

Appendix C – Wetland Delineation Report



Waters of the US and Wetlands Delineation Report

MARINA WAY EXTENTION PROJECT

Prince William County, Virginia

**Project Identifier 23C17011
VDOT UPC 120778**

**Submitted to:
Prince William County Department of Transportation**

February 2024





Executive Summary

Johnson, Mirmiran & Thompson (JMT) has conducted a delineation of jurisdictional waters of the U.S. (WOUS), including wetlands, within a 20.8 acre study area located in Prince William County, Virginia. (Figure 1) The project involves extending Marina Way from Annapolis Way to Horner Road at Gordon Boulevard with a four-lane divided roadway and associated pedestrian facilities. This report is intended to document the findings of the delineation investigation conducted by JMT in order to obtain a preliminary jurisdictional determination (PJD) from the U.S. Army Corps of Engineers (USACE).

There are approximately 0.14 acres of palustrine forested wetland within the study area.



Table of Contents

Executive Summaryi

Site Description1

Field Investigation Methodology1

Findings2

 Published Information2

 Field Investigations3

Streams Error! Bookmark not defined.

Wetlands3

Regulatory Requirements and Limitations3

APPENDICES

- APPENDIX A – PHOTOGRAPHIC DOCUMENTATION
- APPENDIX B – FIGURES
- APPENDIX C – SITE DATA SHEETS



Site Description

The proposed project is located within Prince William County between the Annapolis Way and Horner Road at Route 123 (Gordon Boulevard) and lies within the Coastal Plain physiographic province. The study area is approximately 20.8 acres. To gain access to the site from I-95 northbound, take exit 160A and continue on Route 123 (Gordon Boulevard) east, then turn north onto Horner Road.

The southern portion of the study area is completely paved. This area is used for customer parking that serves the stores located in the center of the study area (Figure 1). The northern portion of the study area is forest land consisting of mostly mixed, broad-leaf, deciduous forested communities that transition to old field/disturbed communities closer to Annapolis Way. Elevation ranges from approximately 70 to 100 feet above mean sea level (amsl) within an area that is predominantly developed (Figure 2). The study area watershed flows to Popes Head Creek which is part of the Middle Potomac – Anacostia – Occoquan River (Hydrologic Unit Code [HUC] 02070010). Elevations on the site range from approximately 71 to 91 feet above mean sea level (amsl). The latitude and longitude of the approximate center of the site are N 38.665503°, W -77.246582°. Mapping from the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Panel 51153C0236E (Dated 8/3/215) is shown in Figure 3 and documents that the study area is not located within a FEMA 100-year floodplain (FEMA, 2015).

Field Investigation Methodology

A field investigation was conducted to delineate potentially jurisdictional Waters of the U.S. (WOUS), including wetlands within the study area. A wetland delineation was performed according to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Regional Supplement, Version 2.0, (USACE, 2010). The Corps of Engineers Wetland Delineation Manual states three criteria (wetland vegetation, wetland soils, and wetland hydrology) must be present for an area to qualify as a wetland, unless the area is significantly disturbed (atypical situation) or is considered a problem area (e.g., seasonally ponded soils). If the area is significantly disturbed or a problem area, then only two parameters must be evident to classify an area as a wetland. All delineated wetlands are classified into system, subsystem, class, and subclass according to the Classification of Wetlands and Deep Water Habitats of the United States (Cowardin et al., 1979).

In order to delineate wetland boundaries, samples were taken periodically using a dutch auger. Soil samples were collected at each wetland and upland sample point, and soil colors were recorded in the field using a Munsell soil color chart (Munsell Color, 2010). NRCS digital soils data and mapping were obtained from the NRCS website and were compared for consistency to the observed conditions encountered during the field investigations. These data were augmented by review of soils data for the property. Site photographs are included in Appendix A; a photo location key is included to orient photographic location within the site. All figures associated with desktop review and field delineation are located in Appendix B.



Samples of vegetation, soils, and hydrology were taken at representative locations that were possible wetlands and adjacent non-wetland areas to determine the potential wetland boundaries. Wetland Determination Data Forms describing representative plant communities, hydrology indicators, and soil characteristics are included in Appendix C. WOUS boundaries were flagged in the field and documented using a Trimble® global positioning system (GPS) capable of sub-meter accuracy.

