10YR 4/1	95%	2.5YR 3/4	5%	D	PL/M	sandy clay loam	
6-12"	2.5Y 6/4	90%	10YR 5/8	10%	C	M	loamy sand	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S8)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rebuild City/County: Baltimore Sampling Date: 5/12/24  
 Applicant/Owner: MDTA State: MD Sampling Point: 2WETD-VPL  
 Investigator(s): LP, ET Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): TOE OF SLOPE Local relief (concave, convex, none): CONCAVE Slope (%): 17  
 Subregion (LRR or MLRA): LRRS, MLRA 149A Lat: 39.2286829 Long: -76.5117875 W Datum: NAD83  
 Soil Map Unit Name: Udorthents, highway, 0 to 65 percent slopes (UcF) NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? NO (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>photo 9360</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b>		<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 2WETD-UPL

Tree Stratum (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1/1</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
50% of total cover: _____ 20% of total cover: _____																				
Sapling/Shrub Stratum (Plot size: <u>5' radius</u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.																
50% of total cover: _____ 20% of total cover: _____																				
Herb Stratum (Plot size: <u>5' radius</u> )																				
1. <u>Phragmites australis</u>	<u>75%</u>	<u>Y</u>	<u>FACW</u>																	
2. <u>Toxicodendron radicans</u>	<u>5%</u>	<u>N</u>	<u>FAC</u>																	
3. <u>Parthenocissus quinquefolia</u>	<u>2%</u>	<u>N</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____																
50% of total cover: <u>41%</u> 20% of total cover: <u>16.4%</u>																				
Woody Vine Stratum (Plot size: <u>5' radius</u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: _____ 20% of total cover: _____																				
Remarks: (If observed, list morphological adaptations below).																				

## SOIL

Sampling Point: 2WETD-UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6"	10YR 5/6	100%					sandy loam	
6-12"	5Y 8/1	80%	10YR 5/8	20%			silty clay	fill material

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ Organic Bodies (A6) (LRR P, T, U)  
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)  
☐ Muck Presence (A8) (LRR U)  
☐ 1 cm Muck (A9) (LRR P, T)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Coast Prairie Redox (A16) (MLRA 150A)  
☐ Sandy Mucky Mineral (S1) (LRR O, S)  
☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)  
☐ Thin Dark Surface (S9) (LRR S, T, U)  
☐ Loamy Mucky Mineral (F1) (LRR O)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ Marl (F10) (LRR U)  
☐ Depleted Ochric (F11) (MLRA 151)  
☐ Iron-Manganese Masses (F12) (LRR O, P, T)  
☐ Umbric Surface (F13) (LRR P, T, U)  
☐ Delta Ochric (F17) (MLRA 151)  
☐ Reduced Vertic (F18) (MLRA 150A, 150B)  
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)  
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR O)  
☐ 2 cm Muck (A10) (LRR S)  
☐ Reduced Vertic (F18) (outside MLRA 150A,B)  
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)  
☐ Anomalous Bright Loamy Soils (F20)  
 (MLRA 153B)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

\* Matrix color assumed to be a result of clay fill material rather than reducing conditions

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Key Bridge Rebuild City/County: Baltimore City Sampling Date: 5/27/25  
 Applicant/Owner: MDTA State: MD Sampling Point: UTP 1  
 Investigator(s): EB, JD Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Upland island Local relief (concave, convex, none): Convex Slope (%): 10%  
 Subregion (LRR or MLRA): MLRA 149A Lat: 39.21162 Long: -76.534459 Datum: NAD83 (2011)  
 Soil Map Unit Name: Udorthents, smoothed, 0-35% slopes NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil ☒, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? N (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Upland island in middle of I-WETE</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:  		



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: UTP-1

Tree Stratum (Plot size: <u>30'</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Catalpa speciosa</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
2.	<u>Juniperus virginiana</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3.						
4.						
5.						
6.						
7.						
8.						
50% of total cover: <u>3.5</u>		<u>7</u> = Total Cover		20% of total cover: <u>1.4</u>		
Sapling/Shrub Stratum (Plot size: <u>30'</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Robinia pseudoacacia</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>UPL</u>		
2.						
3.						
4.						
5.						
6.						
7.						
8.						
50% of total cover: <u>20</u>		<u>40</u> = Total Cover		20% of total cover: <u>8</u>		
Herb Stratum (Plot size: <u>15'</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Galium aparine</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
2.	<u>Bromus sp.</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>N/A</u>		
3.	<u>Lonicera japonica</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
4.	<u>Phragmites australis</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
50% of total cover: <u>60</u>		<u>120</u> = Total Cover		20% of total cover: <u>24</u>		
Woody Vine Stratum (Plot size: <u>30'</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>None</u>					
2.						
3.						
4.						
5.						
50% of total cover: _____		_____ = Total Cover		20% of total cover: _____		

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 5 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

**Prevalence Index worksheet:**  

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

 Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
☐ 1 - Rapid Test for Hydrophytic Vegetation  
☐ 2 - Dominance Test is >50%  
☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒

Remarks: (If observed, list morphological adaptations below).  
Unable to identify Bromus sp., however, even if it was FAC or wetter, the dominance test would not be met (2/5 = 40%).

## SOIL

Sampling Point: WTP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR2-2	100					L	w/ organics
2-12	10YR4-3	99	10YR4-1	1	D	m	SaC	
12-14+	5YR4-4	100					SaC	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

Remarks:





# Waters of the U.S. Data Sheet

Project: <b>MDTanner Loop Hills</b>	Feature ID: <b>1WE Potaposed Vined</b>	Cowardin Class: <b>E1U8</b>
Date: <b>3/20/24</b>	State: <b>MD</b>	Stream Order: <b>N/A</b>
Crew: <b>SWJ/LAP</b>	County: <b>Baltimore</b>	Photos: <b>10508-69</b>
Last Flag Number: <b>N/A</b>		Use Class: <b>1</b>

## Feature Hydrologic Class and Jurisdiction:

Hydrologic Class	USACE Jurisdiction	Jurisdictional Rationale			
<input checked="" type="checkbox"/> Tidal	<input type="checkbox"/> TNW	Impoundment of:		<input type="checkbox"/> Tributary	<input type="checkbox"/> Other Waters
<input type="checkbox"/> Perennial	<input type="checkbox"/> Tidal	<input type="checkbox"/> TNW	<input type="checkbox"/> Tributary	<input type="checkbox"/> Relatively Permanent	<input type="checkbox"/> Relatively Permanent
<input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Tributary	<input type="checkbox"/> Interstate	<input type="checkbox"/> Tributary	<input type="checkbox"/> Relatively Permanent Notes:	
<input type="checkbox"/> Ephemeral	<input checked="" type="checkbox"/> Other Waters	<input type="checkbox"/> Navigable			
<input type="checkbox"/> Other					
Hydrologic Connectivity		Upstream: <b>putsa SA</b>	Downstream: <b>putsa SA</b>	Adjacent/Abutting:	

## Feature Description: (check all that apply)

Shape (with respect to OHW)		Substrate			Vegetation Cover Type (MBSS)		
<input checked="" type="checkbox"/> Natural Channel Shape	Width: <b>50 ft.</b>	<input checked="" type="checkbox"/> Silts	<input checked="" type="checkbox"/> Sands	<input type="checkbox"/> Muck	RB: <b>Scrub/shrub</b> LB: <b>Scrub/shrub</b>		
<input type="checkbox"/> Artificial (man-made)	Depth: <b>0-50 ft.</b>	<input checked="" type="checkbox"/> Cobbles	<input type="checkbox"/> Gravel	<input type="checkbox"/> Other:			
<input type="checkbox"/> Manipulated (man-altered)	Bank Erosion/stability:	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Concrete				
<input type="checkbox"/> Other:	<b>stable</b>	Side slope: <input type="checkbox"/> >1:1 <input type="checkbox"/> 2:1 <input checked="" type="checkbox"/> 3:1 <input type="checkbox"/> 4:1					

Notes:

## Weather/Precipitation Conditions:

Weather station Tanyard springs - KMDGLEMB25		Monthly Drought Condition		State: <b>MD</b>	
https://www.ncdc.noaa.gov/access/monitoring/climate-at-a-glance/divisional/mapping Month: <b>Jan</b> Year: <b>2024</b>		NCDC Divisional PDSI		Division: <b>Upper Southern</b>	
Inches of Rain Within Last Week					
<input checked="" type="checkbox"/> No rain	0-0.5	<input checked="" type="checkbox"/> -3	<input type="checkbox"/> -2	<input type="checkbox"/> -1	<input type="checkbox"/> 0
<input type="checkbox"/> Light rain	0.5-1	<input type="checkbox"/> -6	<input type="checkbox"/> -5	<input type="checkbox"/> -4	<input type="checkbox"/> -3
<input type="checkbox"/> Heavy Rain	>1	Severe Drought		Moderately Drought	
		Moderate Drought		Normal	
		Severely Drought		Severely Wet	

## Non-tidal tributary has: (check all that apply)

Bed and Banks		Ordinary High Water Mark	
<input type="checkbox"/> Yes	Clear, natural line impressed on the bank	<input type="checkbox"/> Sediment deposition	<input type="checkbox"/> Sediment sorting
<input type="checkbox"/> No	Changes in the character of soil	<input type="checkbox"/> Water staining	<input type="checkbox"/> Scour
	Shelving	<input type="checkbox"/> Presence of flood litter/debris	<input type="checkbox"/> Observed/predicted flow events
	Vegetation matted down, bent, or absent	<input type="checkbox"/> Destruction of terrestrial veg.	<input type="checkbox"/> Abrupt change in plant community
	Leaf litter disturbed	<input type="checkbox"/> Presence of wrack line	<input type="checkbox"/> Other:

## Tidal tributary has: (check all that apply)

High Tide Line		Mean High Water Mark indicated by:		Chemical Characteristics	
<input type="checkbox"/> Oil or scum line along shore objects	<input checked="" type="checkbox"/> Survey to available datum	<input checked="" type="checkbox"/> Water is clear			
<input checked="" type="checkbox"/> Fine shell or debris deposits (foreshore)	<input type="checkbox"/> Physical markings	<input type="checkbox"/> Water is discolored			
<input type="checkbox"/> Physical markings/characteristics	<input type="checkbox"/> Vegetation lines/changes in types	<input type="checkbox"/> Oily film			
<input checked="" type="checkbox"/> Tidal gauges		<input type="checkbox"/> Other:			

Notes:

## Waters of the U.S. Data Sheet

WB-4, WB-1034/B

Project: <u>MDTA Inner Loop Rills</u>	Feature ID: <u>1WA</u>	Stream Order: <u>R4UB1</u>
Date: <u>2/20/24</u>	State: <u>MD</u>	Last Flag Number: <u>  </u>
Crew: <u>SW/EL</u>	County: <u>Balt city</u>	Photos: <u>8092-93; on 3/20/24 6566-67</u>

## Feature Hydrologic Class and Jurisdiction:

Hydrologic Class	Jurisdiction	Reason			
Tidal	TNW (a)(1)	TNW	Impoundment of:	Tributary	Other Waters
<input checked="" type="checkbox"/> Perennial	<input checked="" type="checkbox"/> Impoundment (a)(2)	Tidal	TNW (a)(1)	<input checked="" type="checkbox"/> Relatively Permanent	Relatively Permanent
<input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Tributary (a)(3)	Interstate	Impoundment (a)(2)	<input type="checkbox"/> Significant Nexus	Significant Nexus
Ephemeral	Other Waters (a)(5)	Navigable	Tributary (a)(3)	Similarly Situated Waters:	Similarly Situated Waters:
Other			Adj. Wetland (a)(4)		

Hydrologic Connectivity	Upstream: <u>river</u>	Downstream: <u>INC</u>	Adjacent/Abutting: <u>1WETA, 1WB</u>
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## Feature Description: (check all that apply)