Findings

PUBLISHED INFORMATION

Prior to conducting the fieldwork, a desktop review of published information was performed to identify known site conditions and to determine the presence of known jurisdictional wetlands and/or WOUS in the study area. The bullets below provide a list of the references utilized and their effective dates.

- Fort Belvoir, Virginia 7.5' x 7.5' Topographic Quadrangle (USGS, 2019) (**Figure 2**);
- FEMA FIRM Panel. Prince William County, Virginia. Map #51153C0236E (FEMA, 2010) (**Figure 3**);
- National Wetlands Inventory (NWI) (USFWS, 2017) (**Figure 4**);
- Web Soil Survey. Prince William County, Virginia (USDA/NRCS, 2021) (**Figure 5**); and

All figures are presented in Appendix B.

NWI mapping shows a palustrine freshwater emergent wetland (PEM) within the project study area (**Figure 4**). No other NWI-mapped wetlands or WOUS were identified in the desktop review.

Mapped soils information is presented in Table 1 below and no mapped hydric soils or soils with hydric inclusions (shown as Percent Hydric Presence) were identified within the project area. One soil map unit (54B) was not classified by hydric rating or % Hydric Presence, but is urban land and other disturbed soils that are highly variable and not typically expected to have hydric features. Mapped soils are shown in Figure 5.

TABLE 1. SOIL UNITS MAPPED WITHIN THE STUDY AREA

MAP UNIT SYMBOL	MAP UNIT NAME	MAP UNIT PROPERTIES	HYDRIC RATING	% HYDRIC PRESENCE
18D	Dumfries sandy loam, 15 to 25 percent slopes	Not prime farmland	Not hydric	0
42B	Neabsco-Quantico complex, 2 to 7 percent slopes	Not prime farmland	Not hydric	0
54B	Urban land-Udorthents complex, 0 to 7 percent slopes	Not prime farmland	Unclassified	Unclassified
Source: USDA-NRCS Soil Survey 2021				



FIELD INVESTIGATIONS

Field investigations were conducted on June 13, 2023, by JMT environmental scientists Amy Musselman and Steven Swarr, to identify and delineate wetlands and WOUS within the study area. A pedestrian survey of the entire undeveloped limits within the property was conducted and potential jurisdictional areas identified during desktop review were investigated. Due to design constraints, the study area was expanded. A pedestrian survey of the additional area was performed on February 27, 2024. Two upland sample plots were taken to provide a representation of the study area and one wetland data point was collected, following the USACE regional supplement methods; one upland data point (DPU 1) was taken in the vicinity of the NWI-mapped wetland feature and documents absence of hydric soils, hydrology and wetland vegetation in this location. JMT delineated one forested wetland adjacent to the developed portions of the property. The location of the delineated system is shown on the Waters of the US Delineation Map in Figure 6. Photographic documentation is included in Appendix A. Wetland data sheets are in Appendix C.

Wetlands

Wetland A - Wetland A is an isolated palustrine forested (PFO) wetland located in the central portion of the project area along the SW edge of the undeveloped, vegetated area (Figure 6). The primary hydrology indicators throughout this wetland included standing water and water-stained leaves. The secondary hydrology indicators included a FAC-neutral test and drainage patterns. There was standing water (approximately 12 inches deep) where the wetland data point was taken. The dominant vegetation where the wetland data point was taken included willow oak (*Quercus phellos*) and common reed (*Phragmites australis*). Vegetation throughout the wetland was consistent with the wetland data point. Soils were hydric with a matrix chroma of 10 YR 4/4 from 0-4 inches and 10 YR 3/2 from 4 plus inches. Soils were a silt loam. See Appendix C – Data Sheets for additional information.

TABLE 2. WETLANDS AND WATERS OF THE US IDENTIFIED WITHIN THE STUDY AREA

MAP ID	NAME	CLASSIFICATION	LENGTH (FT)	AREA (SQ FT)
Wet A	N/A	PFO	N/A	5,987

Regulatory Requirements and Limitations

The limits of WOUS described in this report are based on an examination of field conditions at the time of this investigation and may differ from future observations by others. This report does not constitute a jurisdictional determination; such determinations must be verified by the USACE or VA Department of Environmental Quality (VDEQ). Given the isolated nature of the wetland identified onsite, it is unlikely the USACE will exert jurisdiction over this feature. However, VDEQ currently conducts State Surface Water Determinations and may review this delineation upon request.