Shape (with respect to OHW)		Substrate				Vegetation Cover Type (MBSS)	
Natural Channel Shape	Width: <u>3'</u>	<input checked="" type="checkbox"/> Silts	<input checked="" type="checkbox"/> Sands	<input type="checkbox"/> Muck	RB: <u>disturbed/disturbed</u> LB: <u>Hedgerow</u>		
<input checked="" type="checkbox"/> Artificial (man-made)	Depth: <u>1-8"</u>	<input checked="" type="checkbox"/> Cobbles	<input checked="" type="checkbox"/> Gravel	<input type="checkbox"/> Other:			
<input checked="" type="checkbox"/> Manipulated (man-altered)	Bank Erosion/stability: <u>mod. unstable</u>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Concrete				
Other:		Side slope: <input type="checkbox"/> >1:1 <input checked="" type="checkbox"/> 2:1 <input checked="" type="checkbox"/> 3:1 <input type="checkbox"/> 4:1					

Notes: Garrison on either side of culvert going under 695, slow flow from culvert under road

## Weather/Precipitation Conditions:

Inches of Rain Within Last Week		Monthly Drought Condition NCDC Divisional PDSI												State: MD		
During Field Visit		<a href="https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/divisional/mapping">https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/divisional/mapping</a>												Division: <u>Upper Southern</u>		
<input checked="" type="checkbox"/> No rain	0-0.5						<input checked="" type="checkbox"/>									
<input type="checkbox"/> Light rain	0.5-1	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6		
<input checked="" type="checkbox"/> Heavy Rain	>1	Severe Drought				Moderate Drought		Normal			Moderately Wet		Severely Wet			

## Non-tidal tributary has: (check all that apply; include photos for each &amp; list photo #)

Bed and Banks	Ordinary High Water Mark		
<input checked="" type="checkbox"/> Yes	Clear, natural line impressed on the bank	<input type="checkbox"/> Sediment deposition	<input type="checkbox"/> Sediment sorting
<input type="checkbox"/> No	Changes in the character of soil	<input checked="" type="checkbox"/> Water staining	<input type="checkbox"/> Scour
	Shelving	<input checked="" type="checkbox"/> Presence of flood litter/debris	<input checked="" type="checkbox"/> Observed/predicted flow events
	<input checked="" type="checkbox"/> Vegetation matted down, bent, or absent	<input type="checkbox"/> Destruction of terrestrial veg.	<input type="checkbox"/> Abrupt change in plant community
	Leaf litter disturbed	<input type="checkbox"/> Presence of wrack line	<input type="checkbox"/> Other:

## Tidal tributary has: (check all that apply; include photos for each &amp; list photo #)

High Tide Line	Mean High Water Mark indicated by:	Chemical Characteristics
<input type="checkbox"/> Oil or scum line along shore objects	<input type="checkbox"/> Survey to available datum	<input type="checkbox"/> Water is clear
<input type="checkbox"/> Fine shell or debris deposits (foreshore)	<input type="checkbox"/> Physical markings	<input type="checkbox"/> Water is discolored
<input type="checkbox"/> Physical markings/characteristics	<input type="checkbox"/> Vegetation lines/changes in types	<input type="checkbox"/> Oily film
<input type="checkbox"/> Tidal gauges		<input type="checkbox"/> Other:

Notes:

# HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME <u>IWA</u>	LOCATION <u>east of Oak Rd @ 1695</u>	
STATION # _____ RIVERMILE _____	STREAM CLASS <u>1</u>	
LAT <u>39.20900</u> LONG <u>-76.541035</u>	RIVER BASIN <u>Potapsc / Baltimore Harbor</u>	
STORET # _____	AGENCY _____	
INVESTIGATORS <u>HT, TT</u>		
FORM COMPLETED BY <u>HT</u>	DATE <u>5/16/24</u> TIME <u>1</u> AM <input checked="" type="radio"/> PM	REASON FOR SURVEY <u>FSK Rebuild</u>

Parameters to be evaluated in sampling reach	Habitat Parameter	Condition Category			
		Optimal	Suboptimal	Marginal	Poor
	1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking. <u>Substrate clay/sand w/ fine sediment, lacking cover</u>
	SCORE <u>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>(2)</u> 1 0
	2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation. <u>some herb veg in channel</u>	Hard-pan clay or bedrock; no root mat or vegetation.
	SCORE <u>7</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 <u>(7)</u> 6	5 4 3 2 1 0
	3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent. <u>small pool at culvert</u>
	SCORE <u>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>(2)</u> 1 0
	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	SCORE <u>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>(2)</u> 1 0
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	SCORE <u>12</u>	20 19 18 17 16	15 14 13 <u>(12)</u> 11	10 9 8 7 6	5 4 3 2 1 0



# HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
<b>6. Channel Alteration</b> Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely. <i>flows through culvert - rip rap stabilized.</i>	
SCORE <u>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1 0
<b>7. Channel Sinuosity</b> The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.	
SCORE <u>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2) 1 0
<b>8. Bank Stability (score each bank)</b> Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods. <i>stabilized w/ large gravel.</i>	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.	
SCORE <u>5</u> (LB)	Left Bank 10 9	8 7 6	(5) 4 3	2 1 0
SCORE <u>5</u> (RB)	Right Bank 10 9	8 7 6	(5) 4 3	2 1 0
<b>9. Vegetative Protection (score each bank)</b> Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining. <i>mostly invasive species</i>	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE <u>3</u> (LB)	Left Bank 10 9	8 7 6	5 4 (3)	2 1 0
SCORE <u>3</u> (RB)	Right Bank 10 9	8 7 6	5 4 (3)	2 1 0
<b>10. Riparian Vegetative Zone Width (score each bank riparian zone)</b> Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters; little or no riparian vegetation due to human activities. <i>disturbed by recent construction activities.</i>	
SCORE <u>2</u> (LB)	Left Bank 10 9	8 7 6	5 4 3	(2) 1 0
SCORE <u>2</u> (RB)	Right Bank 10 9	8 7 6	5 4 3	(2) 1 0

Total Score 51

## Waters of the U.S. Data Sheet

Project: <u>MDTA Inner Loop Kills</u>	Feature ID: <u>1WB</u>	Stream Order: <u>R40B1</u>
Date: <u>2/20/24</u>	State: <u>MD</u>	Last Flag Number: <u>WC-8</u>
Crew: <u>SW/ETH</u>	County: <u>Balt City</u>	Photos: <u>8090-99</u>

## Feature Hydrologic Class and Jurisdiction:

Hydrologic Class	Jurisdiction	Reason			
Tidal	TNW (a)(1)	TNW	Impoundment of:	Tributary	Other Waters
Perennial	Impoundment (a)(2)	Tidal	TNW (a)(1)	Relatively Permanent	Relatively Permanent
Intermittent	Tributary (a)(3)	Interstate	Impoundment (a)(2)	Significant Nexus	Significant Nexus
Ephemeral	Other Waters (a)(5)	Navigable	Tributary (a)(3)	Similarly Situated Waters:	Similarly Situated Waters:
Other			Adj. Wetland (a)(4)		

Hydrologic Connectivity Upstream: 1WETC Downstream: 1WA Adjacent/Abutting: 1WETB

## Feature Description: (check all that apply)

Shape (with respect to OHW)		Substrate				Vegetation Cover Type (MBSS)	
<input checked="" type="checkbox"/> Natural Channel Shape	Width: <u>1-4'</u>	<input checked="" type="checkbox"/> Silts	<input checked="" type="checkbox"/> Sands	<input type="checkbox"/> Muck	RB: <u>Herbaceous</u>		
<input type="checkbox"/> Artificial (man-made)	Depth: <u>1-4'</u>	<input type="checkbox"/> Cobbles	<input checked="" type="checkbox"/> Gravel	<input type="checkbox"/> Other:	LB: <u>Herbaceous</u>		
<input type="checkbox"/> Manipulated (man-altered)	Bank Erosion/stability: <u>stable</u>	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Concrete				
<input type="checkbox"/> Other:		Side slope: <input type="checkbox"/> >1:1 <input type="checkbox"/> 2:1 <input type="checkbox"/> 3:1 <input checked="" type="checkbox"/> <4:1					

Notes: 1WB flows toward 1WA, but stopped by debris jam @ gabion wall

Weather/Precipitation Conditions: adj. to WB, red clay substrate

Inches of Rain Within Last Week		Monthly Drought Condition NCDC Divisional PDSI										State: <u>MD</u>			
During Field Visit		<a href="https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/divisional/mapping">https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/divisional/mapping</a>										Division: <u>Upper Southern</u>			
<input checked="" type="checkbox"/> No rain	0-0.5						<input checked="" type="checkbox"/>								
<input type="checkbox"/> Light rain	0.5-1	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	
<input checked="" type="checkbox"/> Heavy Rain	>1	Severe Drought			Moderate Drought			Normal			Moderately Wet			Severely Wet	

## Non-tidal tributary has: (check all that apply; include photos for each &amp; list photo #)

Bed and Banks	Ordinary High Water Mark		
<input checked="" type="checkbox"/> Yes	Clear, natural line impressed on the bank	<input type="checkbox"/> Sediment deposition	<input type="checkbox"/> Sediment sorting
<input type="checkbox"/> No	Changes in the character of soil	<input type="checkbox"/> Water staining	<input type="checkbox"/> Scour
	Shelving	<input type="checkbox"/> Presence of flood litter/debris	<input type="checkbox"/> Observed/predicted flow events
	Vegetation matted down, bent, or absent	<input type="checkbox"/> Destruction of terrestrial veg.	<input type="checkbox"/> Abrupt change in plant community
	Leaf litter disturbed	<input type="checkbox"/> Presence of wrack line	<input type="checkbox"/> Other:

## Tidal tributary has: (check all that apply; include photos for each &amp; list photo #)

High Tide Line	Mean High Water Mark indicated by:	Chemical Characteristics
<input type="checkbox"/> Oil or scum line along shore objects	<input type="checkbox"/> Survey to available datum	<input type="checkbox"/> Water is clear
<input type="checkbox"/> Fine shell or debris deposits (foreshore)	<input type="checkbox"/> Physical markings	<input type="checkbox"/> Water is discolored
<input type="checkbox"/> Physical markings/characteristics	<input type="checkbox"/> Vegetation lines/changes in types	<input type="checkbox"/> Oily film
<input type="checkbox"/> Tidal gauges		<input type="checkbox"/> Other:

Notes:

**RAPID HABITAT ASSESSMENT: LOW GRADIENT Ephemeral/Intermittent**

Station ID/ Stream Name	1WB			LAT (DD)	39.208974
Reach Length (m)	57	Date	5/16/24	LONG (DD)	-76.541337

HABITAT PARAMETER	CATEGORY																			
	Optimal					Sub-optimal					Marginal					Poor				
1. SUBSTRATE/ DIVERSITY  AVAILABLE COVER FOR AMPHIBIANS CRAYFISH  SCORE: 3	Greater than 50% of substrate consisting of mix of snags, tree roots or other stable habitat providing cover for amphibians and aquatic or terrestrial invertebrates. LWD in moderate to advanced stage of decay and within- active channel; Substrate roughness capable of trapping lots of organic matter. If moss covered, rate high.					30 to 50% cover and mix of diverse stable habitat; well suited for full cover potential; adequate habitat for maintenance of populations; presence of additional LWD in the form of new fall. Substrate roughness still capable of trapping organic matter.					10 to 30% mix of stable cover; habitat availability less than desirable; substrate frequently disturbed or removed. LWD low in density and/or may be new fall or in early decay stage. Some areas suitable for trapping organic matter. If lg. wood is absent, score low.					Less than 10% stable cover; lack of habitat is obvious; substrate unstable or lacking. Few areas suitable for trapping organic matter.  clay/sand w/ fine lime				
	Rate in Channel and Toe of Banks																			
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
2. POOL SUBSTRATE CHARACTER- IZATION  In dry channels, pool areas should still be observable  SCORE: 6	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged (or remnant) aquatic vegetation are common.					Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged (or remnant) vegetation are present.					All mud or clay or sand bottom; little or no root mat; no submerged (or remnant) vegetation.					Hard-pan clay or bedrock; no root mat or vegetation.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
3. CHANNEL ALTERATION  SCORE: 11	Channelization or dredging absent of minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging (>than past 20 years) may be present, but no evidence of recent channelization.					Channelization may be extensive; embankments or shoring structures present on both banks; 40 to 80% of the stream reach channelized and disrupted.					Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
4. SEDIMENT DEPOSITION  SCORE: 6	Little or no enlargement of "islands" or point bars and less than 20% of the bottom affected by fine sediment deposition. Leaf packs and woody debris with minimal silt covering.					Some new increase in bar formation mostly from sand, or fine sediment; 20 to 50% of the bottom is affected; slight deposition in pools. Leaf packs with moderate silt covering.					Moderate deposition of new sand, or fine sediment on old and new bars; 50 to 80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent. Leaf packs with heavier silt covering.					Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
5. CHANNEL SINUOSITY  SCORE: 3	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line.					The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.					the bends in the stream increase the stream length up to 2 times longer than if it was in a straight line.					Channel is straight; waterway has been channelized for a long distance.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				



## Appendix 1: Modified Environmental Protection Agency Rapid Bioassessment Protocol (EPA RBP) Habitat Assessment Field Data Sheet (Low Gradient Ephemeral/Intermittent Streams)

RAPID HABITAT ASSESSMENT: LOW GRADIENT >>>>>>>>>>>>>>>>>>>>>						Reviewers Initials						
							HT JT					
		Optimal		Sub-optimal		Marginal			Poor			
<b>6. BANK STABILITY</b> <b>(score each bank)</b> *determine left/right by facing downstream		Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems (<5% of bank affected).		Moderately stable; infrequent, small areas of erosion mostly healed over; 5-30% of bank in reach has areas of erosion.		Moderately unstable; 30-60% of bank in reach has areas of erosion; high potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.			
LEFT:		10	9	8	7	6	5	4	3	2	1	0
RIGHT:		10	9	8	7	6	5	4	3	2	1	0
<b>7. BANK VEGETATIVE PROTECTION</b>  SCORE: 14		More than 90% of the streambank surfaces and immediate riparian zones covered by vegetation including trees, understory shrubs, and non-woody plants (herbs, grasses, ferns, mosses); vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.		70-90% of the streambank surfaces are covered by vegetation, but one class of plants is not well represented; disruption evident, but not affecting plant growth potential to extent; more than one-half of the potential plant stubble height remaining. <i>Invasives dominant</i>		50-70% of the streambank surfaces are covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces are covered by vegetation; disruption of streambank vegetation very high; vegetation has been removed to 2 inches or less in average stubble height			
If assessed in winter or early spring look for remnants of herbs, and saplings.												
LEFT:		10	9	8	7	6	5	4	3	2	1	0
RIGHT:		10	9	8	7	6	5	4	3	2	1	0
<b>8. WIDTH OF UNDISTURBED VEG. ZONE</b> (undisturbed veg. Is trees, shrubs, and non-woody macrophytes)		Width of undisturbed vegetative zone is >18 meters; human activities (parking lots, roadbeds, clearcuts, lawns, or crops) have not impacted this zone.		Zone width is between 12 and 18 meters; human activities have only minimally impacted this zone.		Zone width is between 6 and 12 meters; human activities have impacted the zone a great deal.			Width of zone is less than 6 meters; little or no undisturbed vegetation due to man-induced activities.			
LEFT:		10	9	8	7	6	5	4	3	2	1	0
RIGHT:		10	9	8	7	6	5	4	3	2	1	0
<b>TOTAL:</b>  (max=160)		Max Pool Depth (if water is present; otherwise "NA") 15 cm Average Channel Width (Toe of Banks) 1.5 m					Total from front 29 + Total from back 32 = 61 Score Percentage= Total Score /160 X 100 38 %					
Average Width Intact Rip Vegetative Zone (m)				Left		m	Right		m			
→ What is the dominant vegetation type in the reach? <input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous (pine/cypress) <input type="checkbox"/> Mixed (>10%)						Estimated age of forest: _____>50 yrs _____25-50 yrs <input checked="" type="checkbox"/> 5-25 yrs _____<5 yrs Number of strata (e.g., canopy, subcanopy, shrub, herb ( 4 max)) 3						
Stream Surface Shading (%) (average of lower, middle, upper reach)  <input type="checkbox"/> Fully exposed (0-25%)				Indicate % based on cloudless day in summer at noon. Fill in square that applies.  <input type="checkbox"/> Partly shaded (25-50%) <input checked="" type="checkbox"/> Partly exposed (50-75%) <input type="checkbox"/> Fully shaded (75-100%)								
-or- % Canopy (Densimeter)				Compass Bearing (facing downstream) (0-360°)								

# Wetland Function-Value Evaluation Form

Total area of wetland 6.2 ac Human made? Y Is wetland part of a wildlife corridor? N or a "habitat island"? N

Adjacent land use Industrial Distance to nearest roadway or other development 50'

Dominant wetland systems present PEMIF Contiguous undeveloped buffer zone present N

Is the wetland a separate hydraulic system? Y If not, where does the wetland lie in the drainage basin? —

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 1WotE

Latitude 39.211816 Longitude -76.53388













Prepared by: DR/KM Date 5/3/21

Wetland Impact:  
Type — Area —

Evaluation based on:

Office ✓ Field ✓

Corps manual wetland delineation completed? Y ✓ N —

Function/Value	Suitability Y N		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge		✓			
 Floodflow Alteration		✓			
 Fish and Shellfish Habitat	✓		2, 3		Impoundment adjacent, but unable to determine if connected, to Patuxent River
 Sediment/Toxicant Retention	✓		1, 2, 3, 4, 5, 7, 8, 9	✓	See note above about water course connection Receives runoff from access roads + holds water year round
 Nutrient Removal		✓			
 Production Export		✓			
 Sediment/Shoreline Stabilization		✓			
 Wildlife Habitat	✓		3, 7, 9, 10, 11, 12, 13, 17, 18, 19, 20, 21	✓	Large phrag marsh surrounded by forest + shrubs, land connection to Patuxent River
 Recreation		✓			
 Educational/Scientific Value		✓			
 Uniqueness/Heritage		✓			
 Visual Quality/Aesthetics		✓			
ES Endangered Species Habitat		✓			
Other					

Notes:

\* Refer to backup list of numbered considerations.

# Wetland Function-Value Evaluation Form

Total area of wetland 0.6 Acres Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Utility ROW, Transportation Distance to nearest roadway or other development 50'

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present 50'

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? \_\_\_\_\_













How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 1WET-G  
Latitude 39.207451 Longitude -76.545866

Prepared by: EB Date 5/8/24

Wetland Impact:  
Type \_\_\_\_\_ Area \_\_\_\_\_

Evaluation based on:  
Office ☒ Field ☒  
Corps manual wetland delineation  
completed? Y ☒ N ☐

Function/Value	Suitability Y N		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge		<input checked="" type="checkbox"/>			
 Floodflow Alteration		<input checked="" type="checkbox"/>			
 Fish and Shellfish Habitat		<input checked="" type="checkbox"/>			
 Sediment/Toxicant Retention	<input checked="" type="checkbox"/>		1, 2, 4, 5, 7, 9		
 Nutrient Removal		<input checked="" type="checkbox"/>			
 Production Export		<input checked="" type="checkbox"/>			
 Sediment/Shoreline Stabilization		<input checked="" type="checkbox"/>			
 Wildlife Habitat		<input checked="" type="checkbox"/>			
 Recreation		<input checked="" type="checkbox"/>			
 Educational/Scientific Value		<input checked="" type="checkbox"/>			
 Uniqueness/Heritage		<input checked="" type="checkbox"/>			
 Visual Quality/Aesthetics		<input checked="" type="checkbox"/>			
ES Endangered Species Habitat		<input checked="" type="checkbox"/>			
Other					

Notes:













\* Refer to backup list of numbered considerations.



# Wetland Function-Value Evaluation Form

Total area of wetland 2.56 ac Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No  
 Adjacent land use Transportation, Railroad, Industrial Distance to nearest roadway or other development 50'  
 Dominant wetland systems present PEM Contiguous undeveloped buffer zone present 50'  
 Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? High  
 How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 1 WET-I  
 Latitude 39.205025 Longitude -76.549892  
 Prepared by: EB Date 5/8/24  
 Wetland Impact:  
 Type      Area       
 Evaluation based on:  
 Office      Field       
 Corps manual wetland delineation completed? Y      N     

Function/Value	Suitability		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
	Y	N			
 Groundwater Recharge/Discharge		<input checked="" type="checkbox"/>			
 Floodflow Alteration		<input checked="" type="checkbox"/>			
 Fish and Shellfish Habitat		<input checked="" type="checkbox"/>			
 Sediment/Toxicant Retention	<input checked="" type="checkbox"/>		1,2,4,5,7,9		
 Nutrient Removal		<input checked="" type="checkbox"/>			
 Production Export		<input checked="" type="checkbox"/>			
 Sediment/Shoreline Stabilization		<input checked="" type="checkbox"/>			
 Wildlife Habitat		<input checked="" type="checkbox"/>			
 Recreation		<input checked="" type="checkbox"/>			
 Educational/Scientific Value		<input checked="" type="checkbox"/>			
 Uniqueness/Heritage		<input checked="" type="checkbox"/>			
 Visual Quality/Aesthetics		<input checked="" type="checkbox"/>			
ES Endangered Species Habitat		<input checked="" type="checkbox"/>			
Other					

Notes:

\* Refer to backup list of numbered considerations.

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: <u>1FS1</u>		Project: <u>MDTA Inner Loop Rills</u>	
Owner/Applicant: <u>MDTA</u>		State: <u>MD</u>	County: <u>Balt. City</u>
Date: <u>2/20/24</u>	Prepared by: <u>SKY/ET</u>	Photos: <u>P081-84</u>	

Type of Community:	Forest Stand Area:
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: <u>30%</u>

## Existing Vegetation

Dominant Species in Canopy:		Size Class:	Notes:
Bradford pear		<input checked="" type="checkbox"/> 2-6"	Few scattered 6-11" trees inclusion of box elder @ bottom of slope near WC
Siberian elm		<input type="checkbox"/> 6-11"	
Black locust		<input type="checkbox"/> 12-20"	
		<input type="checkbox"/> 20-30"	
		<input type="checkbox"/> >30"	
Dominant Species in Understory:		Notes:	
Barberries			
Amur honeysuckle			
smooth sumac			
Dominant Species in Herbaceous Layer:		Notes:	
Broom grass Japanese honeysuckle			
Phragmites			
switchgrass			

Downed Woody Debris:	Invasive Species Cover:	Invasive Species Present:
<input type="checkbox"/> High	<input checked="" type="checkbox"/> High	
<input type="checkbox"/> Medium	<input type="checkbox"/> Medium	
<input checked="" type="checkbox"/> Low	<input type="checkbox"/> Low	

General Stand Conditions:	
Disturbed roadside hedgerow on slope to 1-6%.	
Overall Condition: <u>poor</u>	Vines: <u>Moderate</u>

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1FS2	Project: MDTA Inner Loop Rills	
Owner/Applicant: MDTA	State: MD	County: Baltimore
Date: 01/20/04	Prepared by: SUE/ETH	Photos: 8094-95, 8105-06

Type of Community:	Forest Stand Area:
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 40%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> Black locust Tree-of-heaven White mulberry Siberian elm	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input checked="" type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b>
<b>Dominant Species in Understory:</b> Amur honeysuckle oriental bittersweet Tree-of-heaven Poisoning Baccharis Black locust Japanese honeysuckle	<b>Notes:</b>	
<b>Dominant Species in Herbaceous Layer:</b> English ivy common mallow Japanese honeysuckle grape sp.	<b>Notes:</b> very sparse understory in some areas little herbaceous growth	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b>
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## General Stand Conditions:

Disturbed forest on south side of WC. High level of invasive species

poor condition forest between fence + WC

Overall Condition: Poor

Vines: High



# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1FS3		Project: MDTA Inner Loop Rills Project	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 3/20/24	Prepared by: <del>SLY</del> , SLY, LP	Photos: 6554-55	

Type of Community:	Forest Stand Area:
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 40%

Existing Vegetation		
Dominant Species in Canopy:	Size Class:	Notes:
Bradford pear Black locust	<input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	inclusion of 1 18" pin oak.
Dominant Species in Understory:		Notes:
Amur honeysuckle Multiflora rose		sumac on edge
Dominant Species in Herbaceous Layer:		Notes:
Phragmites Japanese honeysuckle		