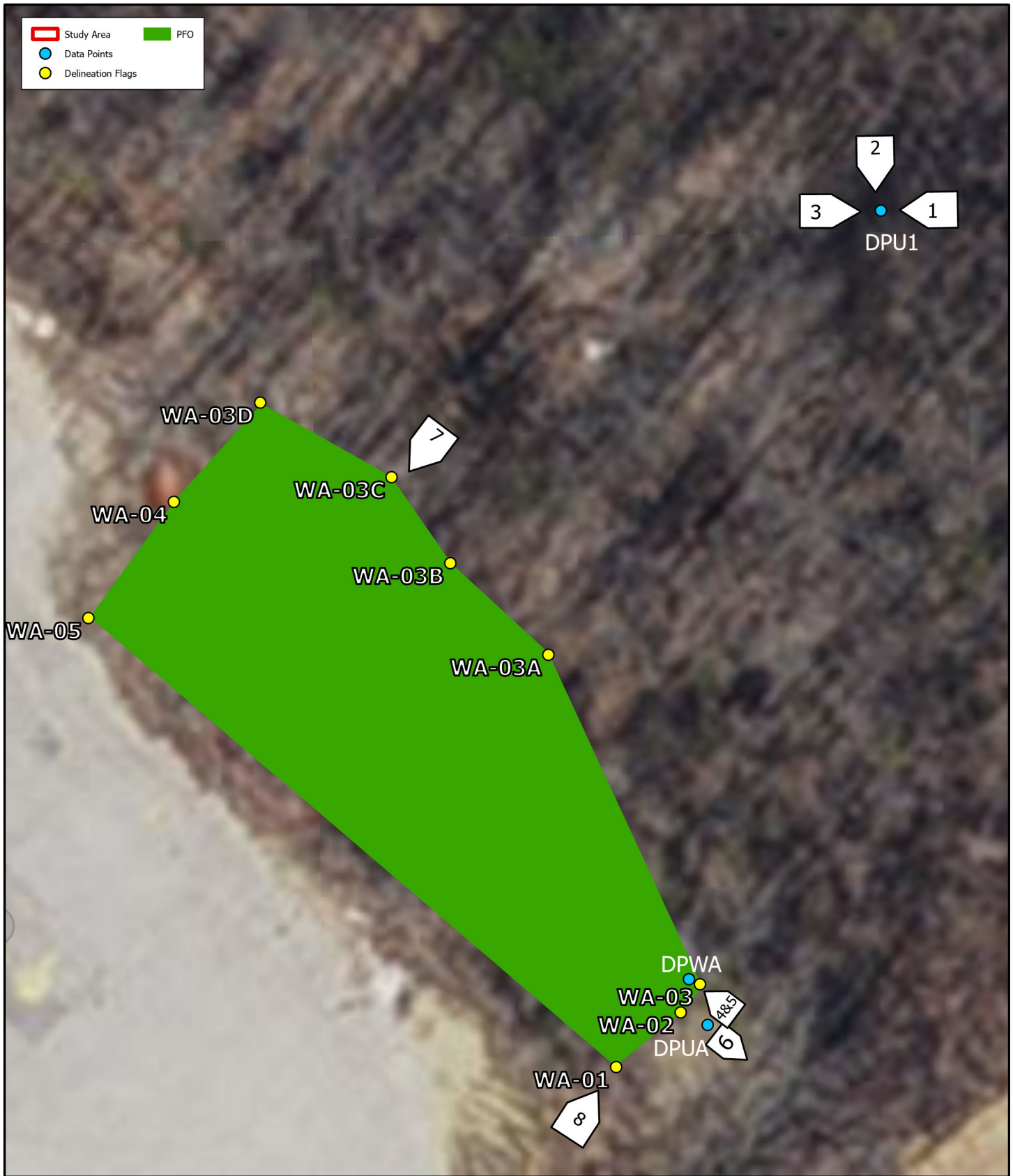
Resources not jurisdictional to USACE may still be regulated by VDEQ. Section 404 of the Clean Water Act authorizes the USACE to regulate the placement of fill in jurisdictional areas. Virginia Administrative Code (9VAC25-690-100) authorizes VDEQ to regulate activities in state waters, which includes wetlands, streams and waterbodies. Any proposed impacts to WOUS may require authorization from the appropriate federal, state, and/or local regulatory agencies.

Prince William County's Chesapeake Bay Preservation Ordinance is enacted to mandate the authority of the Chesapeake Bay Preservation Act (CBPA). The CBPA protects environmentally sensitive features which contribute to the water quality in the Chesapeake Bay. RPAs include both tidal and nontidal wetlands, as well as tidal shores, intermittent streams, water bodies with a perennial flow, and a 100-foot vegetated buffer area located adjacent to the aforementioned features. According to Section 118-5-2(a), public roads, such as this project, are exempt from the provisions of the Ordinance.

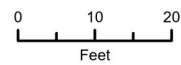


APPENDIX A

PHOTOGRAPHIC DOCUMENTATION



APPENDIX A PHOTODOCUMENTATION LOCATION KEY MARINA WAY EXTENSION (UPC 120778)



Prince William County, VA

Sources: Hybrid Reference Layer: Esri Community Maps Contributors, County of Prince William, Fairfax County, VA, VGIN, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METINASA, USGS, EPA, NPS, US Census Bureau, USDA
Aerial Photography Most Recent (VGII): Virginia Geographic Information Network (VGII)



Photo 1: View of DPU1 facing west.



Photo 2: View of DPU1 facing south.



Photo 3: View of DPU1 facing east.



Photo 4: View of DPWA facing northwest.



Photo 5: View of DPWA facing northwest.



Photo 6: View of DPUA facing east.



Photo 7: View of Wetland A (PFO) facing southwest.



Photo 8: View of Wetland A (PFO) facing northeast.



APPENDIX B

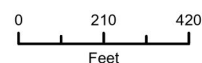
FIGURES



Study Area



FIGURE 1
PROJECT LOCATION
 MARINA WAY EXTENSION (UPC 120778)



Prince William County, VA

Sources: Hybrid Reference Layer: Esri Community Maps Contributors, County of Prince William, Fairfax County, VA, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METINASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 Aerial Photography Most Recent (VGII): Virginia Geographic Information Network (VGII)