Downed Woody Debris:	Invasive Species Cover:	Invasive Species Present:
<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	

General Stand Conditions:
Disturbed hedgerow north of 695 + south of powerlines. High invasive species cover. Poor condition  Vines = moderate

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1FS4		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/6/24	Prepared by: EB, GS	Photos: East	

Type of Community: forest BLACK LOCUST / TREE OF HEAVEN	Forest Stand Area: 70731.39
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 75%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> Robinia pseudoacacia Ailanthus altissima, Morus alba, Liquidambar styraciflua	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> Some vines climbing trees
<b>Dominant Species in Understory:</b> Lonicera maackii, Rubus sp. Lonicera japonica, Toxicodendron radicans, Celastrus orbiculatus, Hedera helix Amorpha fruticosa		<b>Notes:</b>
<b>Dominant Species in Herbaceous Layer:</b> Vines acting as groundcover		<b>Notes:</b>

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> AIAL, MOAL, LOMA, LOJA, CEOR HEHE
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<b>General Stand Conditions:</b> Many invasives in the understory, trees in fair health, low diversity.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: IFS5	Project: FSK Rebuild	
Owner/Applicant: MDTA	State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: Northwest

Type of Community: forest <small>Sweet-gum / common persimmon</small>	Forest Stand Area: 32372.61 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 25%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> Liquidambar styraciflua* Diospyrus virginiana Robinia pseudoacacia Pyrus calleryana	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> Robinia pseudoacacia & morus alba also common throughout Pyrus calleryana
<b>Dominant Species in Understory:</b> Baccharis halimifolia, Lonicera maackii Pyrus calleryana, morus alba Celastrus orbiculatus, Toxicodendron radicans Diospyrus virginiana	<b>Notes:</b> Elaeagnus umbellata, Vitis sp, Rubus sp, Parthenocissus quinquefolia - also common	
<b>Dominant Species in Herbaceous Layer:</b> Lonicera japonica, Pyrus calleryana, Celastrus orbiculatus, Toxicodendron radicans vines dominant as groundcover	<b>Notes:</b> Phragmites australis scattered throughout Parthenocissus quinquefolia also common	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, MOAL, BAHF, LOMA, CEOR, ELUM, LOTR, PHAV
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<b>General Stand Conditions:</b> Poor - invasive species dominant throughout, heavy vine coverage, trees stressed/damaged by vines
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: F56		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: JT, HH	Photos:	

Type of Community: forest BLACK LOCUST / SWEET GUM	Forest Stand Area: 54610.22 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 25%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> <i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i> <i>Diospyros virginiana</i>	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Diospyros virginiana</i> <i>Pyrus calleryana</i> <i>Ailanthus altissima</i> - also common
<b>Dominant Species in Understory:</b> <i>Pyrus calleryana</i> , <i>Robinia pseudoacacia</i> , <i>Lonicera maackii</i> , <i>Baccharis halimifolia</i> , <i>Vitis</i> sp., <i>Celastrus orbiculatus</i> , <i>Ampelopsis brevipedunculata</i>		<b>Notes:</b>
<b>Dominant Species in Herbaceous Layer:</b> <i>Celastrus orbiculatus</i> , <i>Lonicera japonica</i> , <i>Rubus</i> sp., <i>Parthenocissus quinquefolia</i> , <i>Ampelopsis brevipedunculata</i>		<b>Notes:</b> - scattered <i>Phragmites australis</i> + <i>Rosa multiflora</i> , <i>Artemisia vulgaris</i> - vines dominate groundcover

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> <i>PYCA</i> , <i>AIAL</i> , <i>LOMA</i> , <i>BAHA</i> , <i>CEOR</i> , <i>LOJA</i> , <i>ROMU</i> , <i>PTEAU</i>
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<b>General Stand Conditions:</b> <p>POOR - invasive species dominant throughout, heavy vine coverage, trees stressed/damaged by vines</p>
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: <u>1FS7</u>		Project: <u>#SK Rebuild</u>	
Owner/Applicant: <u>MDTA</u>		State: <u>MD</u>	County: <u>Baltimore City</u>
Date: <u>5/10/24</u>	Prepared by: <u>HT, HH</u>	Photos: <u>Northwest</u>	

Type of Community: <u>forest Black locust/Sweet-gum</u>	Forest Stand Area: <u>44252.41 ft<sup>2</sup></u>
Stand Successional Stage: <input type="checkbox"/> Early <input checked="" type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: <u>60%</u>

## Existing Vegetation

<b>Dominant Species in Canopy:</b> <u>Robinia pseudoacacia</u> <u>Liquidambar styraciflua</u> <u>Quercus phellos</u> <u>Pyrus calleryana</u>	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <u>Celtis occidentalis</u> <u>Pyrus calleryana</u>  <u>few larger trees scattered throughout</u>
<b>Dominant Species in Understory:</b> <u>Pyrus calleryana, Robinia pseudoacacia,</u> <u>Lonicera japonica, Lonicera mackii,</u> <u>Rosa multiflora, Vitis sp, Celastrus orbiculata</u> <u>Parthenocissus quinquefolia</u>	<b>Notes:</b>	
<b>Dominant Species in Herbaceous Layer:</b> <u>Phragmites australis, Rosa multiflora</u> <u>Vitis sp, Lonicera japonica, Celastrus orbiculatus,</u> <u>Ampelopsis brevipedunculata</u>	<b>Notes:</b> <u>-Artemisia vulgaris - common along stand edges.</u> <u>-vines dominate ground cover</u>	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> <u>PYCA, LOJA, ROMU, PHAU, CEOR,</u> <u>ARVV, AMBR, LOMI</u>
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## General Stand Conditions:

Poor - invasive species dominant  
 throughout understory + herb layer.  
 Vines climbing trees + shrubs

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1 FS 8		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/10/24	Prepared by:	Photos: West, South	

Type of Community: forest SWEETGUM/WHITE PINE	Forest Stand Area: 23292.82 ft <sup>2</sup>
Stand Successional Stage: <input type="checkbox"/> Early <input checked="" type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 50%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> Liquidambar styraciflua * Pinus strobus, Diospyros virginiana Robinia pseudoacacia Pyrus calleryana	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> few larger white pines scattered throughout morus albus
<b>Dominant Species in Understory:</b> Ampelopsis brevipedunculata Baccharis halimifolia, Lonicera maackii Lonicera japonica, Vitis sp. Celastrus orbiculatus, Toxicodendron radicans, Rubus sp., Rosa multiflora	<b>Notes:</b> Eleagnus umbellata, Rhus typhina, Ailanthus altissima	
<b>Dominant Species in Herbaceous Layer:</b> Phragmites australis, Toxicodendron radicans, Lonicera japonica, Parthenocissus quinquefolia, Vitis sp., Ampelopsis brevipedunculata	<b>Notes:</b> -Phragmites australis -vines dominant as ground cover	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, MOAL, GATHA, LOJA, AMBR, LOMA, CFOR, ROMU, PTHAU
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<b>General Stand Conditions:</b> Poor - invasives dominant throughout, heavy vine coverage
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1FS9	Project: FSK Rebuild	
Owner/Applicant: MDTA	State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: N

Type of Community: forest Black cherry / Black locust	Forest Stand Area: 42097.70
Stand Successional Stage: <input type="checkbox"/> Early <input checked="" type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 75%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> Prunus serotina Robinia pseudoacacia Pyrus calleryana	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> Quercus alba & carya tomentosa also common; Ailanthus altissima scattered along stand edges Paulownia tomentosa scattered
<b>Dominant Species in Understory:</b> Ampelopsis brevipedunculata Pyrus calleryana, Prunus serotina, vitis sp. Ilex opaca, Toxicodendron radicans Rosa multiflora, Lonicera japonica Celastrus orbiculatus, Parthenocissus quinquefolia	<b>Notes:</b> Duchesnea indica	
<b>Dominant Species in Herbaceous Layer:</b> Lonicera japonica, Rosa multiflora Toxicodendron radicans, Parthenocissus quinquefolia, Celastrus orbiculatus	<b>Notes:</b> scattered Phragmites australis along stand edges.	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, PATO, AMBR, BAHIA, POMU, LOJA, CEOR, PHAU Spotted lantern fly
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<b>General Stand Conditions:</b> Fair - invasive species dominant, vines climbing trees, moderate species diversity eastern portion of stand slightly younger but similar species & condition.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: IFS10	Project: FSK Rebuild	
Owner/Applicant: MDTA	State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: East

Type of Community: forest <del>TULIP TREE / TREE OF HEAVEN</del>	Forest Stand Area: 34196.53 ft <sup>2</sup>
Stand Successional Stage: <input type="checkbox"/> Early <input checked="" type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 80%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> <i>Liriodendron tulipifera</i> <i>Ailanthus altissima</i> <i>Liquidambar styraciflua</i> <i>Prunus serotina</i>	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input checked="" type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Paulownia tomentosa</i> , <i>Diospyros virginiana</i> , <i>Juniperus virginiana</i> , <i>Morus alba</i>
<b>Dominant Species in Understory:</b> <i>Hedera helix</i> , <i>Morus alba</i> , <i>Lonicera maackii</i> , <i>Lonicera japonica</i> , <i>Eleagnus umbellata</i> , <i>Toxicodendron radicans</i> , <i>Celastrus orbiculatus</i> , <i>Campsis radicans</i> , <i>Rosa multiflora</i> , <i>Rubus</i> sp. <del><i>Ailanthus altissima</i></del>	<b>Notes:</b> <i>Hedera helix</i>	
<b>Dominant Species in Herbaceous Layer:</b> <i>Lonicera japonica</i> , <i>Toxicodendron radicans</i> , <i>Celastrus orbiculatus</i> , <i>Alliaria petiolata</i> , <i>Hedera helix</i>	<b>Notes:</b> vines dominant ground cover	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> AIAL, MOAL, PATO, HEHE, LOMA, UJA, ELUM, CEOR, ROMO, ALPE spotted lantern fly
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<b>General Stand Conditions:</b> Fair - Poor Stand dominated by invasive species, vines growing over most trees causing stress/damage
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1FS11		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: East	

Type of Community: forest BLACK LOCUST / CALLERY PEAR	Forest Stand Area: 101908.71 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 50%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> <i>Robinia pseudoacacia</i> <i>Pyrus calleryana</i> <i>Liquidambar styraciflua</i> <i>Diospyros virginiana</i>	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Ailanthus altissima</i> & <i>Paulownia tomentosa</i> , <i>Juniperus virginiana</i> <i>Quercus phellos</i> - scattered
<b>Dominant Species in Understory:</b> <i>Baccharis halimifolia</i> , <i>Lonicera maackii</i> , <i>Pyrus calleryana</i> , <i>Vitis</i> sp. <i>Liquidambar styraciflua</i> , <i>Ampelopsis brevipedunculata</i> , <i>Toxicodendron radicans</i>	<b>Notes:</b> <i>Eleagnus umbellata</i>	
<b>Dominant Species in Herbaceous Layer:</b> <i>Celastrus orbiculatus</i> , <i>Lonicera japonica</i> , <i>Rosa multiflora</i> , <i>Toxicodendron radicans</i> <i>Robus</i> sp., <i>Artemisia vulgaris</i>	<b>Notes:</b> <i>Phragmites australis</i> - scattered & along stand edge vines dominant as ground cover	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, AIAL, PATB, BAHM, ELUM, LOMA, AMBR, CEOR, LOJA, ROMO, ARVU
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<b>General Stand Conditions:</b> Poor - invasive species dominant throughout, vines climbing & stressing / damaging trees.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: FS12		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: 500+ w/ web	