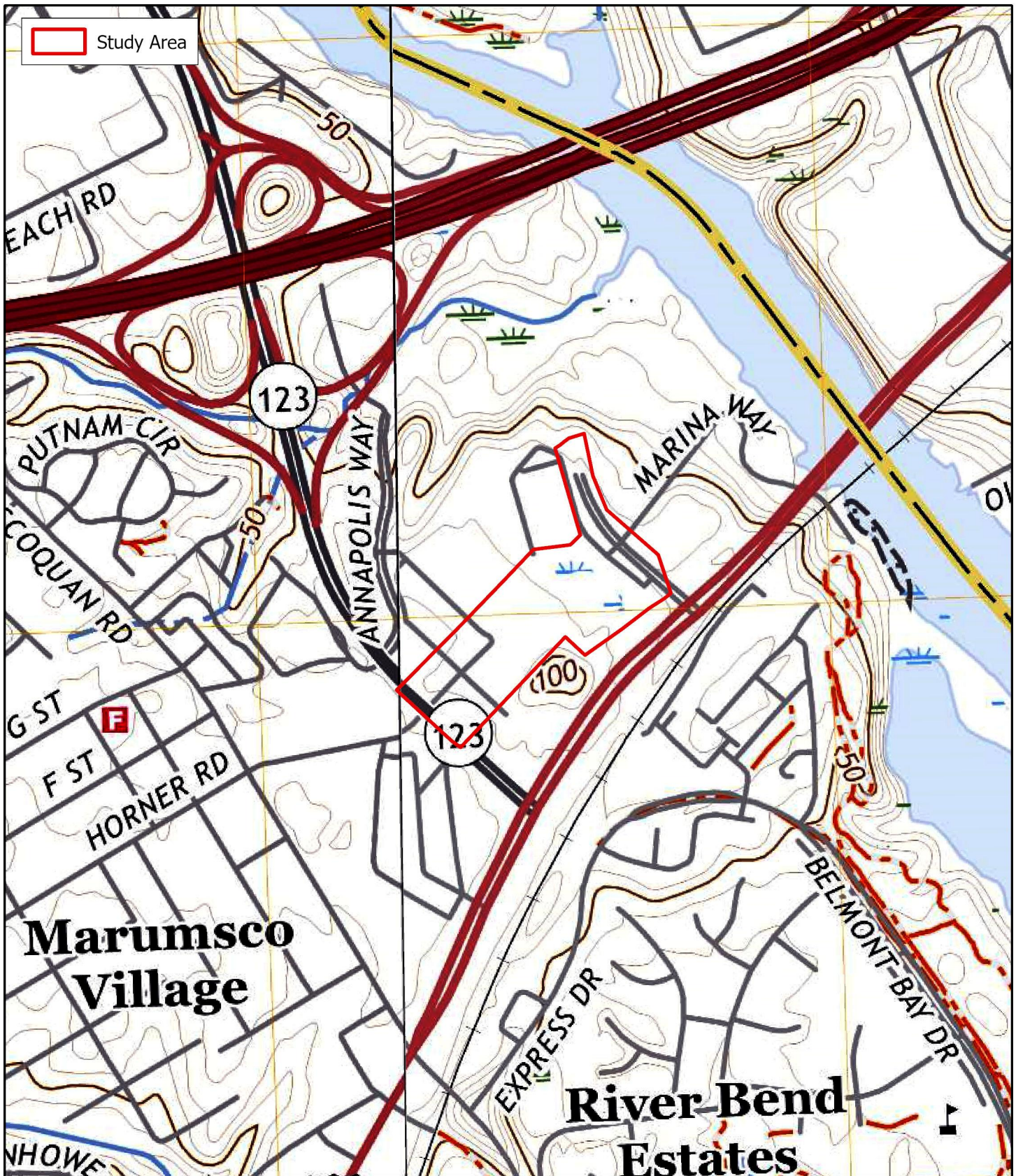


FIGURE 2
USGS TOPOGRAPHIC QUADRANGLE MAP
FORT BELVOIR, VA
MARINA WAY EXTENSION (UPC 120778)

0 240 480
Feet
Prince William County, VA



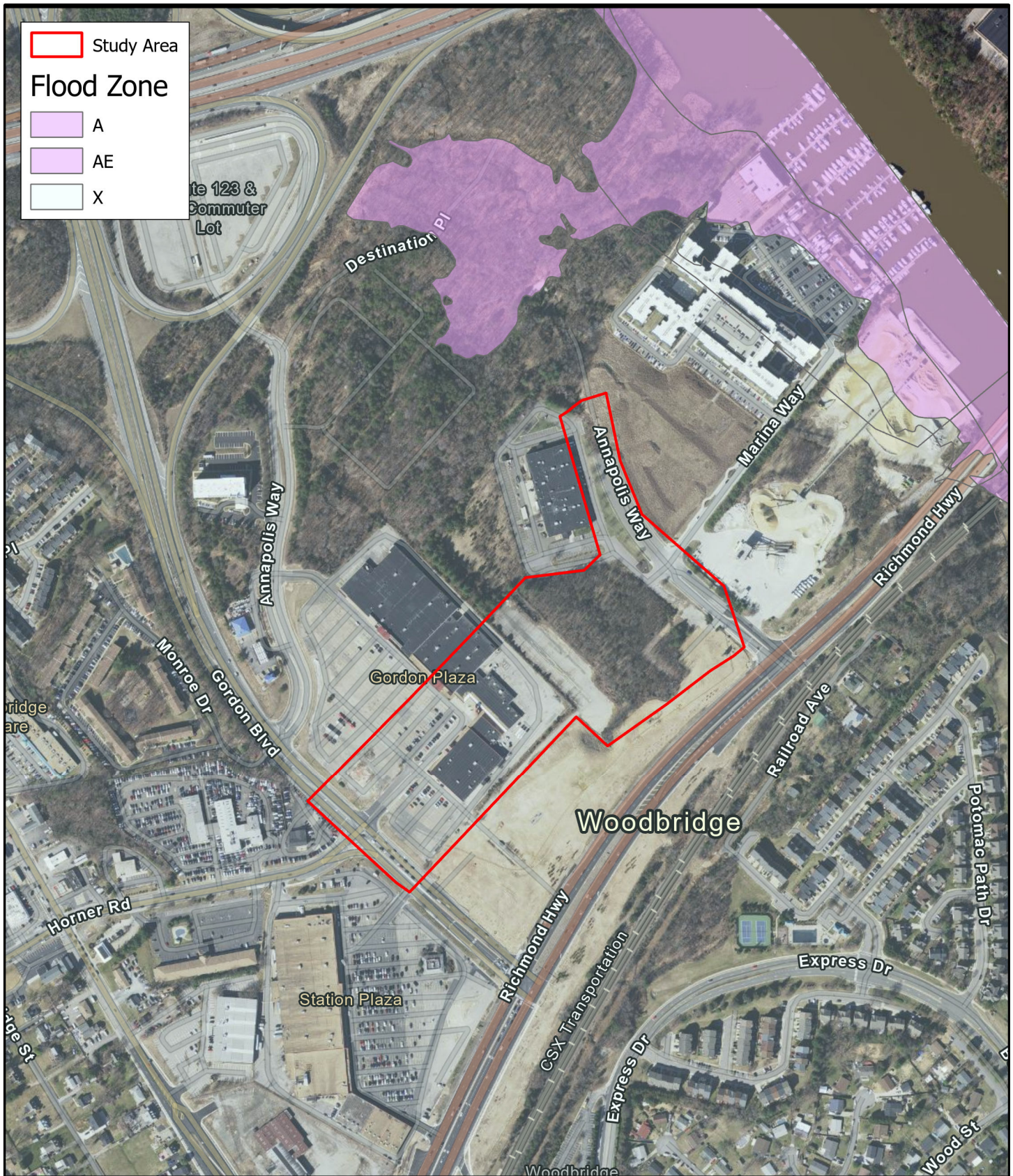
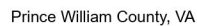


FIGURE 3
FEMA FLOOD HAZARD MAP #51153C0236E
 MARINA WAY EXTENSION (UPC 120778)

0 210 420
 Feet

Prince William County, VA

Sources: Hybrid Reference Layer: Esri Community Maps Contributors, County of Prince William, Fairfax County, VA, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METINASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 Aerial Photography Most Recent (VGII). Virginia Geographic Information Network (VGIN)





Sources: World Imagery: Maxar, Microsoft
 Hybrid Reference Layer: Esri Community Maps Contributors, County of Prince William, Fairfax County, VA,
 VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA,
 USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 Aerial Photography: Meti Download, 2013, Virginia Geographic Information Network, 2/2013

FIGURE 5
NRCS SOIL MAP
 MARINA WAY EXTENSION (UPC 120778)

0 130 260
 Feet

Prince William County, VA

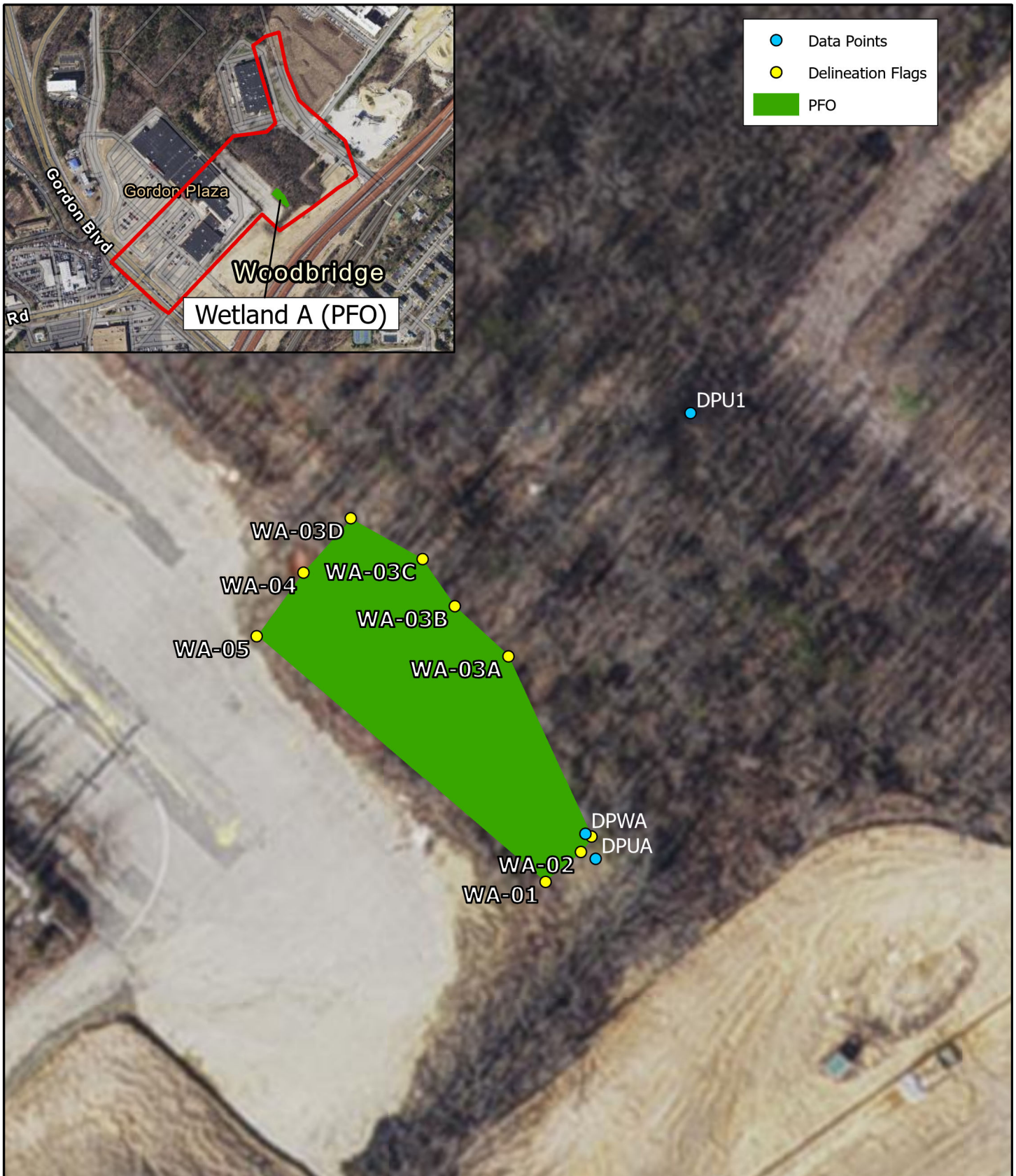
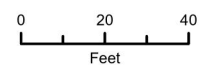