Type of Community: Forest Willow Oak / Black Locust	Forest Stand Area: 57918.32 A2
Stand Successional Stage: <input type="checkbox"/> Early <input checked="" type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 75%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> <i>Quercus phellos</i> <i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i>	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input checked="" type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Quercus falcata</i> , <i>Prunus serotina</i> , <i>Pyrus calleryana</i> , <i>Quercus rubra</i> , <i>Morus alba</i> , <i>Acer rubrum</i> also common - few <i>specimen trees</i>
<b>Dominant Species in Understory:</b> <i>Toxicodendron radicans</i> , <i>Lonicera japonica</i> , <i>Rosa multiflora</i> , <i>Baccharis halimifolia</i> , <i>Smilax rotundifolia</i> , <i>Ilex opaca</i> , <i>Parthenocissus quinquefolia</i> , <i>Celastrus orbiculatus</i> , <i>Rubus</i> sp.	<b>Notes:</b>	
<b>Dominant Species in Herbaceous Layer:</b> <i>Lonicera japonica</i> , <i>Hedera helix</i> , <i>Toxicodendron radicans</i> , <i>Celastrus orbiculatus</i> , <i>Solidago</i> sp.	<b>Notes:</b> <i>Phragmites australis</i> - scattered & along stand edge	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, MOAL, LOJA, ROMO, BATH, CEOR, LOJA, MEHE, PHAU
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<b>General Stand Conditions:</b> Fair - mod species diversity, canopy trees generally in good health, invasive species are prevalent throughout, vines climbing some trees.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1F513		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/16/24	Prepared by: HT, TT	Photos: SW	

Type of Community: forest WILLOW OAK / SOUTHERN RED OAK	Forest Stand Area: 15412.85 A <sup>2</sup>
Stand Successional Stage: <input type="checkbox"/> Early <input checked="" type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 90

Existing Vegetation		
<b>Dominant Species in Canopy:</b> <i>Quercus phellos</i> <i>Quercus falcata</i> <i>Quercus alba</i> <i>Liquidambar styraciflua</i>	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input checked="" type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Acer rubrum</i> also common <i>Prunus serotina</i> some larger trees throughout
<b>Dominant Species in Understory:</b> <i>Smilax rotundifolia</i> , <i>Parthenocissus</i> <i>quinquefolia</i> , <i>Toxicodendron radicans</i> , <i>Campsis radicans</i> , <i>Rosa multiflora</i> , <i>Rubus</i> sp., <i>Vaccinium corymbosum</i>		<b>Notes:</b> open understory in the interior forest.
<b>Dominant Species in Herbaceous Layer:</b> <i>Lonicea japonica</i> , <i>Parthenocissus</i> <i>quinquefolia</i> , <i>Toxicodendron radicans</i>		<b>Notes:</b> <i>Phragmites australis</i> dominant along stand edge

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> <i>Rom</i> , <i>LOJA</i> , <i>PHAV</i>
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<b>General Stand Conditions:</b> Fair - interior forest is diverse with an open understory Stand edge is more disturbed with heavier vine/ invasive cover.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1H2		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/6/24	Prepared by: EB, GS	Photos: West	

Type of Community: hedgerow	Forest Stand Area: 206,766.28 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 20%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> <i>Robinia pseudoacacia</i> , <i>Morus alba</i> , <i>Acer negundo</i> , <i>Ailanthus altissima</i> , <i>Pinus caryana</i> , <i>Ulmus americana</i> , <i>Quercus phellos</i> , <i>Quercus palustris</i>	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> Scattered trees throughout, does not meet definition of a forest. Trees are in fair health, some are being overtaken by vines
<b>Dominant Species in Understory:</b> <i>Amorpha fruticosa</i> , <i>Rosa multiflora</i> , <i>Koeleria paniculata</i> , <i>Lonicera maackii</i> , <i>Baccharis halimifolia</i> , <i>Viburnum</i> sp., <i>Toxicodendron radicans</i> , <i>Lonicera japonica</i> , <i>Hedera helix</i> , <i>Parthenocissus quinquefolia</i> , <i>Celastrus orbiculatus</i>	<b>Notes:</b>	
<b>Dominant Species in Herbaceous Layer:</b> None, vines acting as groundcover	<b>Notes:</b>	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> MOAL, AIAL, PYCA, ROMU, LOMA, LOJA, HEHE, CEOR
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<b>General Stand Conditions:</b> Many invasive species in canopy + understory. Trees in fair health with many climbing vines.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1H3	Project: FSK Rebuild	
Owner/Applicant: MDTA	State: MD	County: Baltimore City
Date: 5/10/21	Prepared by: HT, HH	Photos: North

Type of Community: hedgerow	Forest Stand Area: 10755.92 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 15%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> <i>Pyrus calleryana</i> , <i>Robinia pseudoacacia</i> , <i>Liquidambar styraciflua</i> , <i>Ailanthus altissima</i>	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Ailanthus altissima</i> + <i>Morus alba</i> also common throughout <i>Rhus typhena</i> - clusters
<b>Dominant Species in Understory:</b> <i>Baccharis halimifolia</i> , <i>Lonicera maackii</i> , <i>Ailanthus altissima</i> , <i>Lonicera japonica</i> , <i>Celastrus orbiculatus</i> , <i>Toxicodendron radicans</i>	<b>Notes:</b> <i>Toxicodendron radicans</i> + <i>Rubus</i> sp. also common + <i>Vitis</i> sp.	
<b>Dominant Species in Herbaceous Layer:</b> <i>Lonicera japonica</i> , <i>Celastrus orbiculatus</i> , <i>Toxicodendron radicans</i> , <i>Parthenocissus quinquefolia</i>	<b>Notes:</b> <i>Phragmites australis</i> scattered along edges + throughout vines are dominant ground cover	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, AFAL, MOAL, BAHF, LOMA, LOJA, CEOR, PHAV
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<b>General Stand Conditions:</b> Poor — heavy invasive cover; vines covering most woody veg + stressing/damaging native tree species
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1H4	Project: FSK Rebuild	
Owner/Applicant: MDTA	State: MD	County: Baltimore City
Date: 5/16/24	Prepared by: HT, HH	Photos: North West

Type of Community: hedgerow	Forest Stand Area: 109097.44 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 15%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> <i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i> <i>Pyrus calleryana</i>	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> trees are scattered in some areas <i>Pinus strobus</i> , <i>Pawlonia tomentosa</i> <i>morus alba</i>
<b>Dominant Species in Understory:</b> <i>Baccharis halimifolia</i> , <i>Liquidambar styraciflua</i> , <i>Pyrus calleryana</i> , <i>Lonicera maackii</i> , <i>Celastrus orbiculatus</i> , <i>Toxicodendron radicans</i> , <i>Parthenocissus quinquefolia</i>	<b>Notes:</b> <i>Elaeagnus umbellata</i> , <i>Vitis</i> sp., <i>Rubus</i> sp. - also common	
<b>Dominant Species in Herbaceous Layer:</b> <i>Celastrus orbiculatus</i> , <i>Toxicodendron radicans</i> , <i>Parthenocissus quinquefolia</i> , <i>Baccharis halimifolia</i> , <i>Lonicera japonica</i>	<b>Notes:</b> <i>Phragmites australis</i> along stand edges & scattered throughout	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> <i>RYCA</i> , <i>BATHA</i> , <i>LOMA</i> , <i>CEOR</i> , <i>ELUM</i> , <i>LOJA</i>
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## General Stand Conditions:

Poor - invasives species dominant, heavy vine coverage stressing/damaging trees

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 145	Project: FSK Rebuild	
Owner/Applicant: MDTA	State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: Southeast

Type of Community: <i>Redgum</i>	Forest Stand Area: 17775.93 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 25%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> <i>Pyrus calleryana</i> <i>Populus alba</i> <i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i>	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b> <i>Diospyros virginiana</i> <i>Prunus serotina</i>
<b>Dominant Species in Understory:</b> <i>Rosa multiflora</i> <i>Baccharis halimifolia</i> , <i>Lonicera maackii</i> <i>Toxicodendron radicans</i> , <i>Lonicera japonica</i> , <i>Parthenocissus quinquefolia</i> <i>Eleagnus umbellata</i> , <i>Ampelopsis brevipedunculata</i>	<b>Notes:</b> <i>Celastrus orbiculatus</i>	
<b>Dominant Species in Herbaceous Layer:</b> <i>Phragmites australis</i> , <i>Ampelopsis brevipedunculata</i> , <i>Lonicera japonica</i> <i>Toxicodendron radicans</i>	<b>Notes:</b> vines dominant as ground cover	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> PYCA, BAHIA, ROMO, LOMA, CEOR LOJA, ELUM, AMBR, PTAU
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<b>General Stand Conditions:</b> - lacking density of trees to classify as a forest, but border line - invasive species dominant, vines climbing
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1 H6		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore City
Date: 5/10/24	Prepared by: HT, HH	Photos: northeast	

Type of Community: hedgerow	Forest Stand Area: 23315.56
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 15%

## Existing Vegetation

### Dominant Species in Canopy:

Pyrus calleryana,  
Liquidambar styraciflua  
Diospyros virginiana  
Prunus serotina

### Size Class:

<input checked="" type="checkbox"/>	2-6"
<input type="checkbox"/>	6-11"
<input type="checkbox"/>	12-20"
<input type="checkbox"/>	20-30"
<input type="checkbox"/>	>30"

### Notes:

Juniperus virginiana, Acer  
rubrum, Quercus phellos  
Scattered throughout. Prunus  
serotina

### Dominant Species in Understory:

Baccharis halimifolia, Rosa multiflora,  
Lonicera japonica, Vitis sp. arbutifolia,  
Lonicera maackii, Rubus sp.  
Ampelopsis brevipedunculata

### Notes:

Eleagnus umbellata. also common

### Dominant Species in Herbaceous Layer:

Vitis sp, Rosa multiflora, Lonicera  
japonica, Celastrus orbiculatus  
Phragmites australis, Ampelopsis  
brevipedunculata

### Notes:

vines are dominant  
groundcover

### Downed Woody Debris:

<input type="checkbox"/>	High
<input type="checkbox"/>	Medium
<input checked="" type="checkbox"/>	Low

### Invasive Species Cover:

<input checked="" type="checkbox"/>	High
<input type="checkbox"/>	Medium
<input type="checkbox"/>	Low

### Invasive Species Present:

PYCA, PATO, BAHIA, LOMA,  
LOJA, ROMU, CEOR

### General Stand Conditions:

Poor - invasive species dominant, vines covering  
most trees

trees scattered with tree saplings and shrubs  
dense throughout

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1H2		Project: MDTA Inner Loop Rills	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 2/20/24	Prepared by: SWJ/ET	Photos: 8102	

Type of Community:	Forest Stand Area:
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 25%

## Existing Vegetation

Dominant Species in Canopy: Bradford pear	Size Class: <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
Dominant Species in Understory: Baccharis	Notes:	
Dominant Species in Herbaceous Layer: Japanese knotweed Phragmites on edge	Notes:	

Downed Woody Debris: <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	Invasive Species Cover: <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	Invasive Species Present:
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General Stand Conditions: small hedge row on highway slope	
Overall Condition: Poor	Vines: Moderate

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H1		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/8/24	Prepared by: LP, ET	Photos: 9335	

Type of Community: Hedgerow	Forest Stand Area: 3,119 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 30%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> • Tree of Heaven • white mulberry	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> • poison ivy • tree of heaven • baccharis hamifolia • false indigo	Notes:	
<b>Dominant Species in Herbaceous Layer:</b> • poison ivy • Japanese honeysuckle • rescue sp.	Notes:	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • Tree of heaven • white mulberry • Japanese honeysuckle
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<b>General Stand Conditions:</b> high invasive sp. cover, poor quality, narrow hedgerow between road + river
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H2		Project: FSK Rebuild	
Owner/Applicant:		State: MD	County: Baltimore
Date: 5/3/24	Prepared by: LP, ET	Photos: 9339	

Type of Community: Hedgerow	Forest Stand Area: 1,574 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 40%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> • tree of heaven	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> • tree of heaven • poison ivy	Notes:	
<b>Dominant Species in Herbaceous Layer:</b> • poison ivy • virginia creeper • japanese honeysuckle	Notes:	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • tree of heaven • Japanese honeysuckle
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**General Stand Conditions:** high invasive cover, poor quality

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H3		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/3/24	Prepared by: LP, ET	Photos: 9340	

Type of Community: Hedgerow	Forest Stand Area: 1,159ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 50%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> • Golden raintree	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> • Golden Raintree • Black cherry	Notes:	
<b>Dominant Species in Herbaceous Layer:</b> • Golden Raintree • fescue sp. • japanese honeysuckle	Notes:	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • Golden Raintree • japanese honeysuckle
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**General Stand Conditions:** high invasive cover, poor quality

# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H4		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/3/24	Prepared by: LP, ET	Photos: photo - 9369	

Type of Community: Hedgerow	Forest Stand Area: 10,600 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 50%

## Existing Vegetation

<b>Dominant Species in Canopy:</b> • white mulberry	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> • poison ivy • baccharis halimifolia • white mulberry		Notes:
<b>Dominant Species in Herbaceous Layer:</b> • poison ivy • virginia creeper • fescue sp. • japanese honeysuckle		Notes:

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • white mulberry • japanese honeysuckle
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<b>General Stand Conditions:</b> high invasive cover, poor quality
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 245		Project: PSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/3/24	Prepared by: W, ET	Photos: photo - 9370	

Type of Community: Hedgerow	Forest Stand Area: 2,100ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 40%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> • Siberian elm	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b>
<b>Dominant Species in Understory:</b> • baccharis hamiltonifolia • Siberian elm • poison ivy		<b>Notes:</b>
<b>Dominant Species in Herbaceous Layer:</b> • common mugwort • poison ivy • Japanese honeysuckle • Virginia creeper		<b>Notes:</b>

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • Siberian elm • Japanese honeysuckle • common mugwort
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<b>General Stand Conditions:</b> high invasive cover, poor quality
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H6		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/7/24	Prepared by: LP, ET	Photos: 9351-52	

Type of Community: Hedgerow	Forest Stand Area: 5,037 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 40%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> white mulberry, chinese elm, black locust	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> chinese privet, multiflora rose, false indigo,		Notes:
<b>Dominant Species in Herbaceous Layer:</b> cunny dock, wood reed, poison ivy		Notes:

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • chinese elm • white mulberry • chinese privet • multiflora rose
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<b>General Stand Conditions:</b> poor condition hedgerow on berm between river & wetland.
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 1247		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/7/24	Prepared by: LP, ET	Photos: 9357	

Type of Community: Hedgerow	Forest Stand Area: 3,894 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 40%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> black locust, tree of heaven, Chinese elm,	<b>Size Class:</b> <input checked="" type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	<b>Notes:</b>
<b>Dominant Species in Understory:</b> tree of heaven, black cherry, baccharis halimifolia Chinese Privet	<b>Notes:</b>	
<b>Dominant Species in Herbaceous Layer:</b> virginia creeper, poison ivy, Japanese honeysuckle	<b>Notes:</b>	

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • Tree of heaven • Chinese elm • Chinese Privet • Japanese honeysuckle
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<b>General Stand Conditions:</b> poor quality, high invasives
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H8		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/7/24	Prepared by: LP, ET	Photos: 9363-64	

Type of Community: Hedgerow	Forest Stand Area: 91,902 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 50%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> tree of heaven, white mulberry, bradford pear, sweet gum, black locust, cottonwood	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input checked="" type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> tree of heaven, false indigo, baccharis, halmifolia, black locust, sweet gum		Notes:
<b>Dominant Species in Herbaceous Layer:</b> poison ivy, virginia creeper, japanese honeysuckle, phragmites australis, rice cut grass		Notes:

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> • Tree of heaven • white mulberry • bradford pear • Japanese honeysuckle • Phragmites australis
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<b>General Stand Conditions:</b> poor quality, high invasive, some MDTA planting areas excluded from hedgerow • Tree density does not meet definition of forest
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# WALK-THROUGH FOREST STAND ANALYSIS

Forest Stand ID: 2H9		Project: FSK Rebuild	
Owner/Applicant: MDTA		State: MD	County: Baltimore
Date: 5/7/24	Prepared by: LP, ET	Photos: 9368	

Type of Community: Hedgerow	Forest Stand Area: 5,022 ft <sup>2</sup>
Stand Successional Stage: <input checked="" type="checkbox"/> Early <input type="checkbox"/> Mid <input type="checkbox"/> Mature	Percent Canopy Closure: 50%

Existing Vegetation		
<b>Dominant Species in Canopy:</b> Tree of heaven, black locust, persimmon,	<b>Size Class:</b> <input type="checkbox"/> 2-6" <input type="checkbox"/> 6-11" <input type="checkbox"/> 12-20" <input type="checkbox"/> 20-30" <input type="checkbox"/> >30"	Notes:
<b>Dominant Species in Understory:</b> golden rain tree, tree of heaven, multiflora rose, false indigo bush, baccharis halimifolia		Notes:
<b>Dominant Species in Herbaceous Layer:</b> poison ivy, virginia creeper, japanese honey suckle, catchweed bedstraw		Notes:

<b>Downed Woody Debris:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	<b>Invasive Species Cover:</b> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<b>Invasive Species Present:</b> - Tree of heaven - Golden rain tree - Multiflora rose - Japanese honey suckle
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<b>General Stand Conditions:</b> poor quality, high invasive cover
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## **APPENDIX E: PHOTOGRAPH LOG**



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**

**WETLAND DELINEATION PHOTOGRAPHS**

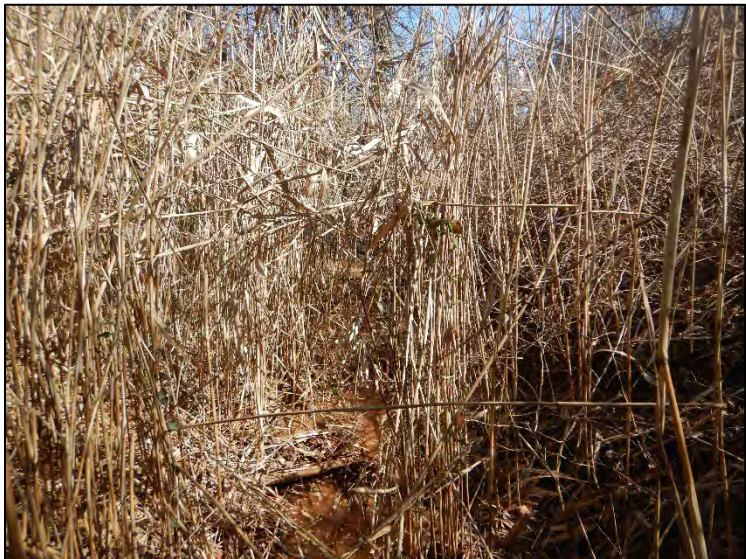


Photo 1 – Looking southwest at 1WETB



Photo 3 – Looking southwest at 1WETD

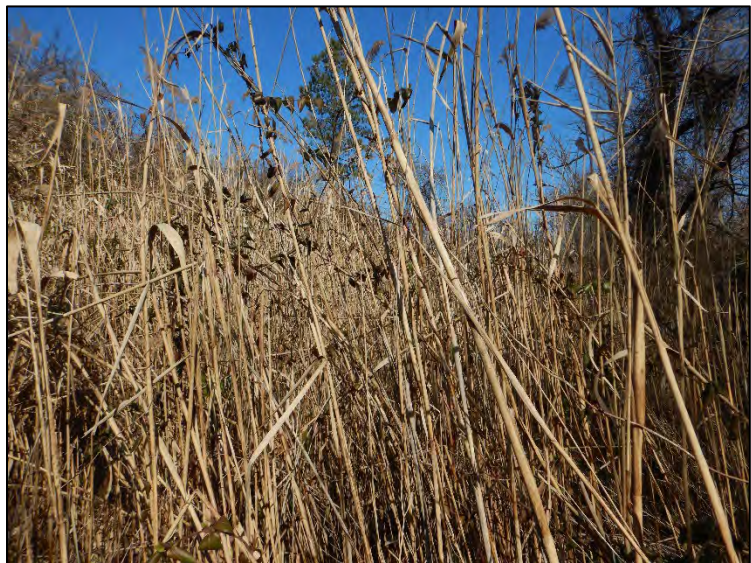


Photo 2 – Looking northeast at 1WETC



Photo 4 – Looking west at 1WETE



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 5 – Looking northeast at 1WETF



Photo 7 – Looking east at 1WETH



Photo 6 – Looking southwest at 1WETG



Photo 8 – Looking northwest at 1WETI



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 9 – Looking south at 1WETJ



Photo 11 – Looking southwest at 2WETB



Photo 10 – Looking southwest at 2WETA



Photo 12 – Looking northeast at Photo 2WETC



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 13 – Looking northeast at 2WETD



Photo 14 – Looking southwest at UTP-1



## Appendix E: Francis Scott Key Bridge Rebuild Project Photograph Log

### FOREST STAND PHOTOGRAPHS



Photo 1: Looking west at 1FS1



Photo 3: Looking northeast at 1FS3



Photo 2: Looking southwest at 1FS2



Photo 4: Looking east at 1FS4



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 5: Looking northwest at 1FS5



Photo 7: Looking west at 1FS7

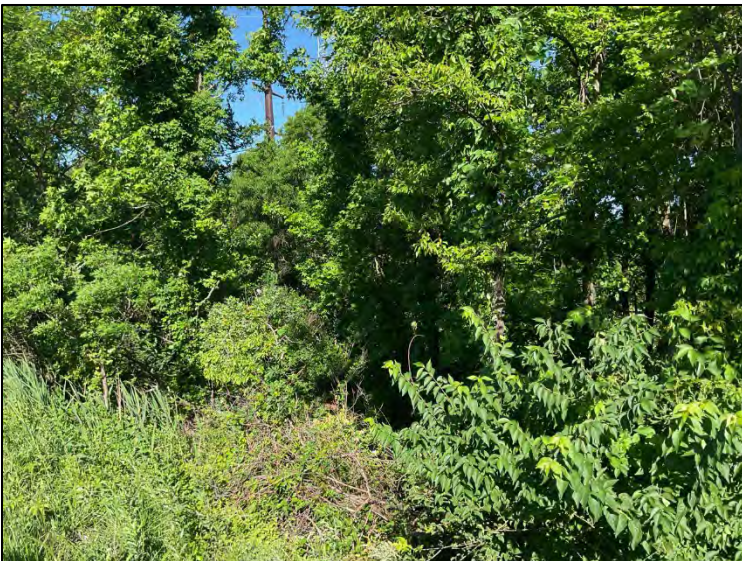


Photo 6: Looking northwest at 1FS6



Photo 8: Looking south at 1FS8



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**

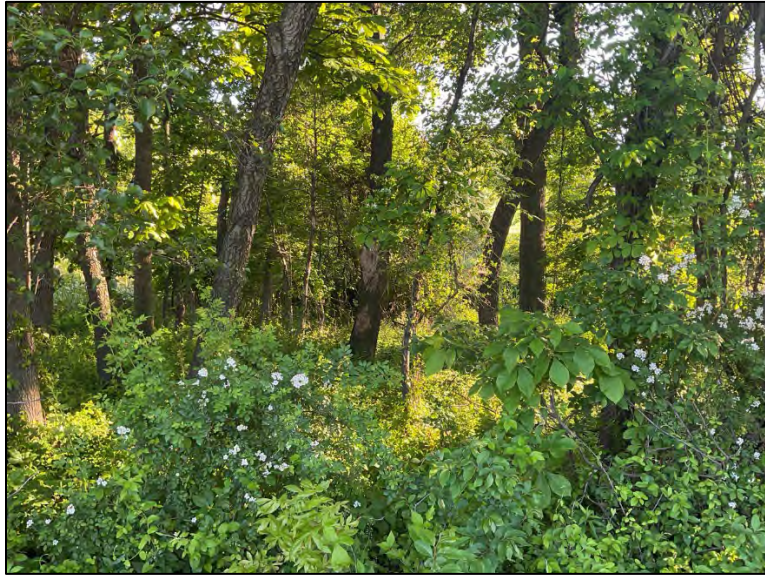


Photo 9: Looking north at 1FS9



Photo 11: Looking east at 1FS11

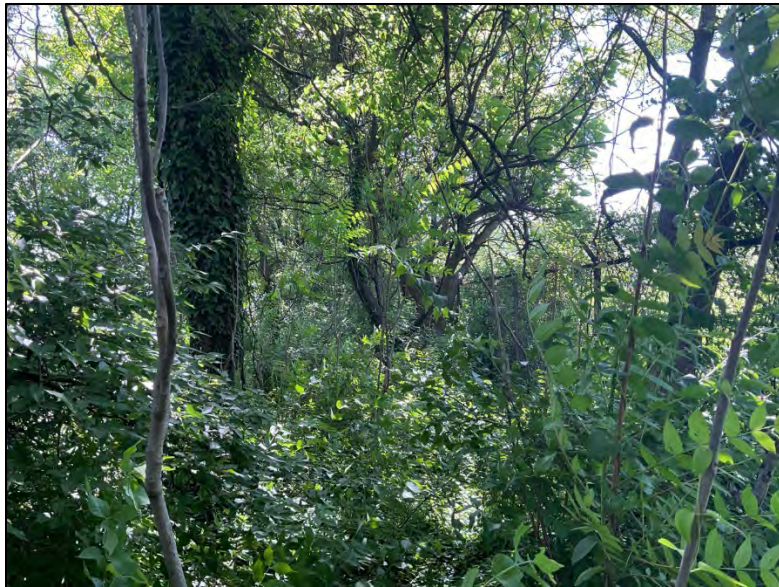


Photo 10: Looking east at 1FS10



Photo 12: Looking southwest at 1FS12



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 13: Looking southwest 1FS13



## Appendix E: Francis Scott Key Bridge Rebuild Project Photograph Log

### HEDGEROW PHOTOGRAPHS



Photo 1: Looking north at 1H1



Photo 3: Looking north at 1H3



Photo 2: Looking west at 1H2



Photo 4: Looking northwest at 1H4



## Appendix E: Francis Scott Key Bridge Rebuild Project Photograph Log



Photo 5: Looking southwest at 1H5



Photo 7: Looking at 2H1



Photo 6: Looking west at 1H6



Photo 8: Looking at 2H2



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 9: Looking at 2H3



Photo 11: Looking at 2H5



Photo 10: Looking at 2H4



Photo 12: Looking at 2H6



**Appendix E: Francis Scott Key Bridge Rebuild Project  
Photograph Log**



Photo 13: Looking at 2H7



Photo 15: Looking at 2H9



Photo 14: Looking at 2H8

APPENDIX F: HEDGEROW SUMMARY TABLE



Appendix F: Francis Scott Key Bridge Rebuild Project  
Hedgerow Summary Table

Hedgerow ID	Dominant Species in Canopy	Size Class	Dominant Species in Understory	Dominant Species in Herbaceous Layer	Comments
1H1 (NRI Map Sheets 2 and 3)	<i>Pyrus calleryana</i>	2-6"	<i>Baccharis halimifolia</i>	<i>Lonicera japonica</i> <i>Phragmites australis</i>	Small hedgerow on highway slope.
1H2 (NRI Map Sheets 3 and 4)	<i>Robinia pseudoacacia</i> <i>Morus alba</i> <i>Acer negundo</i> <i>Ailanthus altissima</i> <i>Pyrus calleryana</i> <i>Ulmus americana</i> <i>Quercus phellos</i> <i>Quercus palustris</i>	2-6"	<i>Baccharis halimifolia</i> <i>Rosa multiflora</i> <i>Amorpha fruticosa</i> <i>Koeleruteria paniculata</i> <i>Lonicera maackii</i> <i>Viburnum</i> sp. <i>Toxicodendron radicans</i> <i>Lonicera japonica</i> <i>Hedera helix</i> <i>Parthenocissus quinquefolia</i> <i>Celastrus orbiculatus</i>	<i>Toxicodendron radicans</i> <i>Lonicera japonica</i> <i>Hedera helix</i> <i>Parthenocissus quinquefolia</i> <i>Celastrus orbiculatus</i>	High invasive species cover in canopy and understory. Trees in fair health with many climbing vines.
1H3 (NRI Map Sheet 2)	<i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i>	2-6"	<i>Baccharis halimifolia</i> <i>Lonicera maackii</i> <i>Ailanthus altissima</i> <i>Lonicera japonica</i> <i>Celastrus orbiculatus</i> <i>Toxicodendron radicans</i>	<i>Lonicera japonica</i> <i>Celastrus orbiculatus</i> <i>Toxicodendron radicans</i> <i>Parthenocissus quinquefolia</i>	Poor condition with high invasive cover; vines covering most of the woody vegetation and damaging native tree species
1H4 (NRI Map Sheets 1 and 2)	<i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i> <i>Pyrus calleryana</i>	2-6"	<i>Rosa multiflora</i> <i>Baccharis halimifolia</i> <i>Ampelopsis brevipedunculata</i> <i>Liquidambar styraciflua</i> <i>Pyrus calleryana</i> <i>Lonicera maackii</i> <i>Elaeagnus umbellata</i> <i>Celastrus orbiculatus</i> <i>Toxicodendron radicans</i> <i>Lonicera japonica</i> <i>Parthenocissus quinquefolia</i>	<i>Phragmites australis</i> <i>Ampelopsis brevipedunculata</i> <i>Toxicodendron radicans</i> <i>Lonicera japonica</i>	Poor condition with high invasive species and vine coverage which are causing damage to trees.
1H5 (NRI Map Sheet 1)	<i>Pyrus calleryana</i> <i>Populus alba</i> <i>Robinia pseudoacacia</i> <i>Liquidambar styraciflua</i>	2-6"	<i>Rosa multiflora</i> <i>Baccahris halimifolia</i> <i>Lonicera maackii</i> <i>Toxicodendron radicans</i> <i>Lonicera japonica</i> <i>Parthenocissus quinquefolia</i> <i>Eleagnus umbellata</i> <i>Ampelopsis brevipedunculata</i> <i>Celastrus orbiculatus</i>	<i>Phragmites australis</i> <i>Ampelopsis brevipedunculata</i> <i>Lonicera japonica</i> <i>Toxicodendron radicans</i>	Did not qualify as a forest due to tree density. High invasive species and heavy vine coverage.
1H6 (NRI Map Sheet 1)	<i>Pyrus calleryana</i> <i>Liquidambar styraciflua</i> <i>Diospyros virginiana</i> <i>Prunus serotina</i>	2-6"	<i>Baccharis halimifolia</i> <i>Rosa multiflora</i> <i>Lonicera japonica</i> <i>Lonicera maackii</i> <i>Ampelopsis brevipedunculata</i> <i>Vitis</i> sp. <i>Rubus</i> sp.	<i>Vitis</i> sp. <i>Rosa multiflora</i> <i>Lonicera japonica</i> <i>Celastrus orbiculatus</i> <i>Phragmites australis</i> <i>Ampelopsis brevipedunculata</i>	Poor condition with high invasive species and vines covering most trees. Trees are scattered with saplings and shrubs throughout.
2H1 (NRI Map Sheet 6)	<i>Ailanthus altissima</i> <i>Morus alba</i>	2-6"	<i>Toxicodendron radicans</i> <i>Ailanthus altissima</i> <i>Baccharis halimifolia</i> <i>Amorpha fruticosa</i>	<i>Toxicodendron radicans</i> <i>Lonicera japonica</i> <i>Festuca</i> sp.	High invasive cover, poor quality, narrow hedgerow between road and the river
2H2 (NRI Map Sheet 5)	<i>Ailanthus altissima</i>	2-6"	<i>Ailanthus altissima</i> <i>Toxicodendron radicans</i>	<i>Toxicodendron radicans</i> <i>Parthenocissus quinquefolia</i> <i>Lonicera japonica</i>	High invasive cover, poor quality

Hedgerow ID	Dominant Species in Canopy	Size Class	Dominant Species in Understory	Dominant Species in Herbaceous Layer	Comments
2H3 (NRI Map Sheet 5)	<i>Koelreuteria paniculata</i>	2-6"	<i>Koelreuteria paniculata</i> <i>Prunus serotina</i>	<i>Koelreuteria paniculata</i> <i>Festuca</i> sp. <i>Lonicera japonica</i>	High invasive cover, poor quality
2H4 (NRI Map Sheets 5 and 6)	<i>Morus alba</i>	2-6"	<i>Toxicodendron radicans</i> <i>Baccharis halimifolia</i> <i>Morus alba</i>	<i>Toxicodendron radicans</i> <i>Parthenocissus quinquefolia</i> <i>Festuca</i> sp. <i>Lonicera japonica</i>	High invasive cover, poor quality
2H5 (NRI Map Sheet 6)	<i>Ulmus pumila</i>	6-11"	<i>Baccharis halimifolia</i> <i>Ulmus pumila</i> <i>Toxicodendron radicans</i>	<i>Artemisia vulgaris</i> <i>Toxicodendron radicans</i> <i>Lonicera japonica</i> <i>Parthenocissus quinquefolia</i>	High invasive cover, poor quality
2H6 (NRI Map Sheet 6)	<i>Morus alba</i> <i>Robinia pseudoacacia</i> <i>Ulmus parvifolia</i>	6-11"	<i>Ligustrum sinense</i> <i>Rosa multiflora</i> <i>Amorpha fruticosa</i>	<i>Cinna arundinacea</i> <i>Toxicodendron radicans</i> <i>Rumex crispus</i>	Poor condition hedgerow on berm between Patapsco River and wetland
2H7 (NRI Map Sheet 6)	<i>Robinia pseudoacacia</i> <i>Ailanthus altissima</i> <i>Ulmus parvifolia</i>	2-6"	<i>Ailanthus altissima</i> <i>Prunus serotina</i> <i>Baccharis halimifolia</i> <i>Ligustrum sinense</i>	<i>Parthenocissus quinquefolia</i> <i>Toxicodendron radicans</i> <i>Lonicera japonica</i>	High invasive cover, poor quality
2H8 (NRI Map Sheets 6 and 7)	<i>Ailanthus altissima</i> <i>Morus alba</i> <i>Pyrus calleryana</i> <i>Liquidambar styraciflua</i> <i>Robinia pseudoacacia</i> <i>Populus deltoides</i>	6-11"	<i>Ailanthus altissima</i> <i>Amorpha fruticosa</i> <i>Baccharis halimifolia</i> <i>Liquidambar styraciflua</i> <i>Robinia pseudoacacia</i>	<i>Toxicodendron radicans</i> <i>Parthenocissus quinquefolia</i> <i>Lonicera japonica</i> <i>Phragmites australis</i> <i>Leersia oryzoides</i>	High invasive cover, poor quality. MDTA planting areas were excluded from hedgerow. Tree density does not meet definition of a forest
2H9 (NRI Map Sheet 7)	<i>Ailanthus altissima</i> <i>Robinia pseudoacacia</i> <i>Diospyros virginiana</i>	2-6"	<i>Koelreuteria paniculata</i> <i>Ailanthus altissima</i> <i>Rosa multiflora</i> <i>Amorpha fruticosa</i> <i>Baccharis halimifolia</i>	<i>Toxicodendron radicans</i> <i>Parthenocissus quinquefolia</i> <i>Lonicera japonica</i> <i>Galium aparine</i>	High invasive cover, poor quality

## APPENDIX G: TREE TABLE



**APPENDIX G: FRANCIS SCOTT KEY BRIDGE REBUILD PROJECT  
TREE AND SHRUB TABLE**

Tree ID*	Common Name	Scientific Name	DBH	Condition	Comment
1T1	Eastern cottonwood	<i>Populus deltoides</i>	30	Fair	Broken branches, heavy vines, twin trunks 30" & 29"
1T2	White mulberry	<i>Morus alba</i>	14	Poor	Significant lean, growing partially horizontal, heavy vine load, dead branches
1T3	Tree of heaven	<i>Ailanthus altissima</i>	4	Fair	Lean, vines on lower trunk
1T4	Black cherry	<i>Prunus serotina</i>	11	Fair/Poor	Vines in lower crown, broken branches
1T5	Black cherry	<i>Prunus serotina</i>	6	Fair/Poor	Minor trunk decay, vines on trunk
1T6	Black cherry	<i>Prunus serotina</i>	8	Fair/Poor	Minor trunk decay, vines on trunk
1T7	Bradford pear	<i>Pyrus calleryana</i>	10	Fair/Poor	overtopped by vines, exposed roots on slope, twin trunks 10" & 7"
1T8	Common hackberry	<i>Celtis occidentalis</i>	16	Fair/Poor	Heavy vines in lower canopy, slight lean, exposed roots on slope
1T9	Siberian elm	<i>Ulmus pumila</i>	28	Fair/Poor	High vine load in lower crown, some broken branches, exposed roots on slope
1T10	White mulberry	<i>Morus alba</i>	8	Fair	Healed trunk wounds, dead branches
1T11	Black locust	<i>Robinia pseudoacacia</i>	23	Poor	Heavy vines on trunk and crown, significant broken branches, exposed roots on slope, dead secondary leader
1T12	Black locust	<i>Robinia pseudoacacia</i>	8	Fair/Poor	Heavy vines on trunk, broken branches, some bark damage
1T13	Black locust	<i>Robinia pseudoacacia</i>	2	Fair	Lean overtopped by adjacent vegetation
1T14	Black locust	<i>Robinia pseudoacacia</i>	8	Poor	Heavy vine load into crown, main tree tipped over
1T15	Black locust	<i>Robinia pseudoacacia</i>	14	Poor	Extensive vines into crown of tree, dead secondary trunk
1T16	Bradford pear	<i>Pyrus calleryana</i>	6	Fair	Vines in lower canopy, broken branches, growing on slope
1T17	Eastern cottonwood	<i>Populus deltoides</i>	12	Fair	Minor dead branches, minor vines on trunk
1T18	Common persimmon	<i>Diospyros virginiana</i>	2	Fair	Irregular trunk
1T19	Black cherry	<i>Prunus serotina</i>	4	Fair	Lean, broken branches
1T20	Black cherry	<i>Prunus serotina</i>	5	Poor	Overtopped by vines, trunk damage
1T21	Callery pear	<i>Pyrus calleryana</i>	9	Fair	With vines, secondary leaders 7.5" & 2"
1T22	Willow oak	<i>Quercus phellos</i>	32	Good	
1T23	Willow oak	<i>Quercus phellos</i>	30	Good/Fair	Fused with a sweetgum
1T24	Willow oak	<i>Quercus phellos</i>	32	Good	
1T25	Willow oak	<i>Quercus phellos</i>	35	Good	
1T26	Willow oak	<i>Quercus phellos</i>	32	Good	
1T27	Willow oak	<i>Quercus phellos</i>	31	Fair	Reduced canopy
1T28	Willow oak	<i>Quercus phellos</i>	34	Good	
1T29	American elm	<i>Ulmus americana</i>	5	Good	
1T30	Persimmon	<i>Diospyros virginiana</i>	2	Good	
1T31	Siberian elm	<i>Ulmus pumila</i>	1	Good	
1T32	Siberian elm	<i>Ulmus pumila</i>	1	Fair	
1T33	Siberian elm	<i>Ulmus pumila</i>	1	Poor	Trunk rot
1T34	Siberian elm	<i>Ulmus pumila</i>	6	Fair	Trunk rot
1T35	Siberian elm	<i>Ulmus pumila</i>	6	Good	
1T36	Staghorn sumac	<i>Rhus typhina</i>	1	Fair	
1T37	Staghorn sumac	<i>Rhus typhina</i>	1	Fair	
1T38	Staghorn sumac	<i>Rhus typhina</i>	1	Fair	
2T1	Hawthorn sp.	<i>Crataegus</i> sp.	3	Good/Fair	deadwood
2T2	Hawthorn sp.	<i>Crataegus</i> sp.	3	Poor	half dead
2T3	Hawthorn sp.	<i>Crataegus</i> sp.	3	Good/Fair	deadwood
2T4	Willow Oak	<i>Quercus phellos</i>	10	Good/Fair	deadwood
2T5	Black Willow	<i>Salix nigra</i>	7	Fair	deadwood, vines, 6" and 5" secondary leaders
2T6	White Mulberry	<i>Morus alba</i>	3	Good	
2T7	Eastern Red Cedar	<i>Juniperus virginiana</i>	9	Good	
2T8	White Mulberry	<i>Morus alba</i>	6	Good	
2T9	White Mulberry	<i>Morus alba</i>	3	Good	
2T10	Common Yew	<i>Taxus baccata</i>	4	Good	pruned
2T11	Common Yew	<i>Taxus baccata</i>	4	Good	pruned
2T12	Common Yew	<i>Taxus baccata</i>	4	Good	pruned
2T13	Common Yew	<i>Taxus baccata</i>	4	Good	pruned
2T14	Common Yew	<i>Taxus baccata</i>	4	Good	pruned
2T15	Common Yew	<i>Taxus baccata</i>	4	Good	pruned
2T16	Small-Leaved Lime	<i>Tilia cordata</i>	15	Good	
2T17	Smokebush	<i>Cotinus coggygria</i>	2	Fair	deadwood
2T18	Bradford Pear	<i>Pyrus calleryana</i>	11	Good	
2T19	Red Pine	<i>Pinus resinosa</i>	10	Good	
2T20	Red Pine	<i>Pinus resinosa</i>	10	Good	
2T21	Red Pine	<i>Pinus resinosa</i>	8	Good	
2T22	Red Pine	<i>Pinus resinosa</i>	8	Good	
2T23	Red Pine	<i>Pinus resinosa</i>	8	Good	
2T24	Red Pine	<i>Pinus resinosa</i>	10	Good	
2T25	Red Pine	<i>Pinus resinosa</i>	12	Good	
2T26	Red Pine	<i>Pinus resinosa</i>	10	Good	
2T27	Red Pine	<i>Pinus resinosa</i>	6	Good	
2T28	Red Pine	<i>Pinus resinosa</i>	7	Good	
2T29	Small-Leaf Lime	<i>Tilia cordata</i>	14	Good	
2T30	Japanese Pagoda	<i>Styphnolobium japonicum</i>	17	Fair/Poor	extensive deadwood
2T31	Japanese Pagoda	<i>Styphnolobium japonicum</i>	11	Fair	deadwood
2T32	Japanese Pagoda	<i>Styphnolobium japonicum</i>	15	Fair	deadwood
2T33	Red Pine	<i>Pinus resinosa</i>	11	Fair	heavy vines
2T34	Red Pine	<i>Pinus resinosa</i>	13	Fair	10" secondary leader, heavy vines

Tree ID*	Common Name	Scientific Name	DBH	Condition	Comment
2T35	Tree of Heaven	<i>Ailanthus altissima</i>	6	Fair	heavy vines
2T36	Common Persimmon	<i>Diospyros virginiana</i>	7	Good	
2T37	Hackberry	<i>Celtis occidentalis</i>	6	Poor	extensive deadwood
2T38	Tree of Heaven	<i>Ailanthus altissima</i>	8	Fair	broken leader
2T39	Tree of Heaven	<i>Ailanthus altissima</i>	6	Fair	vines
2T40	Common Persimmon	<i>Diospyros virginiana</i>	2	Good	
2T41	Hackberry	<i>Celtis occidentalis</i>	3	Fair	heavy vines
2T42	Common Persimmon	<i>Diospyros virginiana</i>	6	Good	
2T43	Common Persimmon	<i>Diospyros virginiana</i>	3	Good	
2T44	Common Persimmon	<i>Diospyros virginiana</i>	3	Good	
2T45	Siberian Elm	<i>Ulmus pumilla</i>	24	Fair	heavy vines
2T46	Tree of Heaven	<i>Ailanthus altissima</i>	12	Fair	deadwood
2T47	Tree of Heaven	<i>Ailanthus altissima</i>	5	Good	
2T48	Tree of Heaven	<i>Ailanthus altissima</i>	8	Good/Fair	deadwood
2T49	Tree of Heaven	<i>Ailanthus altissima</i>	4	Good/Fair	deadwood
2T50	Tree of Heaven	<i>Ailanthus altissima</i>	3	Good/Fair	deadwood
2T51	Tree of Heaven	<i>Ailanthus altissima</i>	14	Good/Fair	deadwood
2T52	Tree of Heaven	<i>Ailanthus altissima</i>	4	Good	
2T53	Tree of Heaven	<i>Ailanthus altissima</i>	2	Good	
2T54	Black Locust	<i>Robinia pseudoacacia</i>	14	Fair/Poor	extensive trunk damage
2T55	Tree of Heaven	<i>Ailanthus altissima</i>	6	Fair	deadwood
2T56	Tree of Heaven	<i>Ailanthus altissima</i>	5	Fair	deadwood
2T57	Tree of Heaven	<i>Ailanthus altissima</i>	5	Fair	deadwood
2T58	Tree of Heaven	<i>Ailanthus altissima</i>	8	Fair/Poor	extensive deadwood
2T59	Tree of Heaven	<i>Ailanthus altissima</i>	13	Poor	extensive deadwood, broken leader
2T60	Willow Oak	<i>Quercus phellos</i>	2	Fair	deadwood, sprouting
2T61	Willow Oak	<i>Quercus phellos</i>	2	Poor	mostly dead
2T62	Willow Oak	<i>Quercus phellos</i>	2	Fair/Poor	deadwood, sprouting
2T63	Red Maple	<i>Acer rubrum</i>	2	Poor	mostly dead
2T64	Bradford Pear	<i>Pyrus calleryana</i>	2	Good	
2T65	Red Maple	<i>Acer rubrum</i>	2	Fair/Poor	extensive deadwood
2T66	Red Maple	<i>Acer rubrum</i>	2	Fair/Poor	extensive deadwood
2T67	Kentucky Yellowwood	<i>Cladrastris kentukea</i>	2	Good	
2T68	Kentucky Yellowwood	<i>Cladrastris kentukea</i>	2	Fair	deadwood, trunk damage
2T69	Kentucky Yellowwood	<i>Cladrastris kentukea</i>	2	Fair	deadwood, trunk damage
2T70	Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	2	Good	
2T71	Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	2	Good	
2T72	Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	2	Good	
2T73	Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	2	Fair/Poor	extensive deadwood
2T74	Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	2	Fair/Poor	extensive deadwood
2T75	Siberian Elm	<i>Ulmus pumila</i>	7	Good	
2T76	Tree of Heaven	<i>Ailanthus altissima</i>	3	Good	
2T77	Tree of Heaven	<i>Ailanthus altissima</i>	3	Good	
2T78	Tree of Heaven	<i>Ailanthus altissima</i>	4	Good	
2T79	Tree of Heaven	<i>Ailanthus altissima</i>	8	Good/Fair	deadwood
2T80	American Elm	<i>Ulmus americana</i>	6	Good	
2T81	Tree of Heaven	<i>Ailanthus altissima</i>	3	Good	
2T82	Black Locust	<i>Robina pseudoacacia</i>	4	Fair/Poor	extensive deadwood
1S1	Groundseltree	<i>Baccharis halimifolia</i>	<1.5	Good	
1S2	Groundseltree	<i>Baccharis halimifolia</i>	<1.5	Good	
1S3	Groundseltree	<i>Baccharis halimifolia</i>	<1.5	Good	
1S4	Groundseltree	<i>Baccharis halimifolia</i>	<1.5	Good	
1S5	White Mulberry	<i>Morus alba</i>	<1.5	Good	
1S6	Unknown Boxwood	<i>Buxus</i> sp.	<1.5	Good	
1S7	Japanese Pagoda	<i>Styphnolobium japonicum</i>	<1.5	Good	
1S8	False Indigo	<i>Amorpha fruticosa</i>	<1.5	Good	
1S9	False Indigo	<i>Amorpha fruticosa</i>	<1.5	Good	
1S10	False Indigo	<i>Amorpha fruticosa</i>	<1.5	Good	
1S11	Tree of Heaven	<i>Ailanthus altissima</i>	<1.5	Good	
1S12	Tree of Heaven	<i>Ailanthus altissima</i>	<1.5	Good	
1S13	Eastern Redbud	<i>Cercis canadensis</i>	<1.5	Good	
1S14	Eastern Redbud	<i>Cercis canadensis</i>	<1.5	Good	
1S15	Eastern Redbud	<i>Cercis canadensis</i>	<1.5	Good	
1S16	Eastern Redbud	<i>Cercis canadensis</i>	<1.5	Good	

\*Specimen trees shown in bold.