FIGURE 6
DELINEATED RESOURCE MAP
 MARINA WAY EXTENSION (UPC 120778)



Prince William County, VA

Sources: Hybrid Reference Layer: Esri Community Maps Contributors, County of Prince William, Fairfax County, VA, VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METRASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 World Imagery: Microsoft
 Hybrid Reference Layer: Esri Community Maps Contributors, County of Prince William, Fairfax County, VA, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METRASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
 Aerial Photography Most Recent (VGIN), Virginia Geographic Information Network (VGIN)



APPENDIX C

SITE DATA SHEETS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Marina Way Extension City/County: _____ Sampling Date: 2023-06-07
Applicant/Owner: _____ State: _____ Sampling Point: DPU1
Investigator(s): AM/SS Section, Township, Range: _____
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR or MLRA): _____ Lat: 38.66515376 Long: -77.24588516 Datum: WGS 84
Soil Map Unit Name: _____ NWI classification: _____
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 _____ 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: Area was in a drought leading up to delineation which is atypical for the area. According to NOAA, the area received 0.47 inches of precipitation in the 2 weeks prior to the site visit. Vegetation was disturbed from previous development and was not typical of that area (catalpa, bradford pear, etc.). Historic (Google Earth) photos show land disturbance and old field conditions within the last 20 years, particularly on the NE end of the site.	

HYDROLOGY

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

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

 Sampling Point: DPU1

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. <u>Pyrus calleryana</u>	<u>20</u>	<input checked="" type="checkbox"/>																
3. <u>Quercus rubra</u>	<u>10</u>		<u>FACU</u>															
4. _____																		
5. _____																		
6. _____																		
<u>60%</u> = Total Cover 50% of total cover: <u>30.0</u> 20% of total cover: <u>12.0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>250</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.1</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>80</u> (A)	<u>250</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>50</u>	x 3 = <u>150</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>80</u> (A)	<u>250</u> (B)																	
<u>15%</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3.0</u>																		
Sapling Stratum (Plot size: <u>30 ft r</u>)																		
1. <u>Pyrus calleryana</u>	<u>15</u>	<input checked="" type="checkbox"/>																
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
<u>15%</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3.0</u>																		
Shrub Stratum (Plot size: <u>30 ft r</u>)																		
1. <u>Morus alba</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <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 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
<u>10%</u> = Total Cover 50% of total cover: <u>5.0</u> 20% of total cover: <u>2.0</u>																		
Herb Stratum (Plot size: <u>30 ft r</u>)																		
1. <u>Toxicodendron radicans</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Definitions of Five Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
2. <u>Leersia virginica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
<u>30%</u> = Total Cover 50% of total cover: <u>15.0</u> 20% of total cover: <u>6.0</u>																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: DPU1**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 ¹	Loc ²		
0 - 4	10YR 3/4	100					Clay Loam	
4 - 12	10YR 4/6	100					Clay Loam	
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: 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 Soils³:

☐ 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)

³Indicators 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: Marina Way Extension City/County: _____ Sampling Date: 2023-06-07
 Applicant/Owner: _____ State: _____ Sampling Point: DPUA
 Investigator(s): AM/SS Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): _____ Lat: 38.66474583 Long: -77.24600603 Datum: WGS 84
 Soil Map Unit Name: _____ NWI classification: _____

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 _____ 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: Area was in a drought leading up to delineation which is atypical for the area. According to NOAA, the area received 0.47 inches of precipitation in the 2 weeks prior to the site visit. Vegetation was disturbed from previous development and was not typical of that area (catalpa, bradford pear, etc.). Historic (Google Earth) photos show land disturbance and old field conditions within the last 20 years, particularly on the NE end of the site.	

HYDROLOGY

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

 Sampling Point: DPUA

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Catalpa speciosa</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
<u>20%</u> = Total Cover 50% of total cover: <u>10.0</u> 20% of total cover: <u>4.0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>45</u> (A)</td> <td><u>155</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>45</u> (A)	<u>155</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>45</u> (A)	<u>155</u> (B)																	
Sapling Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Shrub Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>30 ft r</u>)																		
1. <u>Toxicodendron radicans</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <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 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Baccharis halimifolia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Panicum sp.</u>	<u>5</u>	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
<u>30%</u> = Total Cover 50% of total cover: <u>15.0</u> 20% of total cover: <u>6.0</u>																		
Woody Vine Stratum (Plot size: <u>30 ft r</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: DPUA

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 ¹	Loc ²		
0 - 12	10YR 3/4	100					Clay Loam	
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: 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 Soils³:

- ☐ 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)

³Indicators 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: Marina Way Extension City/County: _____ Sampling Date: 2023-06-07
Applicant/Owner: _____ State: _____ Sampling Point: DPWA
Investigator(s): AM/SS Section, Township, Range: _____
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR or MLRA): _____ Lat: 38.66474630 Long: -77.24600443 Datum: WGS 84
Soil Map Unit Name: _____ NWI classification: _____

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 _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: Area was in a drought leading up to delineation which is atypical for the area. According to NOAA, the area received 0.47 inches of precipitation in the 2 weeks prior to the site visit.	

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Surface Water (A1)	_____ Aquatic Fauna (B13)	_____ Sparsely Vegetated Concave Surface (B8)
_____ High Water Table (A2)	_____ Marl Deposits (B15) (LRR U)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Hydrogen Sulfide Odor (C1)	_____ Moss Trim Lines (B16)
_____ Water Marks (B1)	_____ Oxidized Rhizospheres along Living Roots (C3)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2)	_____ Presence of Reduced Iron (C4)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Algal Mat or Crust (B4)	_____ Thin Muck Surface (C7)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Other (Explain in Remarks)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
_____ Water-Stained Leaves (B9)		_____ 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>0</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)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Ponded water observed in portion of wetland near DPWA		

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

 Sampling Point: DPWA

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Quercus phellos</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
<u>15%</u> = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>200</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>200</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>100</u>	x 2 = <u>200</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>100</u> (A)	<u>200</u> (B)																	
50% of total cover: <u>7.5</u> 20% of total cover: <u>3.0</u>																		
Sapling Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <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 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
50% of total cover: _____ 20% of total cover: _____																		
Shrub Stratum (Plot size: <u>30 ft r</u>)																		
1. <u>Phragmites australis</u>	<u>85</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Definitions of Five Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
<u>85%</u> = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														
50% of total cover: <u>42.5</u> 20% of total cover: <u>17.0</u>																		
Herb Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>30 ft r</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: DPWA

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 ¹	Loc ²		
0 - 4	10 YR 4/4	100					Clay loam	
4 +	10 YR 3/2	100					Clay loam	
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

<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 checked="" 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)		

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: