

### WETLAND DELINEATION REPORT

# SOMERSET COUNTY EXPANSION PROJECT SOMERSET COUNTY, MARYLAND

March 30, 2020

Prepared For:

#### **Chesapeake Utilities**

500 Energy Lane, Suite 100 Dover, Delaware 19901

Attn: Mr. Garth E. Jones, P.E.

Prepared By:

#### GEO-TECHNOLOGY ASSOCIATES, INC.

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GTA Project No: 31191824

#### GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS





March 30, 2020

Chesapeake Utilities 500 Energy Lane, Suite 100 Dover, Delaware 19901

Attn: Mr. Garth E. Jones, P.E.

Re: Wetland Delineation Report

Somerset County Expansion Project

Somerset County, Maryland

Dear Mr. Jones:

Pursuant to your request, Geo-Technology Associates, Inc. (GTA) has performed a wetland delineation of the above referenced site. The project area consists of approximately 10.75 miles of buried natural gas pipeline, extending from the intersection of Merser Road and Ocean Highway (U.S. Route 13) southwest to the intersection of U.S. Route 13 and Revells Neck Road, in the Princess Anne area of Somerset County, Maryland. The purpose of the review was to evaluate the presence and extent of wetlands and/or waterways with respect to Federal and State regulatory authority. This Report and the accompanying *Wetland Delineation Plan* summarize GTA's findings.

We appreciate the opportunity to have been of service to you. If you have questions or require additional information, please contact this office at (410) 515-9446.

Sincerely,

GEO-TECHNOLOGY ASSOCIATES, INC.

Justin Weber Project Scientist

T. Andy Stansfield, Jr.

Vice President

JMW/TAS/cds 31191824

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#### WETLAND DELINEATION REPORT

#### SOMERSET COUNTY EXPANSION PROJECT SOMERSET COUNTY, MARYLAND MARCH 30, 2020

#### 1.0 INTRODUCTION

The project area consists of approximately 10.75 miles of buried natural gas pipeline, extending from the intersection of Merser Road and Ocean Highway (U.S. Route 13) southwest to the intersection of U.S. Route 13 and Revells Neck Road, in the Princess Anne area of Somerset County, Maryland. A *Site Location Map* is attached to this Report at *Figure 1*. Geo-Technology Associates, Inc. (GTA) has been retained to provide a review and delineation of the project area's wetlands and/or "waters of the United States."

At the time of GTA's environmental review, the project area consisted primarily of road rights-of-way, wooded areas, open areas, commercial areas with maintained lawns, and paved roadways. The project area exhibits predominantly gentle slopes. The approximate latitude and longitude of the center of the Somerset County Expansion Project area is  $38.22603^{\circ}$  and -  $75.69445^{\circ}$ , respectively.

#### 2.0 **DOCUMENT REVIEW**

#### 2.1 Site Plans

GTA personnel utilized a plan titled *Concept Somerset County Gas Main Expansion-Schematic Design Drawing*, prepared by Chesapeake Utilities, and dated May 20, 2019, to conduct a field review of the project area.

#### 2.2 United States Geological Survey Topographic Maps

The United States Geological Survey (USGS) Topographic Maps of the Eden and Princess Anne Quadrangles (*Figure 2*) were used as a reference to identify possible waterways within the project area. The topographic maps were utilized to identify elevations, streams, ponds, and roads. U.S. Route 13 is depicted on the eastern edge of the project area, and numerous local roads are depicted crossing the project area. From north to south, Barkley Branch, Peggy Neck Branch, Tangs Creek, Manokin River, Taylor Branch, Jones Creek, and

Kings Creek are depicted crossing the project area. Areas of wooded marsh or swamp are depicted on the western edge of the project area, at various locations, from approximately milepost 1.0 to milepost 4.0 of the pipeline alignment. Wooded marsh or swamp is also depicted on the western edge of the project area adjacent to Jones Creek and Kings Creek.

#### 2.3 Soil Survey Information

GTA also consulted the Natural Resource Conservation Service (NRCS) *Web Soil Survey*<sup>1</sup> to identify the presence of possible hydric soils, wetlands, and waterways. The *Web Soil Survey* (*Figure 3*) depicts 23 soil units (*Table 1*) within the project area. According to the NRCS *Hydric Soils List By State*<sup>2</sup>, 16 soil units are listed as hydric soils.

**Table 1: Mapped Soil Units** 

SYMBOL <sup>1</sup>	NAME/DESCRIPTION <sup>1</sup>	HYDRIC SOIL <sup>2</sup>	HYDRIC COMPONENT <sup>2</sup>	PERCENTAGE OF MAPPING UNIT <sup>2</sup>	POSITION IN LANDSCAPE <sup>2</sup>
AoA	Annemessex-Manokin complex, 0 to 2	Yes	Otherllo	8	Flats, depressions, swales
AUA	percent slopes	103	Fallsington	3	Flats, depressions, drainageways
AoB	Annemessex-Manokin complex, 2 to 5 percent slopes	Yes	Fallsington	11	Flats, depressions, drainageways
			Corsica, undrained	67	Depressions, flats
CRA	Corsica and Fallsington soils, 0 to 2 percent slopes	Yes	Fallsington, undrained	21	Flats, depressions, drainageways, swales
			Mullica	7	Flats, depressions
			Berryland	5	Depressions, flats
EQB	Endoaquepts and Sulfaquepts, 0 to 5 percent slopes	Yes	Endoaquepts, drained	50	Tidal marshes
LQB			Sulfaquepts, drained	40	Tidal marshes
	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	Yes	Fallsington, undrained	38	Flats, depressions, drainageways, swales
FgdA			Fallsington, drained	37	Flats, depressions, swales
			Othello	8	Flats, depressions, drainageways, swales
FhA	Fallsington-Glassboro complex, 0 to 2 percent slopes	Yes	Fallsington, undrained	20	Flats, depressions, drainageways, swales
			Fallsington, drained	20	Flats, depressions, swales
HbB	Hambrook sandy loam, 2 to 5 percent slopes	No			
IkC	Ingleside-Runclint complex, 5 to 10 percent slopes	No			

<sup>&</sup>lt;sup>1</sup> United States Department of Agriculture, Natural Resource Conservation Service, Somerset County, Maryland, Soil Survey Data Version 16, dated September 13, 2019.

<sup>&</sup>lt;sup>2</sup> Hydric soils information available from the United States Department of Agriculture, Natural Resource Conservation Service Soil Data Access Hydric Soils List, accessed on January 21, 2020.

SYMBOL <sup>1</sup>	NAME/DESCRIPTION <sup>1</sup>	HYDRIC SOIL <sup>2</sup>	HYDRIC COMPONENT <sup>2</sup>	PERCENTAGE OF MAPPING UNIT <sup>2</sup>	POSITION IN LANDSCAPE <sup>2</sup>
KpA	Keyport silt loam, 0 to 2 percent slopes	Yes	Lenni, drained	5	Flats, depressions, swales
			Longmarsh	43	Floodplains
	Longmarsh and Indiantown soils,		Indiantown	37	Floodplains
LO	frequently flooded	Yes	Zekiah	10	Floodplains
	1 ,		Manahawkin	5	Swamps, floodplains
MdA	Manokin silt loam, 0 to 2 percent slopes	Yes	Elkton	6	Flats, depressions, swales
	, , , , , , , , , , , , , , , , , , , ,		Fallsington	4	Flats, depressions, drainageways
			Nanticoke	50	Tidal flats, mud flats, floodplains
NM	Nanticoke and Mannington soils, very frequently flooded, tidal	Yes	Mannington	40	Tidal flats, mud flats, floodplains
	,,,		Mispillion	5	Tidal marshes
			Manahawkin	5	Floodplains, swamps
			Othello, undrained	40	Flats, depressions, drainageways, swales
OKA	Othello and Kentuck soils, 0 to 2 percent slopes	Yes	Kentuck, undrained	40	Depressions, drainageways, swales
OKA			Corsica, undrained	5	Depressions, flats, drainageways, swales
			Fallsington, undrained	5	Flats, depressions, drainageways, swales
		Yes	Othello, drained	50	Flats, depressions, swales
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area		Othello, undrained	30	Flats, depressions, drainageways, swales
OIA			Fallsington, undrained	8	Flates, depressions, drainageways, swales
			Kentuck, undrained	7	Flats, depressions, swales
QbB	Queponco loam, 2 to 5 percent slopes	No			
QeA	Queponco silt loam, 0 to 2 percent slopes	No			
QeB	Queponco silt loam, 2 to 5 percent slopes	No	Quindocqua,	45	Flats
	Quindocqua silt loam, 0 to 2 percent slopes		undrained Quindocqua, drained	45	Flats
QuA		Yes	Kentuck	3	Depressions, drainageways, swales
			Corsica	1	Depressions, carolina bays
			Hurlock	1	Flats, drainageways
			Transquaking	40	Tidal marshes
	Transquaking and Mispillion soils, very frequently flooded, tidal	Yes	Mispillion Sunken	40 10	Tidal marshes Flats, submerged upland tidal marshes
TP			Honga	5	Submerged upland tidal marshes
			Othello, undrained	5	Flats, depressions, drainageways, swales

SYMBOL <sup>1</sup>	NAME/DESCRIPTION <sup>1</sup>	HYDRIC SOIL <sup>2</sup>	HYDRIC COMPONENT <sup>2</sup>	PERCENTAGE OF MAPPING UNIT <sup>2</sup>	POSITION IN LANDSCAPE <sup>2</sup>
UwB	Urban land-Udorthents complex, 0 to 5 percent slopes	No			
W	Water	-			
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	Yes	Fallsington	6	Depressions, flats, drainageways, swales
WddB	Woodstown sandy loam, 2 to 5 percent slopes, Northern Tidewater Area	Yes	Fallsington, occasionally ponded	6	Swales, flats, depressions, drainageways

#### 2.4 Wetland Indicator Maps

GTA's wetland scientist also consulted the National Wetlands Inventory (NWI)<sup>3</sup> for the presence of possible wetlands and waterways. The NWI map depicted multiple wetland and riverine systems within the project area, and within 300 feet of the project area. These wetland and riverine systems are classified with Cowardin designations, as summarized in Table 2.

**Table 2: Wetland Indicator Map Classifications** 

SYMBOL <sup>3</sup>	SYSTEM <sup>3</sup>	SUBSYSTEM <sup>3</sup>	CLASS <sup>3</sup>	SUBCLASS <sup>3</sup>	WATER REGIME <sup>3</sup>	MODIFIERS <sup>3</sup>	LOCATION TO PROJECT AREA
R5UBH	Riverine(R)	Unknown Perennial(5)	Unconsolidated Bottom(UB)	N/A	Permanently Flooded(H)	N/A	Passes through project area near milepost 0.48
PFO4Ad	Palustrine(P)	N/A	Forested(FO)	Needle-Leaved Evergreen(4)	Temporarily Flooded(A)	Partially Drained/Ditched(d)	Within project area near milepost 0.92
PFO1A	Palustrine(P)	N/A	Forested(FO)	Broad-Leaved Deciduous(1)	Temporarily Flooded(A)	N/A	25' west of project area near milepost 1.23
PEM1A	Palustrine(P)	N/A	Emergent(EM)	Persistent(1)	Temporarily Flooded(A)	N/A	25' west of project area near milepost 1.33
PFO1A	Palustrine(P)	N/A	Forested(FO)	Broad-Leaved Dediduous(1)	Temporarily Flooded(A)	N/A	Adjacent to project area near milepost 1.64
R5UBH	Riverine(R)	Unknown Perennial(5)	Unconsolidated Bottom(UB)	N/A	Permanently Flooded(H)	N/A	Passes through project area near milepost 1.64
R5UBH	Riverine(R)	Unknown Perennial(5)	Unconsolidated Bottom(UB)	N/A	Permanently Flooded(H)	N/A	Passes through project area near milepost 2.20
PFO1C	Palustrine(P)	N/A	Forested(FO)	Broad-Leaved Deciduous(1)	Seaonally Flooded(C)	N/A	Adjacent to project area near milepost 2.20

<sup>&</sup>lt;sup>3</sup> United States Fish and Wildlife Service, National Wetlands Inventory. Wetlands Mapper. Available online at <a href="http://www.fws.gov/wetlands/Data/Mapper.html">http://www.fws.gov/wetlands/Data/Mapper.html</a>> and accessed on January 21, 2020.

SYMBOL <sup>3</sup>	SYSTEM <sup>3</sup>	SUBSYSTEM <sup>3</sup>	CLASS <sup>3</sup>	SUBCLASS <sup>3</sup>	WATER REGIME <sup>3</sup>	MODIFIERS <sup>3</sup>	LOCATION TO PROJECT AREA
PFO4D	Palustrine(P)	N/A	Forested(FO)	Needle-Leaved Evergeen(4)	Continuously Saturated(D)	N/A	50' west of project area near milepost 2.61
PFO4A	Palustrine(P)	N/A	Forested(FO)	Needle-Leaved Evergreen(4)	Temporarily Flooded(A)	N/A	30' west of project area near milepost 2.90
PFO4/EM1A	Palustrine(P) / Emergent (EM)	N/A	Forested(FO) / Emergent (EM)	Needle-Leaved Evergreen / Persistent(1)	Temporarily Flooded(A)	N/A	20' west of project area near milepost 3.15
PEM1A	Palustrine(P)	N/A	Emergent(EM)	Persistent(1)	Temporarily Flooded(A)	N/A	20' west of project area near milepost 3.41
PFO1/4A	Palustrine(P)	N/A	Forested(FO)	Broad-Leaved Deciduous(1) / Needle-Leaved Evergreen(4)	Temporarily Flooded(A)	N/A	Adjacent to project area near milepost 3.63
PFO4A	Palustrine(P)	N/A	Forested(FO)	Needle-Leaved Evergreen(4)	Temporarily Flooded(A)	N/A	Within project area along milepost 3.73
PFO1/4A	Palustrine(P)	N/A	Forested(FO)	Broad-Leaved Deciduous(1) / Needle-Leaved Evergreen(4)	Temporarily Flooded(A)	N/A	Within project area near milepost 3.89
E1UBL	Estuarine(E)	Subtidal(1)	Unconsolidated Bottom(UB)	N/A	Subtidal(L)	N/A	Passes through project area near milepost 6.11
E2EM1P	Estuarine(E)	Intertidal(2)	Emergent(EM)	Persistent(1)	Irregularly Flooded(P)	N/A	60' west of project area near milepost 6.14
E2EM1P	Estuarine(E)	Intertidal(2)	Emergent(EM)	Persistent(1)	Irregularly Flooded(P)	N/A	Within project area near milepost 6.27
PUBHx	Palustrine(P)	N/A	Unconsolidated Bottom(UB)	N/A	Permanently Flooded(H)	Excavated(x)	Within project area near milepost 7.35
R5UBH	Riverine(R)	Unknown Perennial(5)	Unconsoldiated Bottom(UB)	N/A	Permanently Flooded(H)	N/A	Passes through project area near milepost 7.62
E2EM1P	Estuarine(E)	Intertidal(2)	Emergent(EM)	Persistent(1)	Irregularly Flooded(P)	N/A	Adjacent to project area near milepost 7.62
R5UBH	Riverine(R)	Unknown Perennial(5)	Unconsoldiated Bottom(UB)	N/A	Permanently Flooded(H)	N/A	Passes through project area near milepost 8.36
PFO1A	Palustrine(P)	N/A	Forested(FO)	Broad-Leaved Dediduous(1)	Temporarily Flooded(A)	N/A	Adjacent to project area near milepost 8.36
E1UBL	Estuarine(E)	Subtidal(1)	Unconsolidated Bottom(UB)	N/A	Subtidal(L)	N/A	Passes through project area near milepost 8.90
E2EM1P	Estuarine(E)	Intertidal(2)	Emergent(EM)	Persistent(1)	Irregularly Flooded(P)	N/A	25' west of project area near milepost 8.88
E2EM1P	Estuarine(E)	Intertidal(2)	Emergent(EM)	Persistent(1)	Irregularly Flooded(P)	N/A	Adjacent to project area near milepost 8.95

#### 2.5 Aerial Photographs

GTA reviewed aerial photographs, dated 1998, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2018 for evidence of waters and wetlands within the project area utilizing the Maryland Environmental Resource & Land Information Network (MERLIN). The aerial photographs depict the project area in generally the same condition that it is currently. Several potential streams and saturated or inundated areas were noted within the project area, or within the vicinity of project area, on the aerial photographs. These areas were noted and evaluated in the field.

#### 3.0 METHODOLOGY

#### 3.1 General Methodology

The purpose of GTA's review was to evaluate the presence and extent of wetlands and waterways with respect to Federal and State jurisdictional authority. GTA based its evaluation on the United States Army Corps of Engineers' (Corps) definition of "waters of the U.S." and "navigable waters of the U.S.," which are defined in Title 33 Code of Federal Regulations (CFR), Parts 328 and 329. GTA employed the three-parameter approach set forth in the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-01*, dated 1987 (1987 Manual) and the Corps Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plan Region (Version 2.0), dated November 2010 (Supplement) as a reference for delineating wetlands. The methodology of wetland delineation included identifying hydric soil, wetland hydrology, and dominant hydrophytic vegetation. GTA also considered other regulated waters of the United States, such as ponds, lakes, streams, and rivers. If these waters were observed on the property, GTA incorporated them into the nontidal wetland delineation and labeled them accordingly.

#### 3.2 Hydrology

The 1987 Manual defines wetland hydrology as the sum of the total wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation. The 1987 Manual further defines areas with evident characteristics of wetland hydrology as those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions.

Wetland hydrology exists when a minimum of one primary indicator or two secondary indicators are present. Indicators of wetland hydrology are generally derived from observations of surface water or saturated soils, evidence of recent inundation, evidence of current or recent soil saturation, and evidence from other site conditions or data. Additional evidence of wetland hydrology can also be used with appropriate documentation.

#### 3.3 Vegetation

Hydrophytic vegetation can be defined as plant life growing in water or on a substrate that is at least periodically inundated by water. The USFWS has assigned an indicator status to plants that occur in and around wetlands, describing how often that species is found in a wetland:

Obligate Wetland (OBL): Occur in wetlands with an estimated 99% probability.

Facultative Wetland (FACW): Usually occur in wetlands, with an estimated 67%-99% probability.

Facultative (FAC): Equally likely to occur in wetlands and uplands, with an estimated 34%-66% probability of occurring in wetlands.

Facultative Upland (FACU): Usually occur in uplands, with an estimated 67%-99% probability of occurring in uplands.

Obligate Upland (UPL): Occur in uplands with an estimated 99% probability.

For vegetation within a community to be determined hydrophytic in accordance with the *Supplement*, it must pass the Dominance Test, where more than 50% of the dominant plant species observed must have the indicator statuses OBL, FACW, and FAC. If the vegetation observed in the community fails the Dominance Test and indicators of wetland hydrology and hydric soils are present, the Prevalence Index should be applied. Hydrophytic vegetation is present if a Prevalence Index of 3.0 or less is determined.

#### 3.4 Soils

A hydric soil is defined as a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions (*Supplement*). According to the *Supplement*, indicators of hydric soils form mostly from the loss or accumulation of iron, manganese, sulfur, or carbon compounds during saturated and anaerobic conditions.

#### 3.5 On-Site Data Collection

Data Collection Points (DCPs) were established on-site at locations to evaluate the presence of jurisdictional wetlands and waterways, and to demonstrate the typical characteristics of uplands and wetlands. In areas where hydrologic indicators were observed with hydrophytic vegetation, GTA personnel excavated or augured test pits in the ground to a depth of 20 inches or more to observe features of the soil column. GTA personnel reviewed soil samples from test pits at numbered DCPs in order to describe and classify the soil as either hydric or non-hydric. At these DCPs, GTA personnel also evaluated the surrounding vegetative species and hydrologic indicators. Data Forms were prepared to record observations of the conditions within the wetland areas. Data Forms were also prepared to record data from adjacent upland areas to further support the delineation in the field. The DCPs have been labeled as DCP-1 through DCP-12. Data Forms with reference photographs are included in Appendix B to support the delineation depicted on the accompanying *Wetland Delineation Plan*.

#### 3.6 Delineation

In January and March 2020, GTA's wetland scientists performed an on-site review to evaluate whether jurisdictional wetlands and/or waterways are present within the project area. GTA's field delineation of jurisdictional "waters of the U.S." consisted of identifying the limits of the wetlands and waterways with pink and black striped flags, numbered sequentially. Wetland flags were hung at the time of GTA's field visits. GTA used the base plan described in *Section 2.1* to navigate the site. Wetland and waterway flag locations were located in the field in January and March 2020 using a Trimble Geo-XH handheld global positioning system (GPS) rated with sub-meter accuracy, and are shown on the accompanying *Wetland Delination Plan*.

#### 4.0 WETLANDS AND WATERBODIES IDENTIFIED

Five (5) wetlands and nine (9) waterbodies were identified within or near the project area and are described in the following section. Table 3 identifies wetlands within or near the project area, and Table 4 identifies waterbodies within or near the project area.

**Table 3: Wetlands** 

Wetland Designation <sup>4</sup>	Cowardin NWI Classification <sup>5</sup>	Land Within the Project area (acres)	EEM Wetland area (acres)	PFO Wetland area(acres)	PEM Wetland area(acres)
1	EEM	6			
2	EEM/PEM	.08	.08		7
3	PEM	.07			.07
4	EEM/PEM	.03	.003		.03
5	EEM/PFO/PEM	.08	.003	8	.08
	Total EEM		.09		
	Total PFO				
	Total PEM				.18
	<b>Total Wetland</b>			0.27	

Table 4 - Waterbodies

Waterbody Designation	Waterbody Width (Feet)	Waterbody Name <sup>9</sup>	Waterbody Type <sup>10</sup>	
A	26	Barkley Branch	Perennial	
В	40	Peggy Neck Branch	Perennial	
С	11	Tangs Creek	Perennial	
D	65	Manokin River	Perennial-Tidal	
Е	18	Unnamed Tributary of Manokin River	Intermittent	
F	13	Unnamed Tributary of Manokin River	Intermittent	
G	14	Taylor Branch	Perennial-Tidal	
		Jones Creek <sup>11</sup>	Perennial	
Н	56	Kings Creek	Perennial-Tidal	

PEM = Palustrine Emergent

PFO = Palustrine Forested

EEM = Estuarine Emergent

<sup>&</sup>lt;sup>4</sup> Field designations represent unique identifiers assigned to each wetland during field observations.

<sup>&</sup>lt;sup>5</sup> Wetland classifications are based on the Cowardin classification system whereby:

<sup>&</sup>lt;sup>6</sup> Wetland 1 is located slightly outside of the project area.

<sup>&</sup>lt;sup>7</sup> The PEM portion of Wetland 2 is located outside of the project area.

<sup>&</sup>lt;sup>8</sup> The PFO portion of Wetland 5 is located outside of the project area.

<sup>&</sup>lt;sup>9</sup> As identified on USGS Topographic Series 7.5-minute maps.

Waterbody type includes perennial, intermittent, or ephemeral. A perennial stream has flowing water year-round during a typical year. Perennial streams are identified as solid blue lines on the USGS Topographic maps. An intermittent stream has flowing water during certain times of the year when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Intermittent streams are identified as dashed blue lines on the USGS Topographic maps. Ephemeral channels only flow during precipitation events or spring snow melt. They are not depicted on USGS Topographic Maps.

<sup>&</sup>lt;sup>11</sup> Within the project area, Jones Creek flows through a concrete box culvert that runs from the U.S. Route 13 median strip, beneath U.S. Route 13 southbound and adjacent Market Lane, before discharging on the western side of Market Lane.

#### 4.1 Wetland 1: EEM

Wetland 1 is an emergent wetland abutting the north bank of Waterbody D (Manokin River). Wetland 1 is located slightly outside of the project area. It should be noted that according to Chapter 26.23.06.02 of the Code of Maryland Regulations (COMAR), as well as correspondence with the Maryland Department of Natural Resources (DNR), this wetland is designated as a Wetland of Special State Concern. Within Wetland 1, GTA's wetland scientists observed predominantly hydrophytic vegetation, including sweetgum (*Liquidambar styraciflua*, FAC), narrowleaf cattail (*Typha angustifolia*, OBL), and crimsoneyed rosemallow (*Hibiscus moscheutos*, OBL). Evidence of primary indicators of wetland hydrology observed by GTA's wetland scientists included indicators A2 (High Water Table), A3 (Saturation), and B3 (Drift Deposits. GTA personnel excavated test pits to depths of 20 inches within the limits of the wetland boundary and observed the NRCS and Corps hydric soils field indicator F3 (Depleted Matrix).

#### 4.2 Wetland 2: EEM/PEM

Wetland 2 is an emergent wetland located west of U.S. Route 13, and south of Deal Island Road. Wetland 2 abuts the Manokin River, and consists of both tidal and nontidal portions. The nontidal portion of Wetland 2 is located slightly outside of the project area. Within the vegetation plot, GTA's wetland scientists observed predominantly hydrophytic vegetation species, including bald cypress (*Taxodium distichum*, OBL), crimsoneyed rosemallow, Pennsylvania smartweed (*Polygonum pensylvanicum*, FACW), and narrowleaf cattail. Evidence of primary indicators of wetland hydrology observed by GTA's wetland scientists included indicators A2 (High Water Table), A3 (Saturation), and B3 (Drift Deposits). GTA personnel excavated test pits to depths of 20 inches within the limits of the wetland boundary and observed the NRCS and Corps hydric soils field indicator A9 (1 cm Muck).

#### 4.3 Wetland 3: PEM

Wetland 3 is an emergent wetland located west of U.S. Route 13 and east of Libby Lane, near milepost 7.35. Within the vegetation plot, GTA's wetland scientists observed predominantly hydrophytic vegetation species, including sweetgum, red maple (*Acer rubrum*, FAC), common reed (*Phragmites australis*, FACW), and common rush (*Juncus effusus*, OBL).

Evidence of primary indicators of wetland hydrology observed by GTA's wetland scientist included indicators A1 (Surface Water), A2 (High Water Table), A3 (Saturation), and B9 (Water Stained Leaves). Evidence of secondary indicators of wetland hydrology observed included indicators D2 (Geomorphic Position) and D5 (positive FAC-Neutral Test). GTA personnel excavated test pits to depths of 20 inches within the limits of the wetland boundary and observed the NRCS and Corps hydric soils field indicator F3 (Depleted Matrix).

#### 4.4 Wetland 4: EEM/PEM

Wetland 4 is an emergent wetland located west of U.S. Route 13, and north of North Central School Road. Wetland 4 abuts Taylor Branch, and consists of both tidal and nontidal portions, within the project area. It should be noted that according to COMAR Chapter 26.23.06.02, as well as correspondence with the DNR, this wetland is considered a Wetland of Special State Concern. Within the vegetation plot, GTA's wetland scientists observed predominantly hydrophytic vegetation species, including red maple, boxelder (*Acer negundo*, FAC), redosier dogwood (*Cornus sericea*, FACW), common reed, and common rush. Evidence of primary indicators of wetland hydrology observed by GTA's wetland scientists included indicator A3 (Saturation). Evidence of secondary indicators of wetland hydrology observed included indicators C9 (Saturation Visible on Aerial Imagery), and D5 (positive FAC-Neutral Test). GTA personnel excavated test pits to depths of 20 inches within the limits of the wetland boundary and observed the NRCS and Corps hydric soils field indicator F3 (Depleted Matrix).

#### 4.5 Wetland 5: PEM

Wetland 5 is a forested and emergent wetland located west of U.S. Route 13 and north of Perry Road. Wetland 5 abuts Kings Creek, and consists of both tidal and nontidal portions, within the project area. The forested portion of Wetland 5 is located outside of the project area. Within the vegetation plot, GTA's wetland scientists observed predominantly hydrophytic vegetation species, including wax myrtle (*Morella cerifera*, FAC), black willow (*Salix nigra*, OBL), and common reed. Evidence of primary indicators of wetland hydrology observed by GTA's wetland scientists included indicators A1 (Surface Water), A2, (High Water Table), A3 (Saturation), B7 (Inundation Visible on Aerial Imagery), and B9 (Water Stained Leaves). Evidence of secondary indicators of wetland hydrology observed included indicators B8

(Sparsely Vegetated Concave Surface), D2 (Geomorphic Position), and D5 (positive FAC-Neutral Test). GTA personnel excavated test pits to depths of 20 inches within the limits of the wetland boundary and observed the NRCS and Corps hydric soils field indicators A9 (1cm Muck) and F3 (Depleted Matrix).

#### 4.6 Waterbody A: Perennial Stream (Barkley Branch)

Waterbody A originates east of the project area and conveys flow through a culvert beneath U.S. Route 13 and northwest across the project area, near milepost 0.48. An ordinary high water mark (OHWM) and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### **4.7** Waterbody B: Perennial Stream (Peggy Neck Branch)

Waterbody B originates east of the project area and conveys flow through a culvert beneath U.S. Route 13 and northwest across the project area, near milepost 1.64, north of Peggy Neck Road. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### 4.8 Waterbody C: Perennial Stream (Tangs Creek)

Waterbody C originates east of the project area and conveys flow through a culvert beneath U.S. Route 13 and northwest across the project area, near milepost 2.21. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### 4.9 Waterbody D: Tidal River (Manokin River)

Waterbody D originates east of the review area and conveys flow southwest beneath a bridge conveying U.S. Route 13 and continues west and south outside of the project area. Waterbody D is named the Manokin River, and is a tributary of the Chesapeake Bay. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### **4.10** Waterbody E: Intermittent Stream

Waterbody E originates east of the project area and conveys flow through a culvert beneath U.S. Route 13 and west across the project area, near milepost 6.70. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### 4.11 Waterbody F: Intermittent Stream

Waterbody F originates east of the project area and conveys flow through a culvert beneath U.S. Route 13 and northwest across the project area, near milepost 6.91, north of Stewart Neck Road. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### **4.12** Waterbody G: Tidal River (Taylor Branch)

Waterbody G originates east of the project area and conveys flow through a culvert beneath U.S. Route 13 and west across the project area, near milepost 7.59, north of North Central School Road. Waterbody G is named Taylor Branch and is a tributary of the Manokin River. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### 4.13 Perennial Stream (Jones Creek)

Jones Creek originates east of the project area and conveys flow through a box culvert beneath U.S. Route 13 and the adjacent Market Lane, near milepost 8.33, north of King Miller Road. The box culvert discharges on the west side of Market Lane. Jones Creek was not flagged in the field, as the portion within and immediately adjacent to the project area is contained within the box culvert.

#### 4.14 Waterbody H: Tidal River (Kings Creek)

Waterbody H originates east of the project area and conveys flow through a box culvert beneath U.S. Route 13 and west across the project area, near milepost 8.86, north of Perry Road. Waterbody H is named Kings Creek and is a tributary of the Manokin River. An OHWM and a defined bed and bank were observed within the limits of the stream channel within the project area.

#### 5.0 OTHER FEATURES

#### **5.1** Drainage Ditches

GTA's wetland scientists observed several drainage ditches within the project area. These ditches are located adjacent to U.S. Route 13 throughout the length of the project. These drainage ditches appear to have been constructed within uplands and wholly drain uplands, and in GTA's professional opinion, should not be considered jurisdictional features.

#### 6.0 CONCLUSION

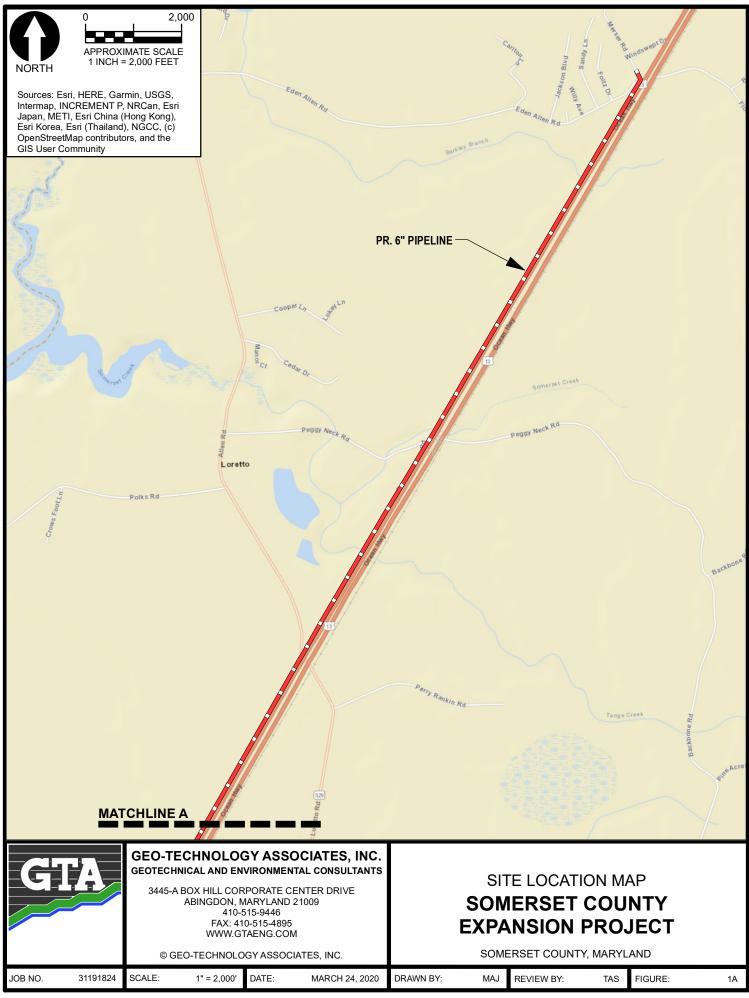
The waterbodies and wetlands identified within the project area, in GTA's professional opinion, exhibited characteristics of "waters of the U.S." or all three wetland parameters. These areas were flagged in the field and are identified on the *Wetland Delineation Plan* (Appendix D).

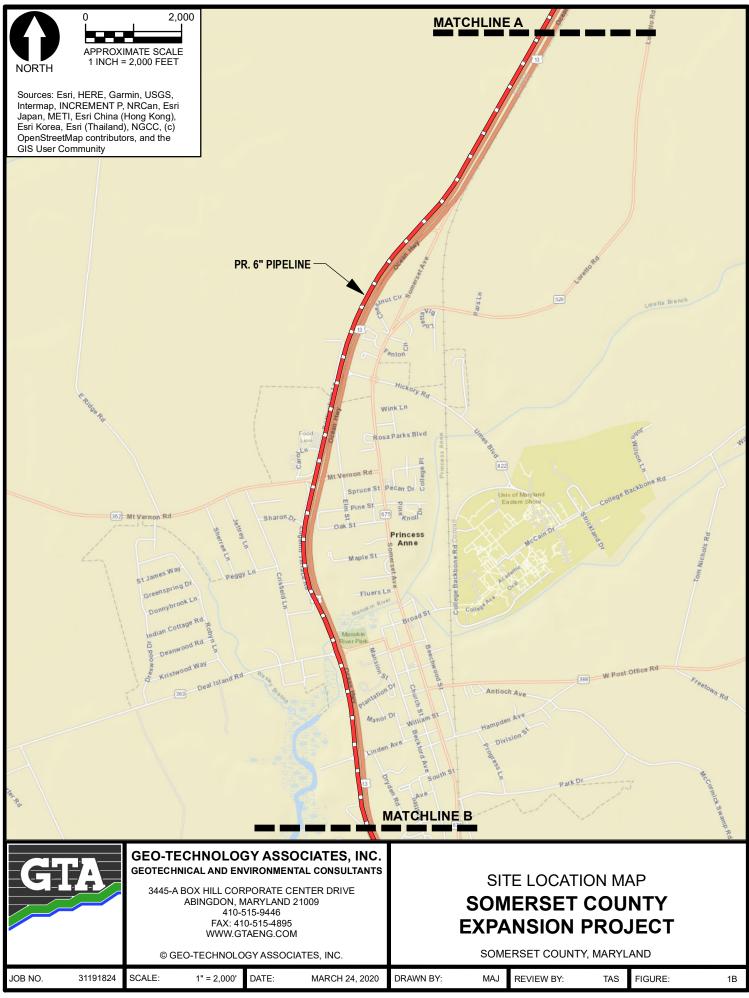
As a result of the environmental review of the site, it is GTA's professional opinion that there are jurisdictional nontidal wetlands, nontidal waterways, tidal wetlands, and tidal waterways present within the project area. Our conclusions regarding this site have been based on observations of existing conditions, professional experience in the area with similar projects, and generally accepted professional environmental practice under similar circumstances. Seasonal fluctuations in precipitation or weather conditions can result in differences in the perception of hydrologic conditions, which can alter GTA's evaluation of wetlands/waterways. It is important to note that this delineation is GTA's professional opinion, only. Decisions regarding the official jurisdictional status of wetlands/waterways are made by federal, state and / or local regulatory agencies.

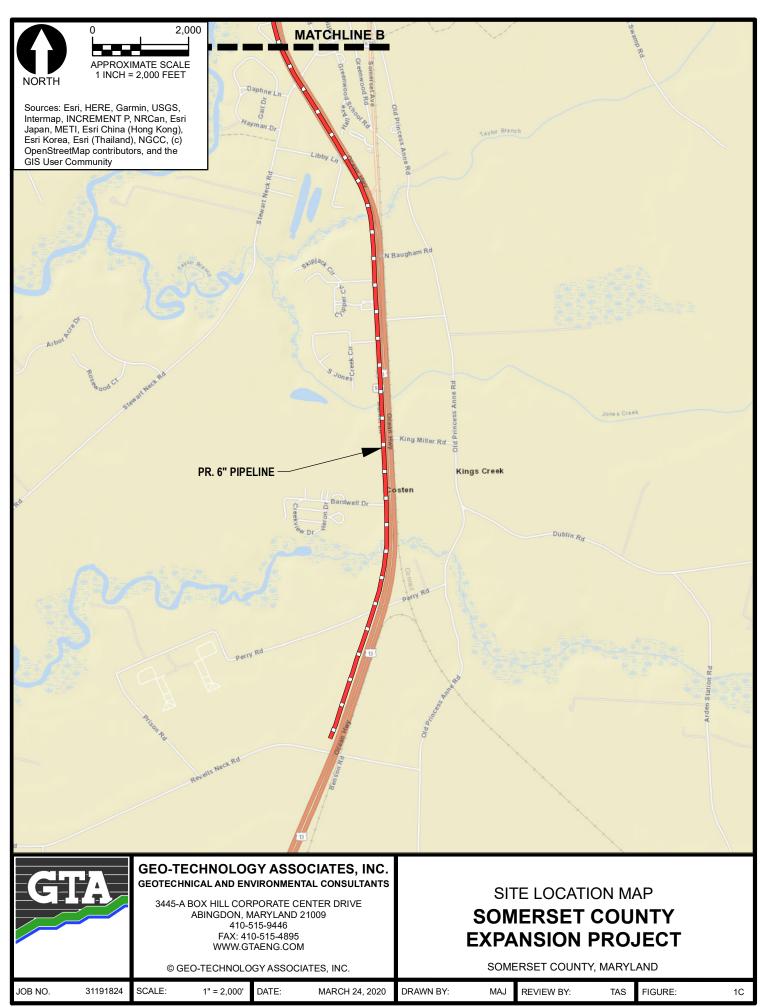
This Report was prepared by GTA for the sole and exclusive use of Chesapeake Utilities. Any reproduction of this Report by any other person without the expressed written permission of GTA and Chesapeake Utilities is unauthorized, and such use is at the sole risk of the user.

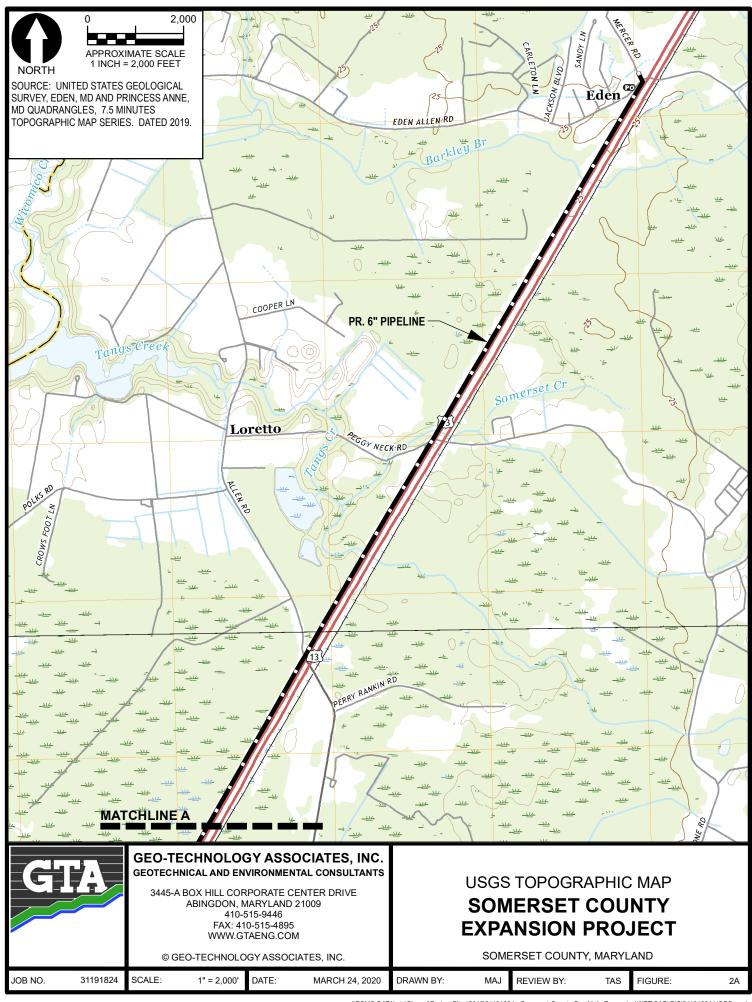
\*\*\*\*\* END OF REPORT \*\*\*\*\*

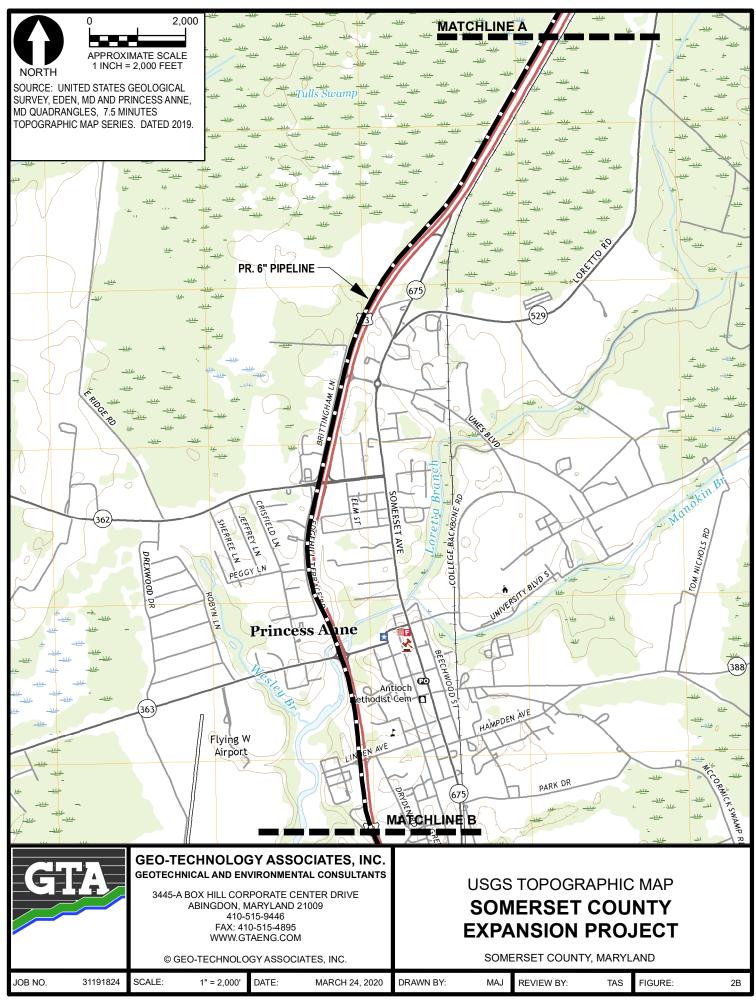
# APPENDIX A FIGURES

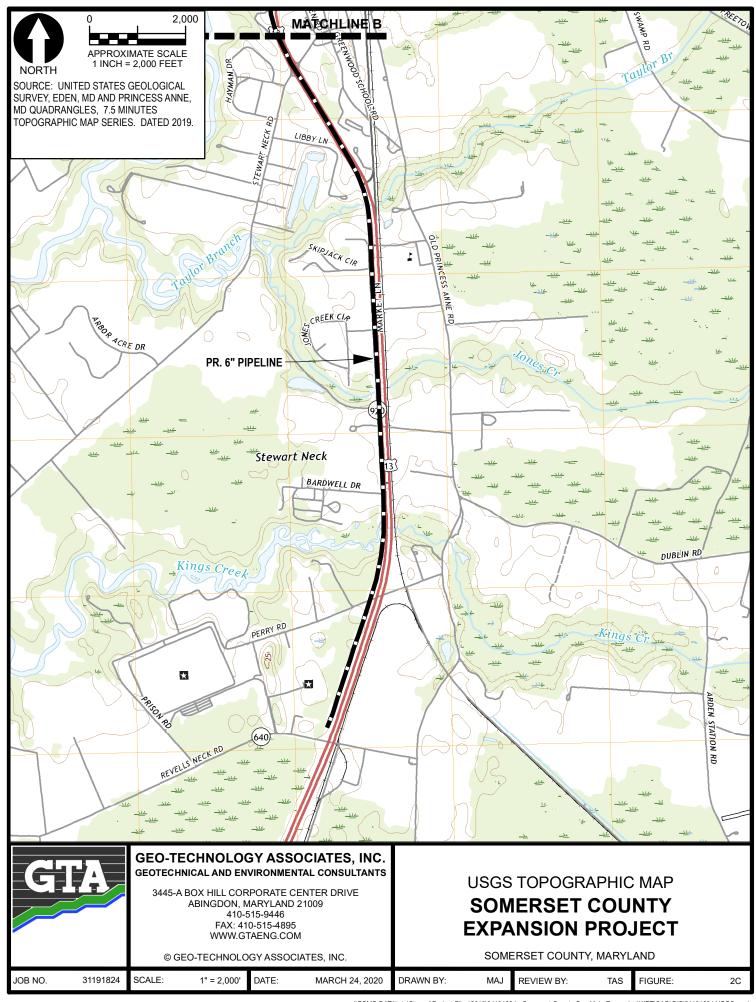


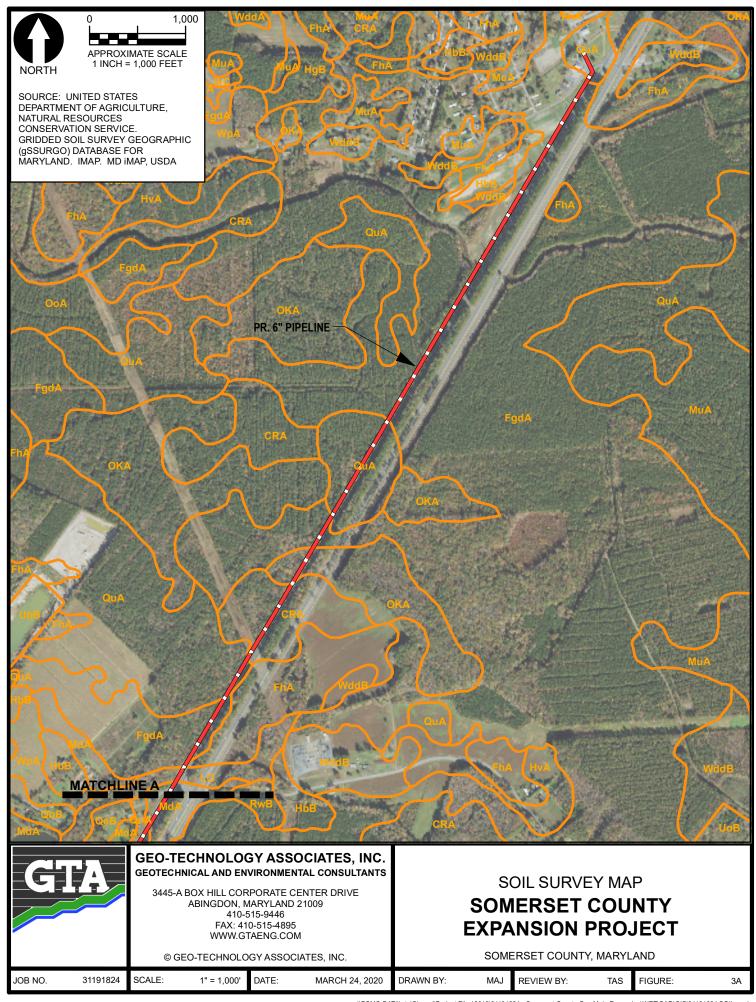


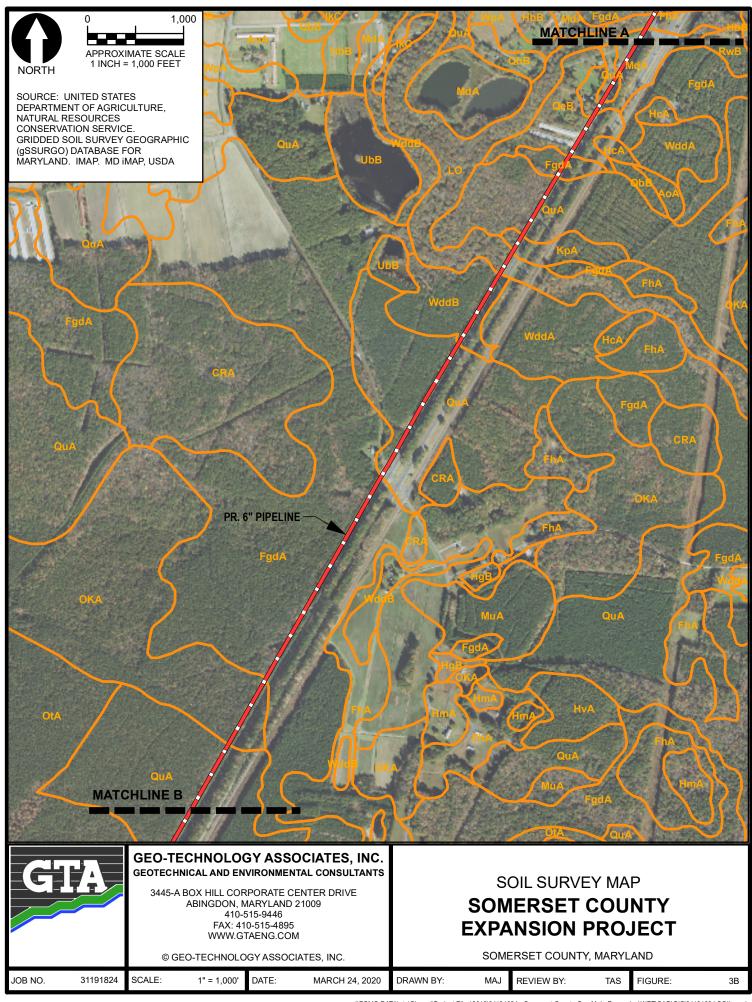


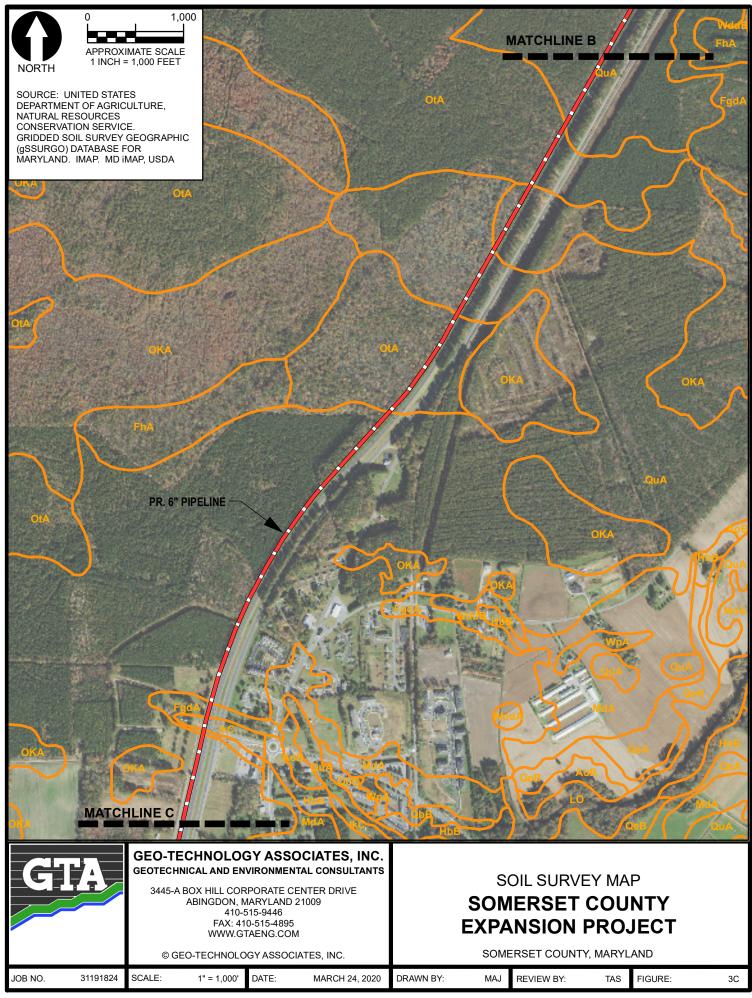


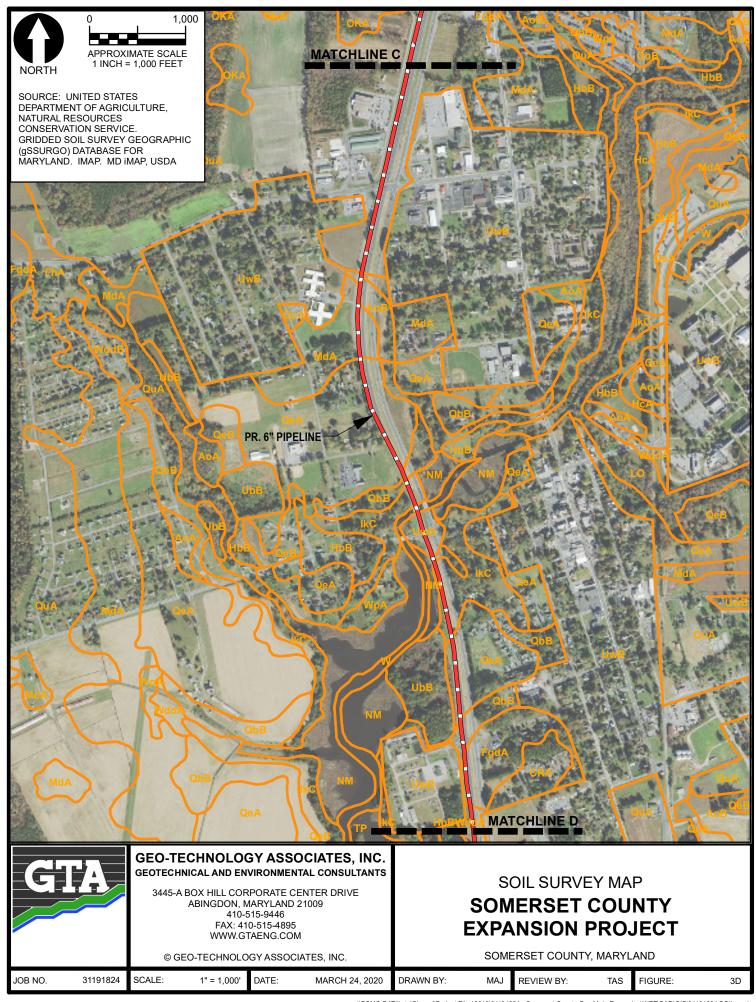


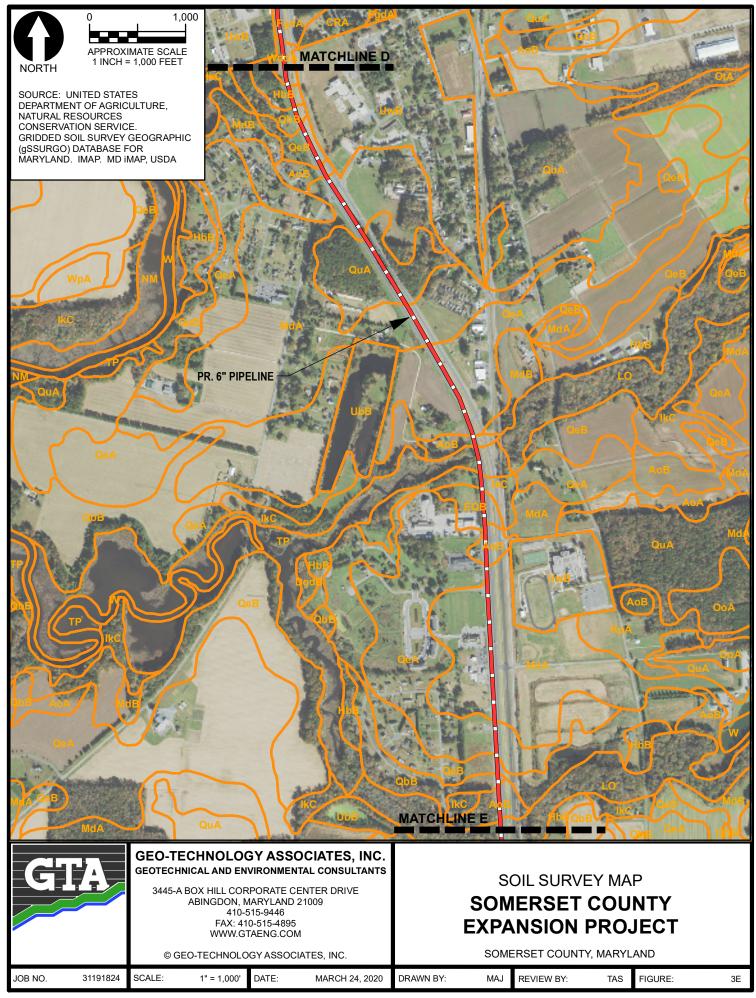


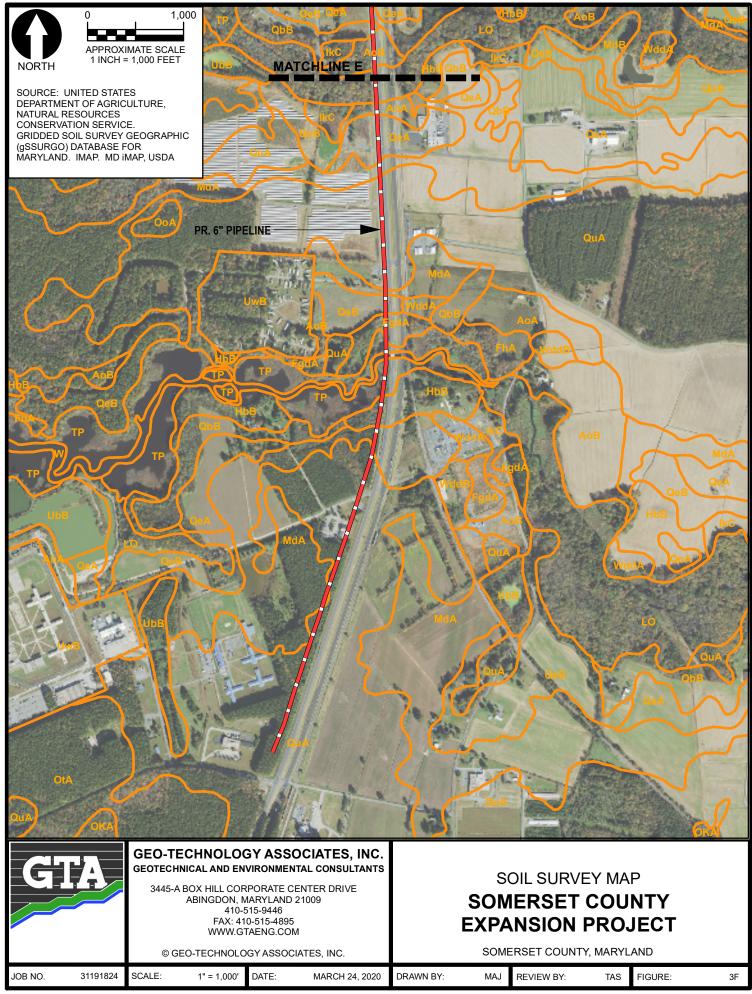


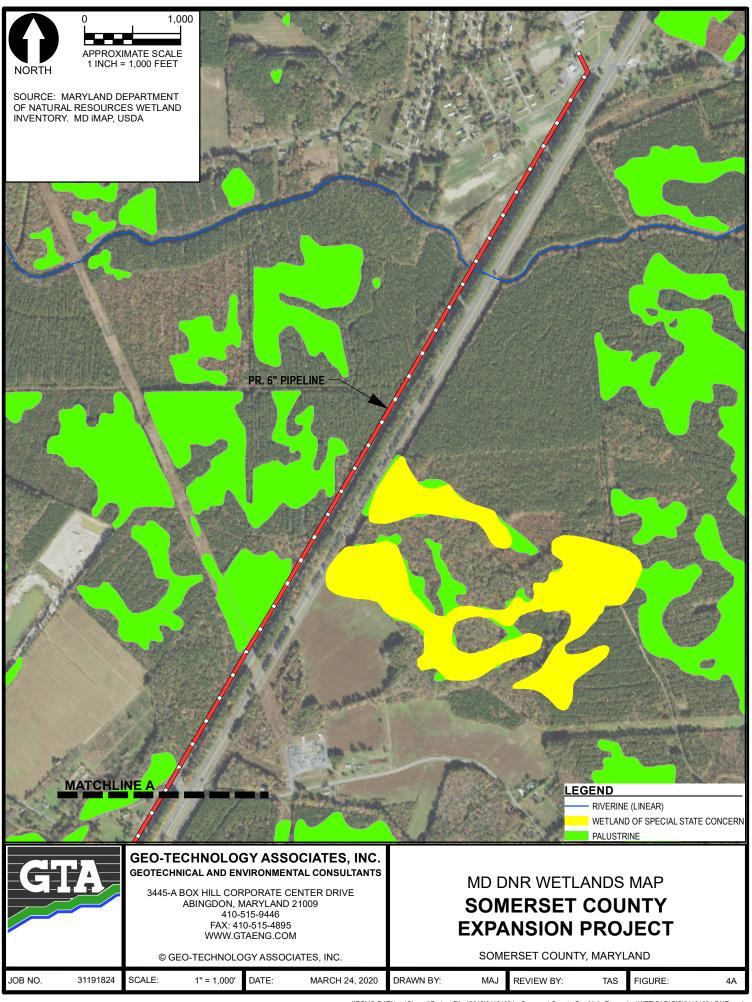


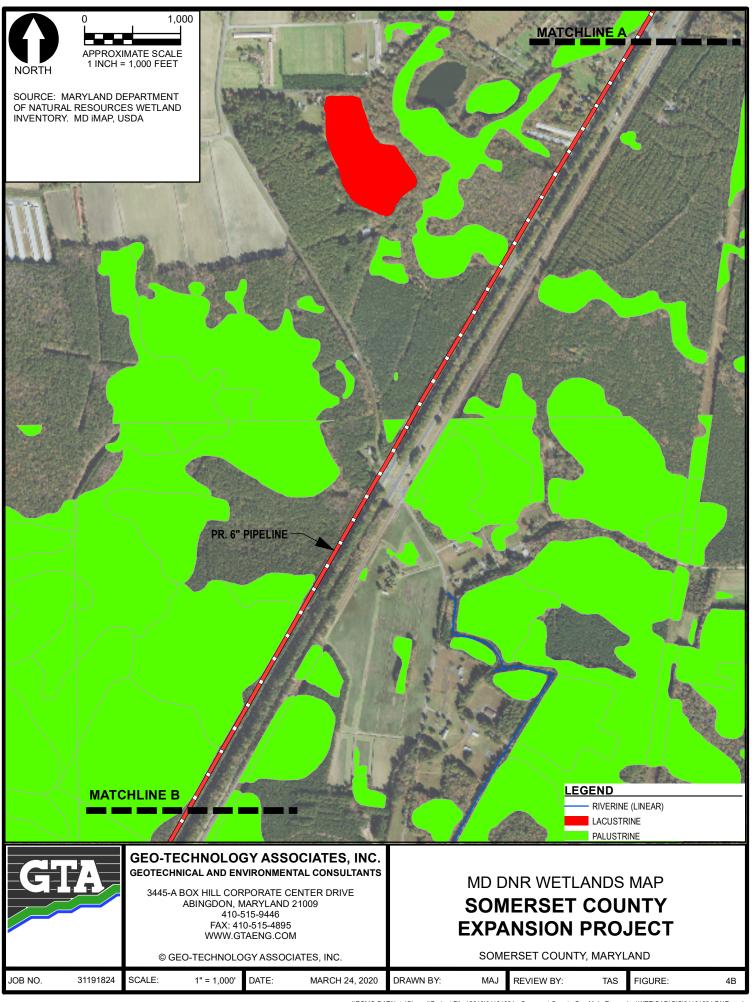


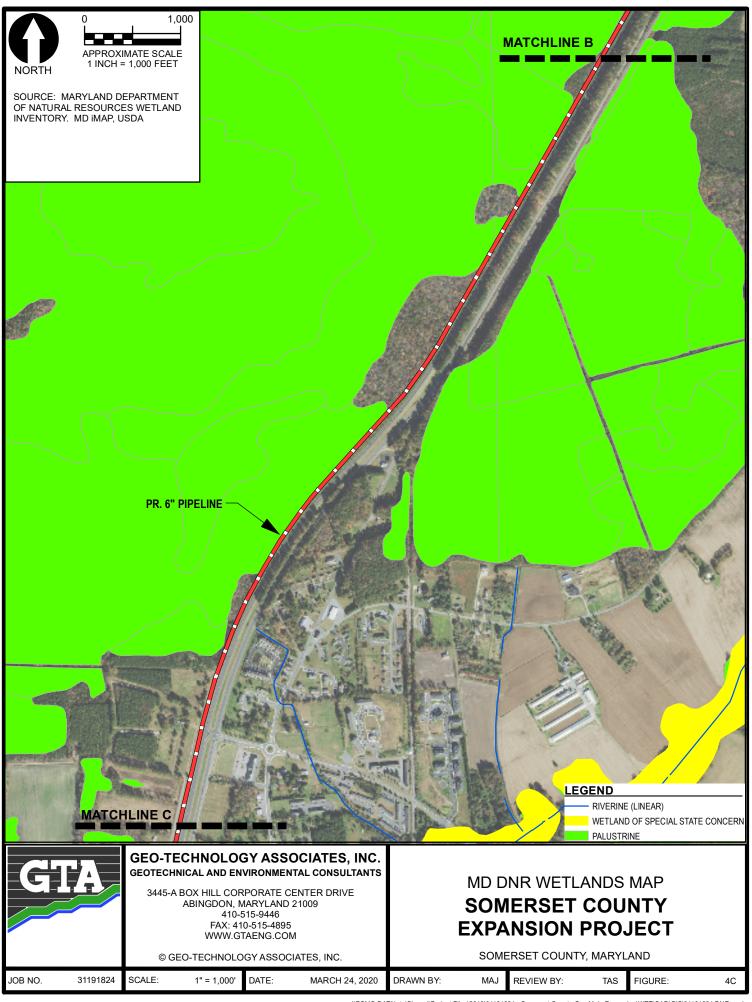


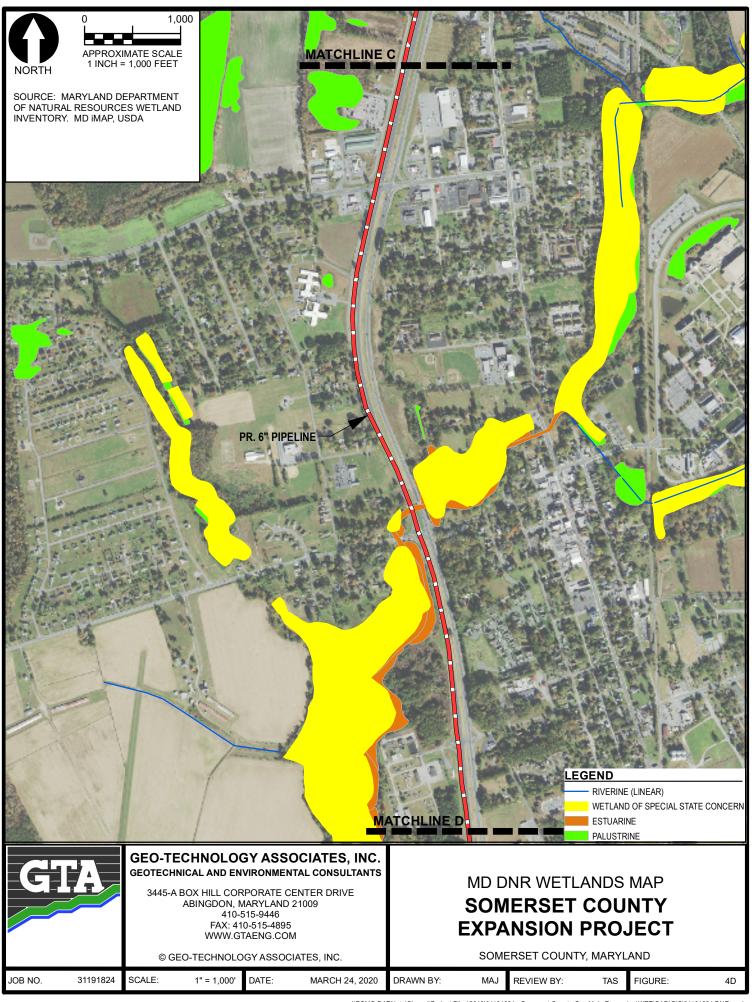


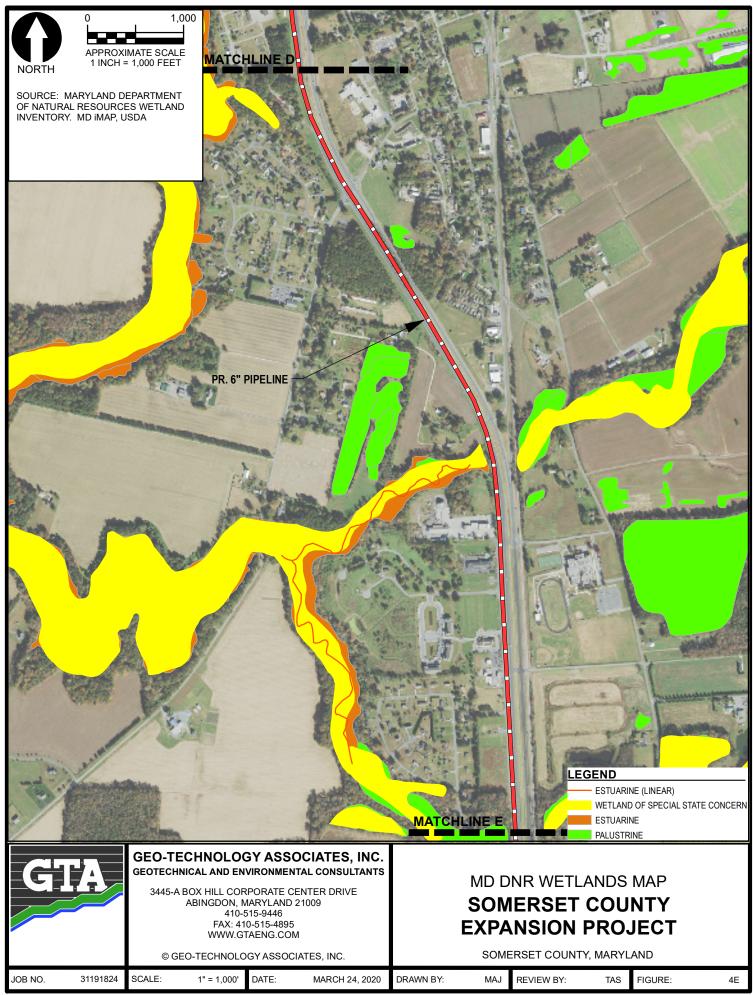


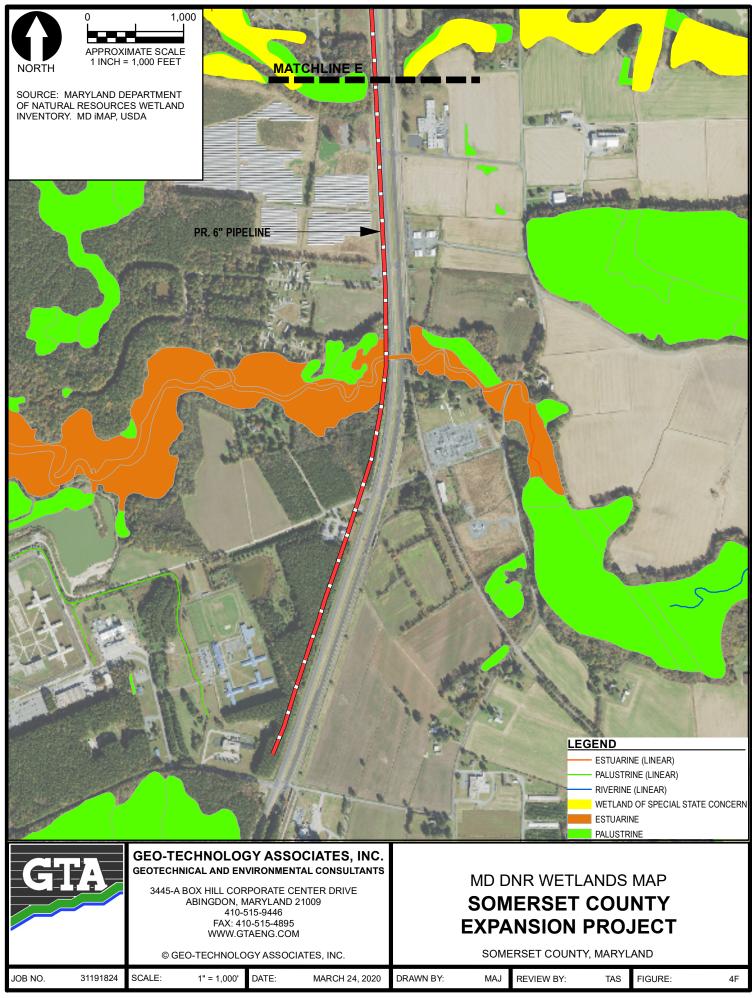


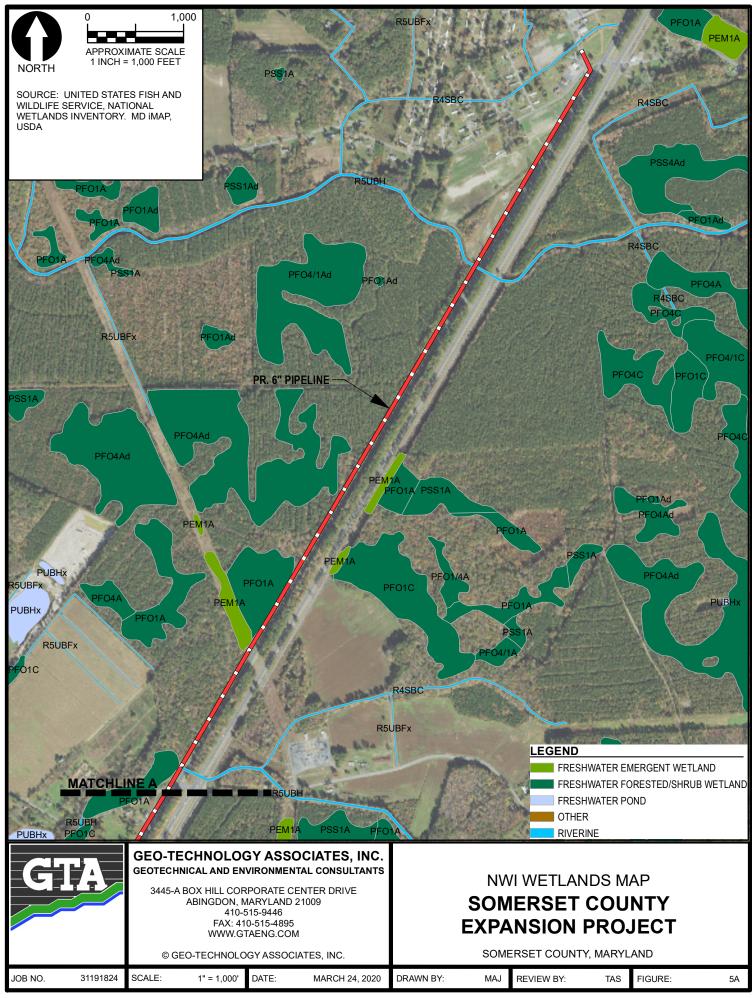


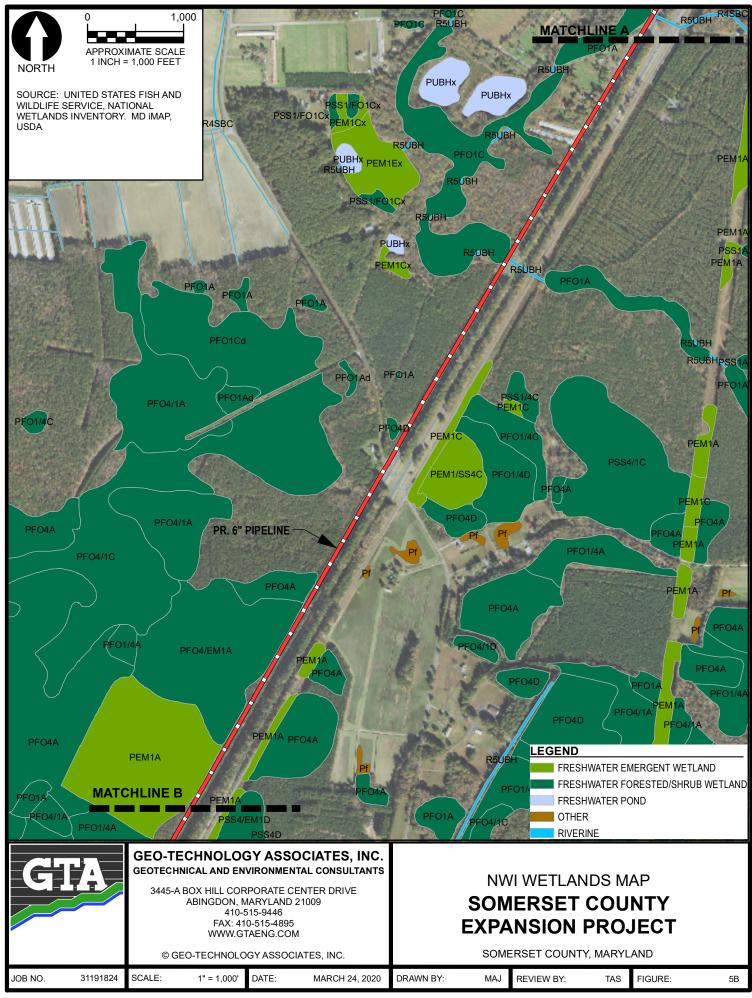


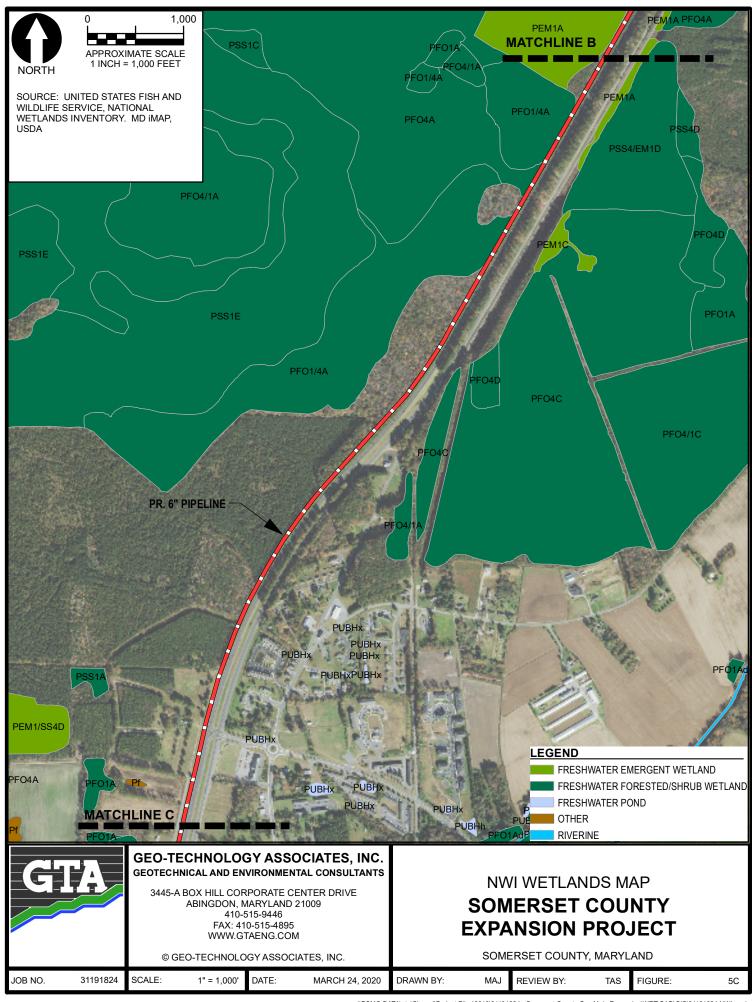


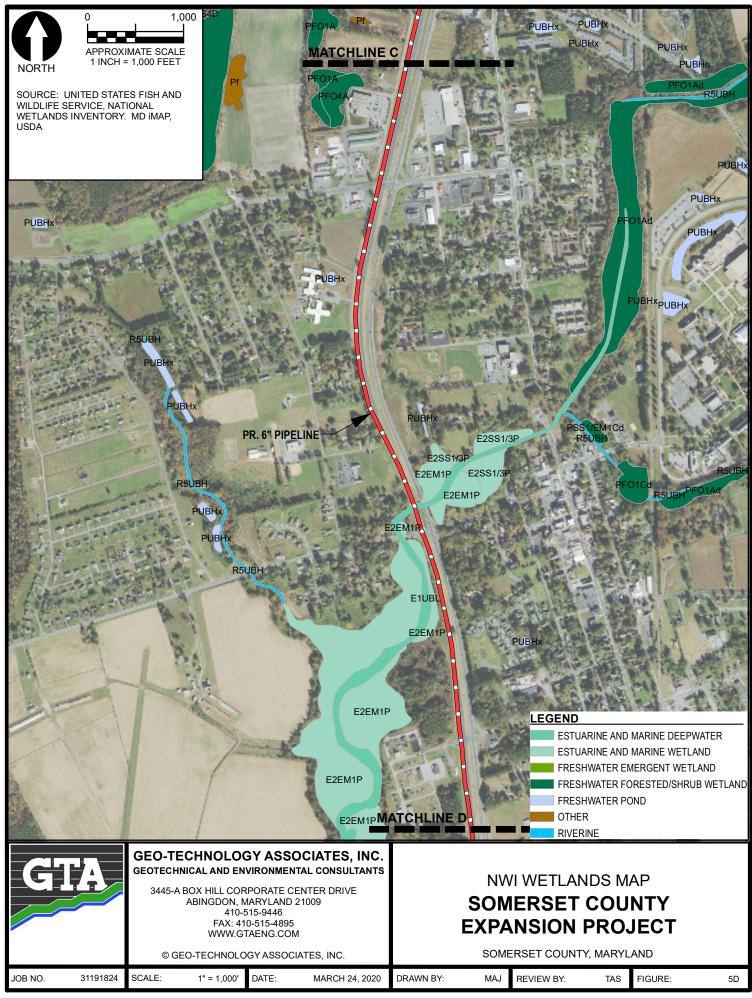


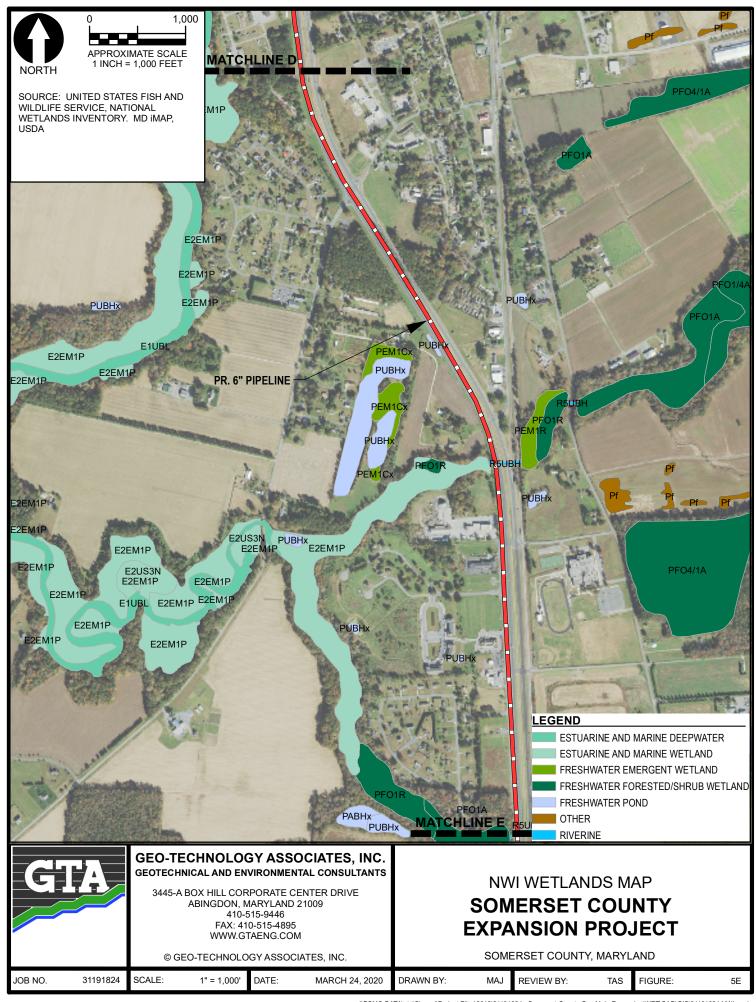


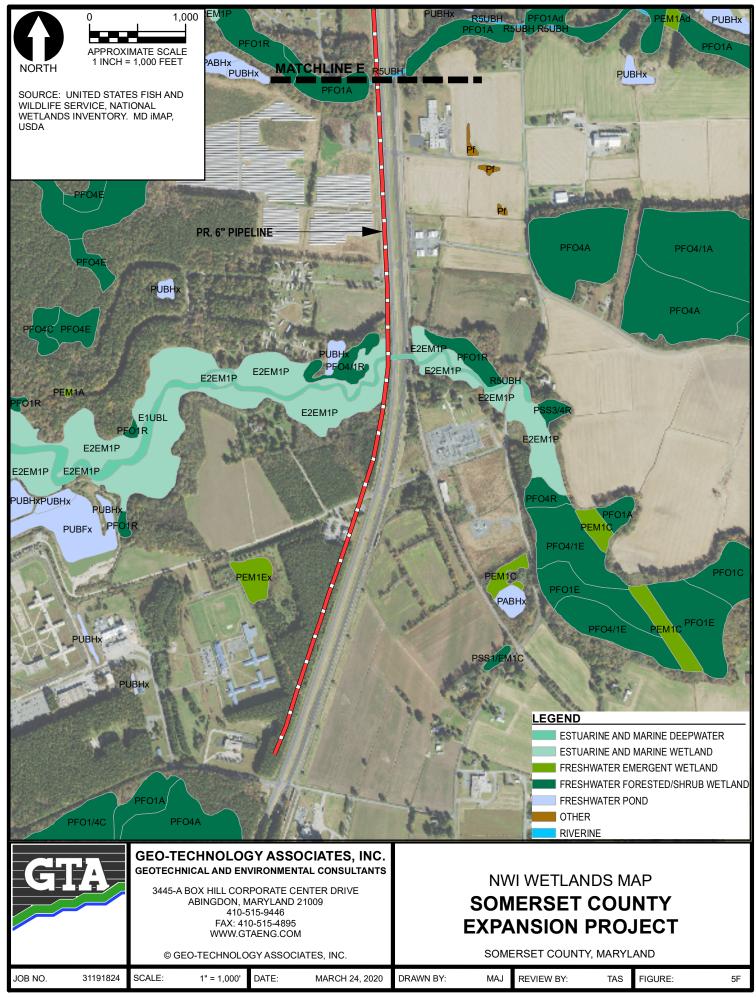












# APPENDIX B DATA FORMS

Project/Site:	Somerset County Expans	sion Proiect	City/County:	Somers	set	Sampling Date:	22-Ja	an-20
Applicant/Owner:		Chesapeake Utilities		State:		Sampling Point:		P-1
Investigator(s):	J. Weber & M. Hunter	-Goskie	Section, Tov	wnship, Range:		N/A		
Landform (hillslope, terrace, e	tc.):	flat	Local relief (co	ncave, convex,	none):no	one Slope (%	%): <u> </u>	1
Subregion (LLR or MLRA):	MLRA153D	Lat:	38.28035°	Long:	-75.65177°	Datu	m:	NAD83
Soil Map Unit Name:		Urban Land				NWI classification:	N/	/A
Are climatic/hydrologic conditi	**	•	Yes	X No		plain in Remarks)		
Are Vegetation, Soil		significantly of			rmal Circumstar	•	s <u>X</u>	No
Are Vegetation, Soil		naturally prob		•		answers in Remarks.)		
SUMMARY OF FINDINGS	· Attach site map sho	wing sampling point	locations, transec	cts, important	features, etc.			
Hydrophytic Vegetation Prese	nt? Yes	No X						
Hydric Soil Present?	_	No X	Is the Sampled	Area within a W	etland?	Yes	No	х
Wetland Hydrology Present?	_	No X	io uno Gampioa	, ca	olidi.idi.	.00		
Remarks: The DCP wa	s established on the wes	tern side of U.S. Route	13, near the northern	portion of the p	roject area.			
HYDROLOGY								
Wetland Hydrology Indicat	ors:				Secondary Indic	ators (minimum of two r	equired)	
Primary Indicators (minimum		k all that apply)			-	Soil Cracks (B6)		
Surface Water (A1)	_	Aquatic Fauna (E	313)		Sparsely	Vegetated Concave Su	ırface (B8)	
High Water Table (A2	2)	Marl Deposits (B	15) (LRR U)		Drainage	e Patterns (B10)		
Saturation (A3)		Hydrogen Sulfide	Odor (C1)		Moss Tr	im Lines (B16)		
Water Marks (B1)	_	Oxidized Rhizosp	heres on Living Root	ts (C3)	Dry-Sea	son Water Table (C2)		
Sediment Deposits (E	32)	Presence of Red	uced Iron (C4)		Crayfish	Burrows (C8)		
Drift Deposits (B3)	_	Recent Iron Redu	uction in Tilled Soils (	C6)	Saturation	on Visible on Aerial Imaç	gery (C9)	
Algal Mat or Crust (B4	1)	Thin Muck Surface	ce (C7)		Geomor	phic Position (D2)		
Iron Deposits (B5)	_	Other (Explain in	Remarks)		Shallow	Aquitard (D3)		
Inundation Visible on	Aerial Imagery (B7)				FAC-Ne	utral Test (D5)		
Water Stained Leave	s (B9)				Sphagni	um moss (D*) (LRR T, U	J)	
Field Observations:								-
Surface Water Present?	Yes No	X Depth (inche	s):					
Water Table Present?	Yes No	X Depth (inche	s):					
Saturation Present?	Yes No	X Depth (inche	s):	Wetland	d Hydrology Pres	sent? Yes	No	X
(includes capillary fringe)								
Describe Recorded Data (stre	am gage, monitoring we	ll, aerial photos, previous	s inspections), if avail	lable:				
Remarks:								

US Army Corps of Engineers

Tree Stratum

(Plot size: 30' Radius

		Samplir	ng Point: DCP-1	
Dominance Tes	st worksheet:			
Number of Domina OBL, FACW, or F.	ant Species That Are AC:		1	_(A)
Total Number of D Across All Strata:	ominant Species		2	_ (B)
Percent of Domina OBL, FACW, or F.	ant Species That Are AC:		50%	_ (A/B)
Prevalence Ind	ex worksheet:			
Total 9	6 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 Ve	getation Indicator	s:		
	1 - Rapid Test for	Hydroph	ytic Vegetation	
	2 - Dominance Te	st is >50	%	
	3 - Prevalence Ind	ex is ≤3.	.01	
	4 - Morphological	Adaptati	ons <sup>1</sup> (Provide	
	supporting data in			e sheet)
	Problematic Hydro	phytic V	egetation <sup>1</sup> (Explai	in)
1 Indicators of h	- ydric soil and wetlar	nd hydro	logy must	
be present, unle	ss disturbed or prol	blematic		
Definitions of \	/egetation Strata:			
Tree - Woody p	lants, excluding woo	ody vine:	s,	
approximately 2	0 ft (6 m) or more ir	height	and 3 in.	
(7.6 cm) or large	er in diameter at bre	ast heig	ht (DBH).	
	- Woody plants, exc DBH and greater th	•		) tall.
<b>Herb</b> - All herba	ceous (non-woody)	plants, i	regardless	
of size, and woo	dy plants less than	3.28 ft.	tall	

1						OBL, FACW, or FAC:	- That Are	11	(A)
						Total Number of Dominant Sp Across All Strata:	pecies	2	(B)
4 5						Percent of Dominant Species OBL, FACW, or FAC:	That Are	50%	(A/B)
						Prevalence Index works	heet:		
r			0	= Total Cover		Total % Cover of		Multiply by:	
	50% of total cover:	0		6 of total cover:	0		x 1 =		
Sapling / Shrub Stratum	(Plot size: 30' Radius					FACW species			
							x 3 =		
							x 4 =		
							x 5 =		
							(A)		
5						<u> </u>			
						Prevalen	ce Index = B/A =		_
8						Hydrophytic Vegetation			
9							Test for Hydrophy	_	
		_		= Total Cover			nance Test is >50%		
	50% of total cover:	0	20%	6 of total cover:	0	†   <del></del>	lence Index is ≤3.0		
							nological Adaptatio		
Herb Stratum	(Plot size: 30' Radius	)				1 1	ng data in Remarks		,
1. Grass spp. *				<u>Y</u>	FAC	T	atic Hydrophytic Ve		in)
2. Glechoma hederacea				<u> </u>	FACU	Indicators of hydric soil a	-		
3. Solanum carolinense					FACU	be present, unless disturb			
						Definitions of Vegetation	n Strata:		
						Tree - Woody plants, excl			
						approximately 20 ft (6 m)	_		
						(7.6 cm) or larger in diame	eter at breast heigh	nt (DBH).	
10.						Sapling/Shrub - Woody p	olants, excluding w	oody vines.	
11.						a less than 3in. DBH and	_	-	n ) tall.
12.						1	5	(	,
				= Total Cover		Herb - All herbaceous (no	n-woody) plants, re	egardless	
	50% of total cover:	55		6 of total cover:	22	of size, and woody plants	***	•	
Woody Vine Stratum	(Plot size: 30' Radius	)				]   ' ' '			
1.	`					Woody vine - All woody v	ines, greater than	3.28 ft. in height.	
						]  ,	, 3		
						1			
				-		1			
5.				-		1			
u			0	= Total Cover		-			
	50% of total cover:	0		6 of total cover:	0				
						Hydrophytic			
						Hydrophytic			
						Vegetation	Voo	No. Y	
						Present?	Yes	No X	
Remarks: (Include photo r	numbers here or on a sepa	arate sheet)							

Absolute

) % Cover Species?

Dominant

Indicator

Status

<sup>\*</sup>The grass species was unidentifiable due to lack of distinguishing characteristics, therefore an indicator status of FAC is assumed.

Profile Descripti	on: (Describe to the	depth needed	d to document the ir	ndicator or c	onfirm the a	bsence of i	indicators.)	
Danth	Matrix			Daday Faatu				
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Featu %	res Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-5	10YR 2/2	100	Color (moist)		Туре	LUC	silt loam	Remains
5-20	10YR 3/2	65	10YR 6/6	35	С	М	silt loam	
<del></del> -								
<del></del> -								
<sup>1</sup> Type: C=concer	ntration, D=Depletion, I	RM=Reduced	Matrix, CS=Covered	or Coated S	and Grains.		<sup>2</sup> Location: PL=	Pore Lining, M=Matrix.
Hydric Soil Indic	ators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
5 cm Mucky Muck Preser 1 cm Muck ( Depleted Be Thick Dark S Coast Prairie Sandy Muck Sandy Gleye Sandy Redo Stripped Ma	don (A2) (A3) ulfide (A4) yers (A5) lies (A6) (LRR P, T, U) Mineral (A7) (LRR P, nce (A8) (LRR U) (A9) (LRR P, T) elow Dark Surface (A11 Surface (A12) e Redox (A16) (MLRA cy Mineral (S1) (LRR C) ed Matrix (S4) ex (S5)	T, U)  150A)  , S)	Polyvalue Below Thin Dark Surfa Loamy Mucky M Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark S Redox Depress Marl (F10) (LRF Depleted Ochric Iron-Manganes Umbric Surface Delta Ochric (F Reduced Vertic Piedmont Flood Anomalous Brig	ace (S9) (LRE Mineral (F1) (I Matrix (F2) ( (F3) rface (F6) Surface (F7) dions (F8) R U) c (F11) (MLR e Masses (F1 e (F13) (LRR I e (F13) (LRR I did (MLRA 1)	A 151) 2) (LRR O, F P, T, U) 3 150A, 150E 19) (MLRA 1	P, T) B) 49A)	2 cm Mucl Reduced N Piedmont Anomalou (MLRA 15 Red Parer Very Shall Other (Exp	(A9) (LRR O) (A10) (LRR S) (Jertic (F18) (outside MLRA 150A,B) (Jertic (F18) (outside MLRA 150A,B) (Jertic (F18) (outside MLRA 150A,B) (Jertic (F18) (Jertic (F19) (LRR P, S, T) (Jertic (F19) (Jertic
Restrictive Laye	r (if observed):							
Type:								
Depth (inche	es):					Hydric So	oil Present?	Yes No X
Remarks:								

Project/Site: Some	erset County Expansion Project	City/County:	Somerset	Sampling Date:	23-Jan-20
Applicant/Owner:	Chesapeake Utilities		State: Maryland	Sampling Point:	DCP-2
··· ——	Weber & M. Hunter-Goskie	Section, Township,		N/A	
Landform (hillslope, terrace, etc.):		Local relief (concave,	<u> </u>	ne Slope (%):	3
Subregion (LLR or MLRA):	MLRA153D Lat:	- '	-75.65549°	Datum:	
Soil Map Unit Name:	Fallsington loams, 0-2% slopes, N			WI classification:	N/A
	on the site are typical for this time of year?	Yes X	No (If no, exp	olain in Remarks)	
Are Vegetation , Soil	, or Hydrologysignificantly	disturbed?	Are "Normal Circumstan	ces" present? Yes	<b>X</b> No
Are Vegetation, Soil	, or Hydrologynaturally pro	blematic?	(If needed, explain any a	inswers in Remarks.)	
SUMMARY OF FINDINGS- Atta	ach site map showing sampling poin	t locations, transects, im	portant features, etc.		
Hydrophytic Vegetation Present?	YesX No				
Hydric Soil Present?	Yes X No	Is the Sampled Area w	ithin a Wetland?	Ves	No X
·		is the campica / trea w	itilii a wetana:	103	NO <u>X</u>
Wetland Hydrology Present?	Yes NoX				
Remarks: The DCP was esta	ablished south of Waters A, flag 103.				
HYDROLOGY					-
Wetland Hydrology Indicators:				ators (minimum of two requ	<u>uired)</u>
Primary Indicators (minimum of or Surface Water (A1)	ne is required, check all that apply)	2.0)		Soil Cracks (B6)	(5.0)
	Aquatic Fauna (I	,		Vegetated Concave Surfa	ce (B8)
High Water Table (A2)	Marl Deposits (B	, ,		Patterns (B10)	
Saturation (A3)	Hydrogen Sulfide	, ,		im Lines (B16)	
Water Marks (B1)		pheres on Living Roots (C3)		son Water Table (C2)	
Sediment Deposits (B2)	Presence of Rec	` '		Burrows (C8)	(00)
Drift Deposits (B3)		uction in Tilled Soils (C6)		on Visible on Aerial Imagery	/ (C9)
Algal Mat or Crust (B4) Iron Deposits (B5)	Thin Muck Surfa Other (Explain in	` '		phic Position (D2) Aguitard (D3)	
Inundation Visible on Aeria		i Keillaiks)		utral Test (D5)	
Water Stained Leaves (B9)	3 , ( )			um moss (D*) (LRR T, U)	
Field Observations: Surface Water Present? Yes	a No V Danth (inch.	20).			
Surface Water Present? Yes Water Table Present? Yes	: `	·			
Saturation Present? Yes	· · · ·	' <del></del>	Wetland Hydrology Pres	ent? Yes	No X
(includes capillary fringe)	<u> </u>		Wolland Hydrology Frod		. No <u>X</u>
Describe Recorded Data (stream g	age, monitoring well, aerial photos, previou	us inspections), if available:			
Remarks:					
Neilla KS.					

US Army Corps of Engineers

(Plot size: 30' Radius

Tree Stratum

1. Pinus taeda

2. Liquidambar styraciflua

	Samplin	ng Point: DCP-2	
Dominance Test worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:		5	_ (A)
Total Number of Dominant Species Across All Strata:		5	_ (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			_
FACU species			
UPL species	x 5 =		
Column Totals:	(A)		(B)
Hydrophytic Vegetation Indicato		. 4:- \	
1 - Rapid Test for		-	
X 2 - Dominance To 3 - Prevalence In			
4 - Morphological			a aboot)
supporting data in Problematic Hydr			
<sup>1</sup> Indicators of hydric soil and wetla			11)
be present, unless disturbed or pro			
Definitions of Vegetation Strata:		•	
Deminions of Vegetation Strata.			
Tree - Woody plants, excluding wo	odv vines	<b>S</b> .	
approximately 20 ft (6 m) or more	-		
(7.6 cm) or larger in diameter at bi	_		
(7.0 only of larger in diameter at bi	castricigi	iii (DBH).	
Sapling/Shrub - Woody plants, ex	cludina w	oodv vines	
a less than 3in. DBH and greater t	_	-	) tall
a .555 than 5m. DDH and greater t	51 64	aa. 10 0.20 it (1 iii	, wii.
Herb - All herbaceous (non-woody	/) plants. r	egardless	
of size, and woody plants less that		_	

3. Acer rubrum	5		FAC	Total Number of Dominant Across All Strata:	Species	5	(B)
4				Description of Description of Control	: Th-4 A		_
5				Percent of Dominant Spec OBL, FACW, or FAC:	ies That Are	100%	_ (A/B)
6							
7				Prevalence Index wor	ksheet:		
	40 =	Total Cover		Total % Cove	r of:	Multiply by:	_
50% of total cover: 20	20%	of total cover:	8		x 1 =		
Sapling / Shrub Stratum (Plot size: 30' Radius	)			FACW species			
1. Acer rubrum		<u> </u>	FAC		x 3 =		
2. <u>Liquidambar styraciflua</u>			FAC	FACU species			
3					x 5 =		
4				Column Totals:	(A)		_ (B)
5							
6				Preva	lence Index = B/A =		_
7							
8				Hydrophytic Vegetation			
9				1 - Ra	pid Test for Hydrophy	tic Vegetation	
	=	Total Cover			minance Test is >50%		
50% of total cover:5	20%	of total cover:	2		evalence Index is ≤3.0		
				4 - Mc	rphological Adaptatio	ns1 (Provide	
Herb Stratum (Plot size: 30' Radius	)			1 1	rting data in Remarks		-
1. Grass spp. *	55	<u> </u>	FAC	Proble	ematic Hydrophytic Ve	egetation¹ (Explai	n)
2. Rosa multiflora	15	<u>N</u>	FACU	Indicators of hydric so	il and wetland hydrolo	ogy must	
3. Lonicera japonica	10	<u>N</u>	FACU	be present, unless dist	urbed or problematic.		
4. Andropogon virginicus	10	<u>N</u>	FAC	Definitions of Vegetat	ion Strata:		
5. Smilax rotundifolia	5	<u>N</u>	FAC				
6. Solanum carolinense	5	<u>N</u>	FACU	Tree - Woody plants, e	xcluding woody vines	,	
7. Plantago lanceolata	1	<u>N</u>	FACU	approximately 20 ft (6 r	n) or more in height a	nd 3 in.	
8				(7.6 cm) or larger in dia	meter at breast heigh	nt (DBH).	
9				-			
10				Sapling/Shrub - Wood	y plants, excluding w	oody vines,	
11				a less than 3in. DBH ar	nd greater than or equ	ıal to 3.28 ft (1 m	) tall.
12							
	101 =	Total Cover		Herb - All herbaceous	(non-woody) plants, re	egardless	
50% of total cover: 50.5	20%	of total cover:	20.2	of size, and woody plar	nts less than 3.28 ft. to	all	
Woody Vine Stratum (Plot size: 30' Radius	)						
1				Woody vine - All wood	y vines, greater than	3.28 ft. in height.	
2							
3							
4							
5							
		Total Cover					
50% of total cover: 0	20%	of total cover:	0				
				Hydrophytic			
				Vegetation			
				Present?	Yes X	No	_

Absolute

20

15

) % Cover Species?

Dominant

Indicator

Status

FAC

FAC

Remarks: (Include photo numbers here or on a separate sheet).

<sup>\*</sup>The grass species was unidentifiable due to lack of distinguishing characteristics, therefore an indicator status of FAC is assumed.

Profile Descrip	tion: (Describe to the o	lanth naada	d to document the i	ndicator or o	onfirm the a	beenee of	indicators \	
Profile Descrip	tion: (Describe to the t	iepin neede	a to document the n	ndicator or c	ommin me a	bsence or	indicators.)	
Depth	Matrix			Redox Featu	res			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 3/2	85	5YR 5/6	15	С	М	silt loam	
6-20	10YR 4/1	80	5YR 5/6	20	C	M	clay loam	
							· ——— —	
							· ——— —	
·						-	· ——— —	
<sup>1</sup> Type: C=conce	entration, D=Depletion, I	RM=Reduced	Matrix, CS=Covered	d or Coated S	and Grains.		<sup>2</sup> Location: PL=P	ore Lining, M=Matrix.
	, ,		,					<i>5</i> ,
Hydric Soil Indi	icators:						Indicators for P	roblematic Hydric Soils <sup>3</sup> :
Histosol (A	.1)		Polyvalue Belov	w Surface (S8	3) (LRR S. T.	U)	1 cm Muck	(A9) (LRR O)
Histic Epip	,	•	Thin Dark Surfa			-,		(A10) <b>(LRR S)</b>
Black Histi	` '		Loamy Mucky N					ertic (F18) (outside MLRA 150A,B)
Hydrogen S	Sulfide (A4)	•	Loamy Gleyed	Matrix (F2)			Piedmont F	loodplain Soils (F19) (LRR P, S, T)
Stratified L	• ' '		X Depleted Matrix	` '				Bright Loamy Soils (F20)
	odies (A6) (LRR P, T, U)		Redox Dark Su	` '			(MLRA 153	
	ky Mineral (A7) (LRR P,	T, U)	Depleted Dark					Material (TF2)
	ence (A8) <b>(LRR U)</b> (A9) <b>(LRR P, T)</b>	,	Redox Depress	` '				w Dark Surface (TF12) (LRR T, U)
	Below Dark Surface (A11		Marl (F10) (LRI Depleted Ochri		Δ 151)		Other (Expi	ain in Remarks)
	Surface (A12)	,	Iron-Manganes		-	) T\	3Indicators	of hydrophytic vegetation and
	rie Redox (A16) <b>(MLRA</b>	150A)	Umbric Surface			, ')		drology must be present,
	cky Mineral (S1) (LRR C	•	Delta Ochric (F					urbed or problematic.
	yed Matrix (S4)	, -,	Reduced Vertic	, .	•	3)		
Sandy Red	dox (S5)	•	Piedmont Floor					
Stripped M			Anomalous Brig	ght Loamy So	ils (F20) <b>(ML</b>	RA 149A, 1	153C, 153D)	
Dark Surfa	ce (S7) (LRR P, S, T, U	)						
Restrictive Lav	er (if observed):							
Type:	er (ii observeu).							
Depth (inch	hes):					Hydric Sc	oil Present?	Yes X No
, ,	· -							
Remarks:								

•	et County Expansion Project	City/County:	Somerset	Sampling Date:	23-Jan-20
Applicant/Owner:	Chesapeake Utilities	0 11 7 11	State: Maryland	Sampling Point:	DCP-3
5 ( ) <u> </u>	eber & M. Hunter-Goskie	Section, Township,		N/A	
Landform (hillslope, terrace, etc.):		Local relief (concave,		ne Slope (%):	
Subregion (LLR or MLRA):	MLRA153D Lat:		-75.66635°	Datum:	
Soil Map Unit Name:	Longmarsh and Indiantown soil		_	NWI classification:	N/A
, ,	the site are typical for this time of year?			plain in Remarks)	
Are Vegetation, Soil	, or Hydrologysignificantly of		Are "Normal Circumstar	· · · · -	X No
Are Vegetation, Soil	, or Hydrologynaturally prol	blematic?	(If needed, explain any a	nswers in Remarks.)	
SUMMARY OF FINDINGS- Attac	h site map showing sampling point	locations, transects, imp	portant features, etc.		
Hydrophytic Vegetation Present?	Yes <u>X</u> No				
Hydric Soil Present?	Yes X No	Is the Sampled Area wi	thin a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes NoX				
Remarks: The DCP was estable	lished north of Waters B, flag 102.				
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary India	ators (minimum of two requ	ired)
Primary Indicators (minimum of one	is required, check all that apply)		Surface	Soil Cracks (B6)	
Surface Water (A1)	Aquatic Fauna (E	313)	Sparsely	Vegetated Concave Surface	e (B8)
High Water Table (A2)	Marl Deposits (B	15) (LRR U)	Drainage	e Patterns (B10)	
Saturation (A3)	Hydrogen Sulfide	e Odor (C1)	Moss Tr	im Lines (B16)	
Water Marks (B1)	Oxidized Rhizosr	pheres on Living Roots (C3)	Dry-Sea	son Water Table (C2)	
Sediment Deposits (B2)	Presence of Red	luced Iron (C4)	Crayfish	Burrows (C8)	
Drift Deposits (B3)	Recent Iron Red	uction in Tilled Soils (C6)	Saturation	on Visible on Aerial Imagery	(C9)
Algal Mat or Crust (B4)	Thin Muck Surface	ce (C7)	Geomor	phic Position (D2)	
Iron Deposits (B5)	Other (Explain in	Remarks)	Shallow	Aquitard (D3)	
Inundation Visible on Aerial I	magery (B7)		FAC-Ne	utral Test (D5)	
Water Stained Leaves (B9)			Sphagni	um moss (D*) (LRR T, U)	
Field Observations:					
Surface Water Present? Yes	No X Depth (inche	es):			
Water Table Present? Yes	No X Depth (inche	, <del></del>			
Saturation Present? Yes	No X Depth (inche	es):	Wetland Hydrology Pres	ent? Yes	No X
(includes capillary fringe)					
Describe Recorded Data (stream gag	ge, monitoring well, aerial photos, previou	s inspections), if available:			
Remarks:					

US Army Corps of Engineers

	Samplii	ng Point: DCP-3
Indicator Status	Dominance Test worksheet:	
FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	5 (A)
FAC	OBE, I AOW, OI I AO.	(,,
FAC	Total Number of Dominant Species Across All Strata:	(B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
	Prevalence Index worksheet:	
	Total % Cover of:	Multiply by:
8	OBL species x 1 =	
	FACW species x 2 =	
FAC	FAC species x 3 =	
FAC	FACU species x 4 =	
	UPL species x 5 =	
	Column Totals: (A)	(B)
	Prevalence Index = B/A =	
	Hydrophytic Vegetation Indicators:	
	1 - Rapid Test for Hydroph	ytic Vegetation
	X 2 - Dominance Test is >50	%
2	3 - Prevalence Index is ≤3	.01
	4 - Morphological Adaptati	ons <sup>1</sup> (Provide
	supporting data in Remark	s or on a separate sheet)
FAC	Problematic Hydrophytic V	egetation <sup>1</sup> (Explain)
FACU	1 Indicators of hydric soil and wetland hydro	logy must
FACU	be present, unless disturbed or problematic	:.
FAC	Definitions of Vegetation Strata:	
FAC		
FACU	Tree - Woody plants, excluding woody vine	S,
FACU	approximately 20 ft (6 m) or more in height	and 3 in.
	(7.6 cm) or larger in diameter at breast heig	ght (DBH).
	Sapling/Shrub - Woody plants, excluding v	voody vines,
	a less than 3in. DBH and greater than or ed	ual to 3.28 ft (1 m ) tall.
	Herb - All herbaceous (non-woody) plants,	regardless
20.2	of size, and woody plants less than 3.28 ft.	tall
	Woody vine - All woody vines, greater than	3.28 ft. in height.

Tree Stratum	(Plot size: 30' Radius )	% Cover	Species?	Status	Number of Deminent Cassiss	That Ara		
1. Pinus taeda		20	Υ	FAC	Number of Dominant Species OBL, FACW, or FAC:	That Are	5	(A)
Liquidambar styraciflu	ua .	15	Υ	FAC				
					Total Number of Dominant Sp	ecies	_	(D)
3. Acer rubrum		5	<u>N</u>	FAC	Across All Strata:		5	(B)
4					Percent of Dominant Species	That Are		
5			·		OBL, FACW, or FAC:	mat / ii c	100%	(A/B)
			·		Prevalence Index worksl	neet:		
			= Total Cover		Total % Cover of	÷	Multiply by:	
	50% of total cover: 20		of total cover:	8				
Sapling / Shrub Stratum	(Plot size: 30' Radius )	2070	or total 557511		FACW species			_
		5	Y	FAC				
1. Acer rubrum					1 1 '			
2. <u>Liquidambar styraciflu</u>			<u> </u>		FACU species			
					1			
					Column Totals:	(A)		(B)
					4			
6					Prevalen	ce Index = B/A =		_
7			· · · · · · · · · · · · · · · · · · ·					
					Hydrophytic Vegetation	indicators:		
					1 - Rapid	Test for Hydroph	ytic Vegetation	
			= Total Cover		X 2 - Domii	nance Test is >50	)%	
	50% of total cover: 5	20%	of total cover:	2	3 - Preva	lence Index is ≤3.	.0¹	
			-		4 - Morph	nological Adaptati	ons <sup>1</sup> (Provide	
Herb Stratum	(Plot size: 30' Radius )					-	s or on a separat	e sheet)
1. Grass spp. *	· <u> </u>	55	Υ	FAC		-	egetation <sup>1</sup> (Expla	-
		45			,			.111)
2. Rosa multiflora			N	FACU	Indicators of hydric soil a	-		
3. <u>Lonicera japonica</u>			<u>N</u>	FACU	be present, unless disturb		<b>).</b>	
4. Andropogon virginicu	'S		<u>N</u>	FAC	Definitions of Vegetation	Strata:		
5. Smilax rotundifolia			<u>N</u>	FAC	4			
6. Solanum carolinense			<u>N</u>	FACU	Tree - Woody plants, excl	uding woody vine	s,	
7. Plantago lanceolata		1	<u>N</u>	FACU	approximately 20 ft (6 m)	or more in height	and 3 in.	
8.					(7.6 cm) or larger in diame	eter at breast heig	ght (DBH).	
9			·		<u> </u>			
10					Sapling/Shrub - Woody p	lants, excluding v	voody vines,	
					a less than 3in. DBH and	greater than or ec	ual to 3.28 ft (1 m	າ ) tall.
	_		= Total Cover		Herb - All herbaceous (no	n-woody) plants,	regardless	
	50% of total cover: 50.5		of total cover:	20.2	of size, and woody plants		-	
Woody Vine Stratum	(Plot size: 30' Radius )				]			
-	·				Woody vine - All woody v	ings greater than	2 20 ft in hoight	
	_				Woody Ville - All Woody V	nes, greater than	i 3.26 it. iii neigiit.	*
			<del></del>					
					-			
					-			
5					4			
		0	= Total Cover					
	50% of total cover: 0	20%	of total cover:	0				
					Hydrophytic			
					Vegetation			
					Present?	Yes X	No	
Remarks: (Include photo	numbers here or on a separate sheet	).						

Absolute

Dominant

<sup>\*</sup>The grass species was unidentifiable due to lack of distinguishing characteristics, therefore an indicator status of FAC is assumed.

Profile Descrin	tion: (Describe to the	lenth needed	to document the inc	dicator or co	onfirm the a	hsanca of i	indicators \	
Frome Descrip	tion. (Describe to the t	iepiii needed	to document the inc	uicator or co	ommin the a	DSEIICE OI I	mulcators.)	
Depth	Matrix		R	Redox Featur	res			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 3/2	85	5YR 5/6	15	С	М	silt loam	
6-20	10YR 4/1	80	5YR 5/6	20	C	M	clay loam	
			-					
<sup>1</sup> Type: C=conce	entration, D=Depletion, I	RM=Reduced	Matrix, CS=Covered	or Coated Sa	and Grains.		<sup>2</sup> Location: PL =Po	ore Lining, M=Matrix.
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		mann, oo corerea	<u></u>				7.5 <u>2</u>
Hydric Soil Indi	icators:						Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
Histosol (A	,	_	Polyvalue Below			U)		A9) (LRR O)
Histic Epipe	` '	<del>-</del>	Thin Dark Surfac					A10) (LRR S)
Black Histic	, ,	_	Loamy Mucky Mi		LRR O)			rtic (F18) (outside MLRA 150A,B)
	Sulfide (A4)	_	Loamy Gleyed M					oodplain Soils (F19) (LRR P, S, T)
Stratified L	• ' '	_	X Depleted Matrix (	` '				Bright Loamy Soils (F20)
	odies (A6) <b>(LRR P, T, U)</b> y Mineral (A7) <b>(LRR P,</b>	_	Redox Dark Surf	` '			(MLRA 153)	Material (TF2)
	ence (A8) <b>(LRR U)</b>		Depleted Dark Si Redox Depression					v Dark Surface (TF12) <b>(LRR T, U)</b>
	(A9) <b>(LRR P, T)</b>	_	Marl (F10) (LRR	` '				in in Remarks)
	Below Dark Surface (A11	, –	Depleted Ochric		A 151)		Other (Exple	iii iii iteinaiks)
	Surface (A12)	_	Iron-Manganese		-	ο т\	<sup>3</sup> Indicators of	f hydrophytic vegetation and
	rie Redox (A16) (MLRA	150A) <u> </u>	Umbric Surface (			, ',		Irology must be present,
	cky Mineral (S1) (LRR C		Delta Ochric (F1)					ribed or problematic.
	yed Matrix (S4)	_	Reduced Vertic (			3)	amood alote	
Sandy Red	, ,	=	Piedmont Floodp					
Stripped M		_	Anomalous Brigh				53C, 153D)	
Dark Surfa	ce (S7) (LRR P, S, T, U	_	_					
'								
5 (1.0)	(* 1 B)					1		
Type:	er (if observed):							
Depth (inch	nes).		<u> </u>			Hydric So	oil Present?	Yes X No
Bopan (mor						,		100 <u>x</u> 110
						1		
Remarks:								

Project/Site: Some	rset County Expansion Project	City/County:	Somerset	Sampling Date:	23-Jan-20
Applicant/Owner:	Chesapeake Utilities		State: Maryland	Sampling Point:	DCP-4
Investigator(s): J. \	Weber & M. Hunter-Goskie	Section, Township	, Range:	N/A	
Landform (hillslope, terrace, etc.):	hillslope	Local relief (concave,	convex, none):	ne Slope (%):	3
Subregion (LLR or MLRA):			-75.67172°	Datum:	
	Longmarsh and Indiantown soil	· · · · · · · · · · · · · · · · · · ·		IWI classification:	N/A
, ,	n the site are typical for this time of year?			olain in Remarks)	
Are Vegetation, Soil			Are "Normal Circumstan	· ·	No
Are Vegetation, Soil	_		(If needed, explain any a	nswers in Remarks.)	
SUMMARY OF FINDINGS- Atta	ich site map showing sampling point	locations, transects, in	iportant features, etc.		
Hydrophytic Vegetation Present?	Yes <u>X</u> No				
Hydric Soil Present?	Yes NoX	Is the Sampled Area w	rithin a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes NoX				
Remarks: The DCP was esta	ablished north of Waters C, flag 102.			-	-
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two requ	ired)
Primary Indicators (minimum of on	e is required, check all that apply)		Surface S	Soil Cracks (B6)	
Surface Water (A1)	Aquatic Fauna (E	313)	Sparsely	Vegetated Concave Surface	ce (B8)
High Water Table (A2)	Marl Deposits (B	, ,	Drainage	Patterns (B10)	
Saturation (A3)	Hydrogen Sulfide	,		m Lines (B16)	
Water Marks (B1)	·	oheres on Living Roots (C3)		son Water Table (C2)	
Sediment Deposits (B2)	Presence of Red	` '		Burrows (C8)	
Drift Deposits (B3)		uction in Tilled Soils (C6)		on Visible on Aerial Imagery	(C9)
Algal Mat or Crust (B4)	Thin Muck Surface	` '		ohic Position (D2)	
Iron Deposits (B5)	Other (Explain in	Remarks)		Aquitard (D3)	
Inundation Visible on Aerial	· , ,			utral Test (D5)	
Water Stained Leaves (B9)			Sphagnu	ım moss (D*) (LRR T, U)	
Field Observations:					
Surface Water Present? Yes		,			
Water Table Present? Yes		·			
Saturation Present? Yes	No X Depth (inche	s):	Wetland Hydrology Pres	ent? Yes	No X
(includes capillary fringe)					
Describe Recorded Data (stream ga	age, monitoring well, aerial photos, previous	s inspections), if available:			
Remarks:					

US Army Corps of Engineers

Too a Otrostore	(Diet siese 20) Desline	Absolute	Dominant	Indicator	Dominance Tes	t worksheet:			
Tree Stratum	(Plot size: 30' Radius	% Cover	Species?	Status		nt Species That Are		_	
Liquidambar styracif	lua	35	<u> </u>	FAC	OBL, FACW, or FA	AC:		5	_(A)
2. Acer rubrum		20	<u> </u>	FAC	Total Number of De	ominant Species			
3. Pinus taeda		5	N	FAC	Across All Strata:	on the control of the		7	(B)
4. Ilex opaca		5	N	FAC	Daniel of Daniel	-4 O i Th -4 A			
5					OBL, FACW, or FA	nt Species That Are AC:		71%	(A/B)
					Prevalence Inde	ex worksheet:			
·			= Total Cover		Total %	Cover of:	Mu	ıltiply by:	
	50% of total cover: <u>32.5</u>	20%	of total cover:	13	OBL species	х			
Sapling / Shrub Stratum	(Plot size: 30' Radius )	)			FACW species	x	2 =		_
1. Acer rubrum		10	Y	FAC	FAC species	x	3 =		_
2. Liquidambar styracif	ilua	5	Y	FAC	FACU species	x	4 =		_
3. Ilex opaca		3	N	FAC	UPL species	x	5 =		_
4					Column Totals:		(A)		(B)
						Prevalence Index = B	/A =		_
					Hydrophytic Ve	getation Indicators:			
						1 - Rapid Test for Hyd	rophytic Ve	getation	
		18	= Total Cover		Х	2 - Dominance Test is	>50%		
	50% of total cover: 9	20%	of total cover:	3.6		3 - Prevalence Index i	is ≤3.0¹		
						4 - Morphological Ada	aptations <sup>1</sup> (P	rovide	
Herb Stratum	(Plot size: 30' Radius )	)				supporting data in Rei	marks or on	a separate	sheet)
1. Smilax rotundifolia		20	Y	FAC		Problematic Hydrophy	tic Vegetati	on¹ (Explaiı	า)
2. Lonicera japonica		15	Y	FACU	1 Indicators of hy	dric soil and wetland h	nydrology mi	ust	
3					be present, unles	ss disturbed or probler	natic.		
4					Definitions of V	egetation Strata:			
5									
6					Tree - Woody pla	ants, excluding woody	vines,		
7					approximately 20	) ft (6 m) or more in he	eight and 3 is	n.	
8					(7.6 cm) or large	r in diameter at breast	height (DBI	Ⅎ).	
9									
10					Sapling/Shrub -	Woody plants, exclud	ling woody v	ines,	
11					a less than 3in. [	OBH and greater than	or equal to 3	3.28 ft (1 m	) tall.
12									
		35	= Total Cover		Herb - All herbad	ceous (non-woody) pla	ints, regardle	ess	
	50% of total cover: 17.5	20%	of total cover:	7	of size, and woo	dy plants less than 3.2	8 ft. tall		
Woody Vine Stratum	(Plot size: 30' Radius	)							
1. Hedera helix		2	<u> </u>	FACU	Woody vine - Al	I woody vines, greater	than 3.28 ft	. in height.	
2									
3									
4									
5									
		2	= Total Cover						
	50% of total cover: 1	20%	of total cover:	0.4					
					Hydrophytic				
					Vegetation				
					Present?	Yes	<u>X</u> !	No	_
Remarks: (Include photo	numbers here or on a separate shee	t).			1 1				
. tomanto. (morade prioto		٠,٠							

Profile Descripti	on: (Describe to the o	lepth needed	to document the i	ndicator or co	onfirm the al	bsence of i	indicators.)	
Depth	Matrix			Redox Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 3/3 10YR 5/8	100	10YR 2/2	30		M	sandy loam	
8-20	1011 5/6	70	101K 2/2	30		IVI	sandy loam	
<sup>1</sup> Type: C=concer	ntration, D=Depletion, F	RM=Reduced	Matrix, CS=Covered	d or Coated Sa	and Grains.		<sup>2</sup> Location: P	L=Pore Lining, M=Matrix.
Hydric Soil Indic	cators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
5 cm Mucky Muck Prese 1 cm Muck ( Depleted Be Thick Dark ( Coast Prairi Sandy Muck Sandy Gleye Sandy Redo	don (A2) (A3) ulfide (A4) yers (A5) dies (A6) (LRR P, T, U) Mineral (A7) (LRR P, nce (A8) (LRR U) (A9) (LRR P, T) elow Dark Surface (A11 Surface (A12) e Redox (A16) (MLRA xy Mineral (S1) (LRR O ed Matrix (S4) ox (S5)	T, U)	Polyvalue Belo Thin Dark Surfa Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LR Depleted Ochri Iron-Manganes Umbric Surface Delta Ochric (F Reduced Vertic Piedmont Flood Anomalous Brig	ace (S9) (LRR Mineral (F1) (L Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8) R U) c (F11) (MLRA de Masses (F1) c (F13) (LRR F c (F18) (MLRA 15 c (F18) (MLRA 15 ddplain Soils (F	S, T, U) .RR O) A 151) 2) (LRR O, F P, T, U) (1) . 150A, 150B 19) (MLRA 1	P, T) () 49A)	2 cm M Reduce Piedmo Anomal (MLRA Red Pa Very Sh Other (I	uck (A9) (LRR O) uck (A10) (LRR S) d Vertic (F18) (outside MLRA 150A,B) nt Floodplain Soils (F19) (LRR P, S, T) ous Bright Loamy Soils (F20) 153B) rent Material (TF2) iallow Dark Surface (TF12) (LRR T, U) Explain in Remarks) ors of hydrophytic vegetation and d hydrology must be present, disturbed or problematic.
Restrictive Laye	r (if observed):							
Type: Depth (inche	es):		<u> </u>			Hydric So	il Present?	Yes NoX
Remarks:								

	WEILAND	DETERMINATION	DATA FURIVI-ALIA	ntic and Guir Coasta	Plain Region	
Project/Site:	Somerset County Expans	sion Project	City/County:	Somerset	Sampling Date:	4-Mar-20
Applicant/Owner:		Chesapeake Utilities		State: Marylar	nd Sampling Point:	DCP-5
Investigator(s):	J.Weber		Section, Tov	vnship, Range:	N/A	
Landform (hillslope, terrace	e, etc.):	flat	Local relief (cor	ncave, convex, none):	concave Slope (%)	): <u> </u>
Subregion (LLR or MLRA):	MLRA153D	Lat:	38.20155°	Long: -75.698	43° Datum	: NAD83
Soil Map Unit Name:	Nanticoke ar	nd Mannington soils, ver	y frequently flooded, t	idal	NWI classification:	EEM/PEM
, ,	ditions on the site are typica	al for this time of year?	Yes	X _ No (If n	o, explain in Remarks)	
Are Vegetation, Se	oil , or Hydrology	significantly o	listurbed?	Are "Normal Circui	mstances" present? Yes	X No
Are Vegetation, Se	oil , or Hydrology	naturally prob	lematic?	(If needed, explain	any answers in Remarks.)	
SUMMARY OF FINDING	SS- Attach site map sho	wing sampling point	locations, transec	ts, important features,	etc.	
I budes also the Manadation De-		V N-				
Hydrophytic Vegetation Pre		X No				
Hydric Soil Present?	Yes _	X No	Is the Sampled	Area within a Wetland?	Yes X	No
Wetland Hydrology Presen	t? Yes _	X No				
Remarks: The DCP	was established adjacent to	Wetland 2. flag 115.				
		, , ,				
HYDROLOGY						
Wetland Hydrology Indi	cators:			Secondary	Indicators (minimum of two red	uired)
, ,,	um of one is required, chec	k all that apply)			rface Soil Cracks (B6)	<u>,</u>
Surface Water (A1		Aquatic Fauna (B	13)		arsely Vegetated Concave Surf	ace (B8)
X High Water Table	(A2)	Marl Deposits (B			ainage Patterns (B10)	
X Saturation (A3)	_	Hydrogen Sulfide	, , ,		ss Trim Lines (B16)	
Water Marks (B1)	_		heres on Living Root		/-Season Water Table (C2)	
Sediment Deposits	(B2)	Presence of Red	•	· · · — ·	ayfish Burrows (C8)	
X Drift Deposits (B3)	` '		ction in Tilled Soils (		turation Visible on Aerial Image	ry (C9)
Algal Mat or Crust	_	Thin Muck Surface			omorphic Position (D2)	., ()
Iron Deposits (B5)	_	Other (Explain in	` '		allow Aquitard (D3)	
	on Aerial Imagery (B7)	Out of (2xpiaii) iii	· tomanto,		C-Neutral Test (D5)	
Water Stained Lea	• • • •				hagnum moss (D*) (LRR T, U)	
Field Observations:			<u> </u>	<u> </u>		
Surface Water Present?	Yes No	X Depth (inches	s)·			
Water Table Present?	Yes X No	Depth (inches				
Saturation Present?	Yes X No	Depth (inches	·	Wetland Hydrology	Present? Yes X	No
(includes capillary fringe)				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Describe Recorded Data (s	stream gage, monitoring we	II, aerial photos, previous	inspections), if avail	able:		
,	0 0 7		, ,,			
Remarks:						

US Army Corps of Engineers

Tree Stratum

	Samplir	ng Point: DCP-5	
Dominance Test worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:		4	_(A)
Total Number of Dominant Species Across All Strata:		4	(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 Indicator	rs:		
1 - Rapid Test for	Hydroph	ytic Vegetation	
X 2 - Dominance Te			
3 - Prevalence Inc			
4 - Morphological	Adaptati	ons <sup>1</sup> (Provide	
· · · -		s or on a separate	
Problematic Hydro			າ)
<sup>1</sup> Indicators of hydric soil and wetla			
be present, unless disturbed or pro	blematic		
Definitions of Vegetation Strata:			
Tree - Woody plants, excluding wo	ody vine	•	
approximately 20 ft (6 m) or more i	•		
(7.6 cm) or larger in diameter at bro	_		
(7.0 cm) of larger in diameter at bit	cast fiely	iii (DDi i).	
Sapling/Shrub - Woody plants, ex	cluding w	voody vines,	
a less than 3in. DBH and greater th	•		) tall.
Herb - All herbaceous (non-woody)	nlants i	regardless	
of size, and woody plants less than			
Woody vine - All woody vines, gre-	ater than	3.28 ft. in height.	
Hydrophytic			
Vegetation			

4						Percent of Dominan	nt Species That Are			
5						OBL, FACW, or FA	C:	-	100%	(A/B)
6						Dravelanae Inda	v wankahaat.			
7				= Total Cover		Prevalence Inde	Cover of:		Multiply by:	
	50% of total cover:	7.5		of total cover:	3		Cover or.	x 1 =		
Sapling / Shrub Stratum	(Plot size: 30' Radius	)	20%	or total bovor.	-	·		-		
Hibiscus moscheutos	(1 lot 0/20. <u>00 1 taaras</u>		5	Υ	OBL	FAC species				
2.					OBL	_		_		
3.						UPL species				
4.										
5.						_		( ,		(-/
6.							Prevalence Index =	= B/A =		
7.								-		_
8.						Hydrophytic Ved	getation Indicators	s:		
9.							1 - Rapid Test for I		tic Vegetation	
			5	= Total Cover			2 - Dominance Tes		_	
	50% of total cover:	2.5		of total cover:	1		3 - Prevalence Ind			
	_			•			4 - Morphological A	Adaptatio	ns <sup>1</sup> (Provide	
Herb Stratum	(Plot size: 30' Radius	)				,	supporting data in	-		e sheet
Polygonum pensylvan	icum		25	Υ	FACW		Problematic Hydro	phytic Ve	egetation <sup>1</sup> (Expla	ain)
2. Grass spp.*			45	Υ	FAC	1 Indicators of hyd	dric soil and wetlan	d hydrol	ogy must	
3. Typha angustifolia			2	N	OBL	be present, unles	s disturbed or prob	olematic.		
4.						Definitions of Ve	egetation Strata:			
5.										
6.						Tree - Woody pla	ants, excluding woo	dy vines	,	
7						approximately 20	ft (6 m) or more in	height a	nd 3 in.	
8						(7.6 cm) or larger	in diameter at bre	ast heigh	nt (DBH).	
9										
10						Sapling/Shrub -	Woody plants, exc	luding w	oody vines,	
11						a less than 3in. D	BH and greater tha	an or equ	ual to 3.28 ft (1 m	n ) tall.
12										
			42	= Total Cover		Herb - All herbac	eous (non-woody)	plants, re	egardless	
	50% of total cover:	21	20%	of total cover:	8.4	of size, and wood	ly plants less than	3.28 ft. ta	all	
Woody Vine Stratum	(Plot size: 30' Radius	)								
1						Woody vine - All	woody vines, grea	ter than	3.28 ft. in height.	
2										
3										
4										
5										
		-		= Total Cover						
	50% of total cover:	0	20%	of total cover:	0					
						I bedee wheels				
						Hydrophytic				
						Vegetation	V	х	No	
						Present?	Yes	X	No	

Absolute Dominant Indicator

(Plot size: 30' Radius ) % Cover Species? Status

1. Taxodium distichum15YOBL

Profile Descript	ion: (Describe to the o	depth needed	to document the i	ndicator or co	onfirm the al	bsence of i	indicators.)		
Depth	Matrix			Redox Featur	res				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rem	arks
0-2	10YR 3/1	100	()				muck		
2-20	10YR 3/2	100					silt loam		
<sup>1</sup> Type: C=conce	ntration, D=Depletion, I	RM=Reduced I	Matrix, CS=Covered	d or Coated Sa	and Grains.		<sup>2</sup> Location: PL=F	Pore Lining, M=Mat	rix.
Hydric Soil Indi	cators:						Indicators for F	Problematic Hydric	c Soils <sup>3</sup> :
Histosol (A1	1)		Polyvalue Belo			U)	1 cm Muck	(A9) <b>(LRR O)</b>	
Histic Epipe	edon (A2)		Thin Dark Surfa					(A10) (LRR S)	
Black Histic	` '	_	Loamy Mucky		_RR O)			ertic (F18) (outsid	
Hydrogen S		_	Loamy Gleyed					Floodplain Soils (F1	
Stratified La	dies (A6) <b>(LRR P, T, U)</b>	_	Depleted Matri Redox Dark Su	` '			(MLRA 15	S Bright Loamy Soil	S (F20)
	/ Mineral (A7) <b>(LRR P</b> ,		Depleted Dark	` '			•	נסט, t Material (TF2)	
	ence (A8) <b>(LRR U)</b>		Redox Depress					ow Dark Surface (T	F12) <b>(LRR T, U)</b>
X 1 cm Muck	(A9) <b>(LRR P, T)</b>	_	Marl (F10) <b>(LR</b>	R U)				lain in Remarks)	
Depleted Be	elow Dark Surface (A11	1)	Depleted Ochri	ic (F11) <b>(MLR</b>	A 151)		<u> </u>		
	Surface (A12)	_	Iron-Manganes			', T)		of hydrophytic veg	
	ie Redox (A16) (MLRA		Umbric Surface					/drology must be p	
	ky Mineral (S1) (LRR C	), S) _	Delta Ochric (F	, .	•	<b>\</b>	unless dis	turbed or problema	tic.
Sandy Red	red Matrix (S4)	_	Reduced Vertice Piedmont Floor						
Stripped Ma		_	Anomalous Bri				53C, 153D)		
	ce (S7) <b>(LRR P, S, T, U</b>	_		,	· / ·	•	,		
Doctrictive Leve	on (if abannod).								
Restrictive Layer Type:	er (if observed):								
Depth (inch	es):		<del></del>			Hydric So	il Present?	Yes X	No
Remarks:									
Remarks.									

Project/Site: Somers	et County Expansion Project	City/County:	Somerset	Sampling Date:	4-Mar-20
Applicant/Owner:	Chesapeake Utilities		State: Maryland	Sampling Point:	DCP-6
Investigator(s):	J.Weber	Section, Township		N/A	
Landform (hillslope, terrace, etc.):	hillslope	Local relief (concave,		ne Slope (%):	15
Subregion (LLR or MLRA):	MLRA153D Lat:		-75.69824°	Datum:	NAD83
Soil Map Unit Name:	Ingleside-Runclint complex,			NWI classification:	N/A
Are climatic/hydrologic conditions on	the site are typical for this time of year?		No (If no, ex	plain in Remarks)	
Are Vegetation, Soil	, or Hydrologysignificantly	y disturbed?	Are "Normal Circumstar	ces" present? Yes	<b>X</b> No
Are Vegetation, Soil	, or Hydrologynaturally pr		(If needed, explain any a	inswers in Remarks.)	
SUMMARY OF FINDINGS- Attac	h site map showing sampling poi	nt locations, transects, im	portant features, etc.		
Hydrophytic Vegetation Present?	Yes No _ <b>X</b>				
Hydric Soil Present?	Yes NoX	Is the Sampled Area w	rithin a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes NoX				
Remarks: The DCP was estable	lished upslope of Wetland 2, flag 116.	l			
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indic	ators (minimum of two requ	uired)
Primary Indicators (minimum of one	is required, check all that apply)		Surface	Soil Cracks (B6)	<del></del>
Surface Water (A1)	Aquatic Fauna	(B13)	Sparsely	Vegetated Concave Surfa	ce (B8)
High Water Table (A2)	Marl Deposits (	B15) (LRR U)	Drainage	e Patterns (B10)	
Saturation (A3)	Hydrogen Sulfic	de Odor (C1)	Moss Tr	im Lines (B16)	
Water Marks (B1)	Oxidized Rhizo	spheres on Living Roots (C3)	Dry-Sea	son Water Table (C2)	
Sediment Deposits (B2)	Presence of Re	educed Iron (C4)	Crayfish	Burrows (C8)	
Drift Deposits (B3)	Recent Iron Re	duction in Tilled Soils (C6)	Saturation	on Visible on Aerial Imagery	y (C9)
Algal Mat or Crust (B4)	Thin Muck Surf	ace (C7)	Geomor	phic Position (D2)	
Iron Deposits (B5)	Other (Explain	in Remarks)		Aquitard (D3)	
Inundation Visible on Aerial I	magery (B7)			utral Test (D5)	
Water Stained Leaves (B9)			Sphagni	um moss (D*) (LRR T, U)	
Field Observations:					
Surface Water Present? Yes	No X Depth (inch	nes):			
Water Table Present? Yes	No X Depth (inch	, <u> </u>			
Saturation Present? Yes	No X Depth (inch	nes):	Wetland Hydrology Pres	sent? Yes	No <u>X</u>
(includes capillary fringe)					
Describe Recorded Data (stream gag	ge, monitoring well, aerial photos, previo	ous inspections), if available:			
Remarks:					

US Army Corps of Engineers

Tree Stratum

Dominance Test worksheet:         Number of Dominant Species That Are OBL, FACW, or FAC:       1 (A)         Total Number of Dominant Species Across All Strata:       2 (B)         Percent of Dominant Species That Are OBL, FACW, or FAC:       50% (A/B)         Prevalence Index worksheet:       Multiply by:         Total % Cover of:       Multiply by:         OBL species       x 1 =         FACW species       x 2 =         FACU species       x 4 =         UPL species       x 5 =         Column Totals:       (A)         I - Rapid Test for Hydrophytic Vegetation         2 - Dominance Test is >50%         3 - Prevalence Index is ≤3.0¹         4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)         Problematic Hydrophytic Vegetation¹ (Explain)         ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m) tall.         Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			Samplin	g Point: DCP-6	
OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  2 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC:  Total % Cover of:  Multiply by:  OBL species  FAC species  FAC species  FAC species  FAC species  FAC species  FACU species  FACU species  FACU species  FACU species  Column Totals:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0'  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	Dominance Te	st worksheet:			
Across All Strata:  Percent of Dominant Species That Are OBL, FACW, or FAC:  Total % Cover of:  Multiply by:  OBL species  FAC species  FAC species  FACU species  Y 1 =  FACU species  Y 2 =  FACU species  Y 4 =  UPL species  Column Totals:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			_	1	_(A)
Prevalence Index worksheet:  Total % Cover of:  Multiply by:  OBL species  FACW species  FAC species  FACU species  FACU species  Well species  Multiply by:  Multiply by:  OBL species  Multiply by:  Multiply by:  OBL species  Multiply by:  Multiple by:		Dominant Species	_	2	_(B)
Total % Cover of:  OBL species  FACW species  FAC species  FAC species  FACU species  VA = UPL species  Column Totals:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			-	50%	_ (A/B)
OBL species	Prevalence Inc	lex worksheet:			
OBL species	Total 9	% Cover of:		Multiply by:	
FACW species			x 1 =		_
FAC species	•	-	x 2 =		_
UPL species	•		x 3 =		_
UPL species			x 4 =		_
Prevalence Index = B/A =  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	•		x 5 =		_
Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	Column Totals:		(A)		(B)
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2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall		=		tic Vegetation	
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supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall					
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a less than 3in. DBH and greater than or equal to 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	(7.0 cm) or larg	er in diameter at bre	ast neigi	к (ББП).	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			_	-	\ to!!
of size, and woody plants less than 3.28 ft. tall	a iess tildti sin.	סטר and greater tn	an or equ	ıaı 1∪ 3.∠8 II (1 M	j tall.
***		aceous (non-woody)	plants, re	egardless	
Woody vine - All woody vines, greater than 3.28 ft. in height.	Herb - All herba	ndy plants less than	3.28 ft. ta	all	
		ody pianto iess than			

Ну	/drophytic	
Ve	egetation	
Pr	resent?	Yes

0

Remarks: (Include photo numbers here or on a separate sheet).

No X

Absolute Dominant Indicator

\_\_\_\_ 15 \_\_ = Total Cover

0 = Total Cover

85 = Total Cover

\_\_\_\_ e Total Cover

20% of total cover: 0

20% of total cover: 17

70

20% of total cover:

N \_\_\_

UPL

UPL

FAC

FAC

20% of total cover: 3

(Plot size: 30' Radius ) % Cover Species? Status

 1. Pinus taeda
 15
 Y
 FAC

50% of total cover: 7.5

50% of total cover: 0

50% of total cover: 42.5

(Plot size: 30' Radius )

50% of total cover:

(Plot size: 30' Radius

3. *Grass spp.* \* 5

1. Veronica hederifolia

4. Setaria pumila

Woody Vine Stratum

2. Lamium purpureum

Sapling / Shrub Stratum (Plot size: 30' Radius )

<sup>\*</sup>The grass species was unidentifiable due to lack of distinguishing characteristics, therefore an indicator status of FAC is assumed.

Destile Dessein	tion. (December to the c						:!: \	
Profile Descript	tion: (Describe to the o	aeptn needed	a to document the inc	dicator or c	onfirm the a	bsence of	indicators.)	
Depth	Matrix		D	Redox Featu	roe			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	- Texture	Remarks
0-6	10YR 3/2	100	Color (moist)		Туре	LUC	sandy loam	Remarks
6-20	10YR 4/3	80	10YR 5/4	20	C	M	sandy loam	
1	<del></del> .						2	
'Type: C=conce	entration, D=Depletion, F	RM=Reduced	Matrix, CS=Covered	or Coated S	and Grains.		*Location: PL=	Pore Lining, M=Matrix.
	. ,						la dia stana fan l	Donald Language Co. 11-3.
Hydric Soil Indi	icators:						indicators for i	Problematic Hydric Soils <sup>3</sup> :
Histosol (A	1)		Polyvalue Below	Surface (SS	8) /I PP S T	IIV	1 cm Mucl	< (A9) (LRR O)
Histic Epipe	,	•	Thin Dark Surfac			0,		(A10) (LRR S)
Black Histic	` '		Loamy Mucky Mi					Vertic (F18) (outside MLRA 150A,B)
	Sulfide (A4)	•	Loamy Gleyed M		-,			Floodplain Soils (F19) (LRR P, S, T)
Stratified L	, ,	•	Depleted Matrix (					s Bright Loamy Soils (F20)
	odies (A6) (LRR P, T, U)		Redox Dark Surf	` '			(MLRA 15	3B)
	y Mineral (A7) (LRR P,	T, U)	Depleted Dark S					nt Material (TF2)
	ence (A8) <b>(LRR U)</b>	•	Redox Depression	` '				ow Dark Surface (TF12) (LRR T, U)
	(A9) <b>(LRR P, T)</b>		Marl (F10) (LRR				Other (Exp	plain in Remarks)
	selow Dark Surface (A11	)	Depleted Ochric		-		3	
	Surface (A12)		Iron-Manganese			P, T)		of hydrophytic vegetation and
	rie Redox (A16) (MLRA		Umbric Surface (					ydrology must be present,
	cky Mineral (S1) (LRR O	, 5)	Delta Ochric (F17			٥١	uniess dis	sturbed or problematic.
Sandy Red	yed Matrix (S4)		Reduced Vertic ( Piedmont Floodp					
Stripped M		-	Anomalous Brigh				153C 153D)	
	ce (S7) <b>(LRR P, S, T, U</b>	)	/ inomalous brigi	it Louiny oo	///3 (1 20) <b>(III 2</b>	1 <del>10</del> /1,	1000, 1000)	
	, , , , , ,	,						
Restrictive Lay	er (if observed):							
Type:	·							
	·					Hydric Sc	oil Present?	Yes NoX
Type:	·					Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·		_			Hydric So	oil Present?	Yes NoX
Type:	·		_			Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	pil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	pil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	pil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	pil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	pil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	pil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	oil Present?	Yes NoX
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	oil Present?	YesNoX
Type: Depth (inch	·					Hydric So	oil Present?	YesNoX
Type: Depth (inch	·					Hydric So	oil Present?	YesNo_X
Type: Depth (inch	·					Hydric So	pil Present?	YesNoX
Type: Depth (inch	·					Hydric So	pil Present?	YesNoX
Type: Depth (inch	·					Hydric So	pil Present?	YesNoX

	VV E	ILAND DE	TERMINATION	DATA FURIVI-ALI	antic and Gui	i Coastai Pia	iin Kegion			
Project/Site:	Somerset Coun	ty Expansion	Project	City/County:	Somers	set	_ Sampling Date:		4-M	ar-20
Applicant/Owner:		Che	esapeake Utilities		State:	Maryland	Sampling Point:		DC	P-7
Investigator(s):	J.	Weber		Section, To	Section, Township, Range:N/A					
Landform (hillslope, terrace	e, etc.):	depre	ssion	Local relief (c	oncave, convex,	none): con	icave SI	ope (%):_		2
Subregion (LLR or MLRA):	Lat:	38.18702°	_ Long:	-75.69239°		Datum:		NAD83		
Soil Map Unit Name:		Quep	onco silt loam, 0-2 p	percent slopes	_		NWI classification:		Р	EM
Are climatic/hydrologic cor	ditions on the site	are typical for	this time of year?	Yes	X No	(If no, ex	plain in Remarks)			
Are Vegetation, S	oil , or Hy	ydrology	significantly of	disturbed?	Are "No	rmal Circumsta	nces" present?	Yes	Χ	No
Are Vegetation , S			naturally prol	blematic?	(If need	ed, explain any	answers in Remark	(s.)		-
SUMMARY OF FINDING	S- Attach site r	nap showin	g sampling point	locations, transe	ects. important	features, etc.				
			g camping point	T	oto, important		•			
Hydrophytic Vegetation Pre	esent?	Yes X	No							
Hydric Soil Present?			No	Is the Samples	d Area within a W	etland?	Yes	х	No	
Ť	_			is the Sampled	Alea Willina W	eliana:	163		INO	
Wetland Hydrology Preser	t?	Yes X	No							
Remarks: The DCP	was established a	djacent to We	etland 3, flag 103.							
		•	, 0							
HYDROLOGY										
Wetland Hydrology Indi	cators:					Secondary India	cators (minimum of	two requi	ired)	
Primary Indicators (minim	um of one is requi	red, check all	that apply)			Surface	Soil Cracks (B6)	•		
X Surface Water (A1	)		Aquatic Fauna (E	313)		Sparsel	y Vegetated Conca	ve Surfac	e (B8)	
X High Water Table	(A2)	·	Marl Deposits (B	15) (LRR U)	•	Drainag	e Patterns (B10)			
X Saturation (A3)	. ,		Hydrogen Sulfide	, , ,	•		rim Lines (B16)			
Water Marks (B1)			_	oheres on Living Roo	ots (C3)		ason Water Table (	C2)		
Sediment Deposits	s (B2)		Presence of Red	•			Burrows (C8)	/		
Drift Deposits (B3)	` '		_	uction in Tilled Soils	(C6)		on Visible on Aeria	l Imagery	(C9)	
Algal Mat or Crust			Thin Muck Surface		(00)		rphic Position (D2)	ago.y	(00)	
Iron Deposits (B5)	(64)		Other (Explain in	. ,			Aguitard (D3)			
Inundation Visible	on Aerial Imagery	(B7)		rtomanto)			eutral Test (D5)			
X Water Stained Lea	٠.	(2.)					um moss (D*) <b>(LR</b> I	R T. U)		
<u> </u>						op.iag.i		, .,		
Field Observations:	., .,		5 4 7 1							
Surface Water Present?	Yes X	No	_ Depth (inche	<i>'</i>						
Water Table Present? Saturation Present?	Yes X Yes X	No	Depth (inche		\\/atlan	d I budrala au Dra	+? V	v	Na	
(includes capillary fringe)	res A	No	_ Depth (inche	s): <u>surface</u>	Welland	d Hydrology Pre	sent? Yes	<u> </u>	No	
					1					
Describe Recorded Data (	stream gage, moni	toring well, as	erial photos, previou	s inspections), if ava	ailable:					
Remarks:										
Nemaiks.										

US Army Corps of Engineers

Tree Stratum	(Plot size: 30' Radius	) <u>% Cover</u>	Species?	Status	J I				
1. Acer rubrum		15	Y	FAC	OBL, FACW, or FA	nt Species That Are C:	-	4	(A)
					Total Number of Do	minant Species			
					Across All Strata:		-	4	(B)
					Percent of Dominar			100%	(A /D)
					OBL, FACW, or FA	C:	-	100%	(A/B)
					Prevalence Inde	x worksheet:			
			= Total Cover		Total %	Cover of:	_	Multiply by:	
	50% of total cover: 7.5	20%	% of total cover:	3					
Sapling / Shrub Stratum	(Plot size: 30' Radius								
Liquidambar styraciflu			<u> </u>						
					7 I		_		
					Column Totals.		(A) <u> </u>		(b)
					= =	Prevalence Index =	= B/A = _		
					Hydronhytic Vec	getation Indicators	••		
			·		1   ' ' ' '	1 - Rapid Test for I		tic Vegetation	
			= Total Cover			2 - Dominance Tes		=	
	50% of total cover: 4	20%	% of total cover:	1.6		3 - Prevalence Inde	ex is ≤3.0	<b>)</b> ¹	
						4 - Morphological A	Adaptatio	ons <sup>1</sup> (Provide	
Herb Stratum	(Plot size: 30' Radius	)				supporting data in	Remarks	s or on a separa	te sheet)
1. Phragmites australis		35	<u> </u>	FACW		Problematic Hydro	phytic Ve	egetation <sup>1</sup> (Expla	ain)
2. Juncus effusus		20	<u> </u>	OBL	<sup>1</sup> Indicators of hyd	dric soil and wetlan	d hydrol	ogy must	
3					be present, unles	s disturbed or prob	olematic.		
					Definitions of Ve	egetation Strata:			
					4				
					1	ants, excluding woo	-		
					1   ' '	ft (6 m) or more in	-		
					(7.6 cm) or larger	in diameter at bre	ast neigr	и (рвп).	
					Sanling/Shrub -	Woody plants, exc	ludina w	oody vines	
					11 ' '	BH and greater tha	•		n ) tall.
						<b>.</b>			,
			= Total Cover		Herb - All herbac	eous (non-woody)	plants, re	egardless	
	50% of total cover: 27.5	20%	% of total cover:	11	of size, and wood	ly plants less than	3.28 ft. ta	all	
Woody Vine Stratum	(Plot size: 30' Radius	)			NA/	woody vines, grea	441	0.00 % : :	
			·		woody vine - All	woody vines, grea	iter than	3.28 it. in neigni	
					11				
					11				
			·		11				
			= Total Cover		1				
	50% of total cover: 0	20%	% of total cover:	0					
					Hydrophytic				
					Vegetation				
					Present?	Yes	Х	No	_
Remarks: (Include photo r	numbers here or on a separate s	heet).							

Dominant

Absolute

Indicator Dominance Test worksheet:

Profile Descrip	tion: (Describe to the	depth needed	d to document the in	dicator or c	onfirm the a	bsence of	indicators.)		
Depth	Matrix			Redox Featu			•		
(inches)	Color (moist)	<u></u> %	Color (moist)	<u></u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-5	10YR 3/2	100					sandy loam		
5-20	10YR 5/2	90	10YR 5/6	10	C	M	sandy loam		
							. <u></u>		
						-			
							·		
'Type: C=conce	entration, D=Depletion,	RM=Reduced	Matrix, CS=Covered	or Coated S	and Grains.		<sup>2</sup> Location: PL=	Pore Lining, M=Matrix.	
Hydric Soil Indi	icators:						Indicators for I	Problematic Hydric Soils <sup>3</sup> :	
Histosol (A	1)		Polyvalue Below			U)	1 cm Mucl	(A9) <b>(LRR O)</b>	
Histic Epip	edon (A2)	•	Thin Dark Surface	ce (S9) (LRR	? S, T, U)		2 cm Mucl	(A10) <b>(LRR S)</b>	
Black Histic	c (A3)	•	Loamy Mucky M	lineral (F1) (I	LRR O)		Reduced \	/ertic (F18) (outside MLRA 15	0A,B)
Hydrogen S	Sulfide (A4)	-	Loamy Gleyed N					Floodplain Soils (F19) (LRR P,	
Stratified L	` '	-	X Depleted Matrix					s Bright Loamy Soils (F20)	
	odies (A6) <b>(LRR P, T, U</b>	•	Redox Dark Sur				(MLRA 15		
	y Mineral (A7) (LRR P,		Depleted Dark S	` '			•	t Material (TF2)	
	ence (A8) <b>(LRR U)</b>	, <b>-,</b>	Redox Depressi					ow Dark Surface (TF12) (LRR	r. U)
	(A9) (LRR P, T)	-	Marl (F10) (LRR	` '				plain in Remarks)	., .,
	elow Dark Surface (A1		Depleted Ochric		۸ 151)		Other (Lxp	naiii iii Remarks)	
		') <u>.</u>			-	\	3, ,,		
	Surface (A12)		Iron-Manganese	,	, ,	۶, ۱)		of hydrophytic vegetation and	
	rie Redox (A16) (MLRA		Umbric Surface					ydrology must be present,	
	cky Mineral (S1) (LRR C	), S)	Delta Ochric (F1		•		unless dis	turbed or problematic.	
	yed Matrix (S4)	. <u>-</u>	Reduced Vertic						
Sandy Red	ox (S5)	. <u>-</u>	Piedmont Flood						
Stripped M		_	Anomalous Brigl	ht Loamy So	ils (F20) <b>(ML</b>	.RA 149A, 1	153C, 153D)		
Dark Surfa	ce (S7) <b>(LRR P, S, T, U</b>	)							
· <u></u>									
Restrictive Lay	er (if observed):								
Type:									
Depth (inch	nes):					Hydric Sc	oil Present?	Yes X No	
Depth (inch	nes):					Hydric Sc	oil Present?	Yes X No_	
, ,	nes):					Hydric Sc	oil Present?	Yes X No_	
Depth (inch	nes):					Hydric So	oil Present?	Yes X No _	
, ,	nes):					Hydric Sc	oil Present?	Yes X No _	
, ,						Hydric So	oil Present?	Yes X No_	
, ,						Hydric Sc	oil Present?	Yes X No_	
, ,	nes):					Hydric Sc	oil Present?	Yes X No_	
, ,	nes):					Hydric Sc	oil Present?	Yes X No_	
, ,	nes):					Hydric Sc	oil Present?	Yes X No_	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
						Hydric Sc	oil Present?	Yes X No	
						Hydric Sc	oil Present?	Yes X No	
						Hydric Sc	oil Present?	Yes X No	
	nes):					Hydric Sc	oil Present?	Yes X No	
	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,						Hydric Sc	oil Present?	Yes X No	
, ,						Hydric Sc	oil Present?	Yes X No	
, ,						Hydric Sc	oil Present?	Yes X No	
, ,						Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	
, ,	nes):					Hydric Sc	oil Present?	Yes X No	

Project/Site: Somers	et County Expansion Project	City/County:	Somerset	Sampling Date:	4-Mar-20
Applicant/Owner:	Chesapeake Utilities	i	State: Maryland	Sampling Point:	DCP-8
Investigator(s):	J.Weber	Section, Township,	Range:	N/A	
Landform (hillslope, terrace, etc.):	flat	Local relief (concave, o	convex, none):	one Slope (%):	2
Subregion (LLR or MLRA):	MLRA153D Lat:	38.18699° Long:	-75.69230°	Datum:	NAD83
Soil Map Unit Name:	Queponco silt loam, 0-			NWI classification:	N/A
Are climatic/hydrologic conditions on	the site are typical for this time of year'	? Yes X	No (If no, ex	plain in Remarks)	
Are Vegetation, Soil	, or Hydrology significant	ly disturbed?	Are "Normal Circumstar	nces" present? Yes	<b>X</b> No
Are Vegetation , Soil			(If needed, explain any a	answers in Remarks.)	
SUMMARY OF FINDINGS- Attac	h site map showing sampling poi	int locations, transects, imp	portant features, etc.	,	
Hydrophytic Vegetation Present?	Yes No X				
Hydric Soil Present?	Yes X No	Is the Sampled Area wit	thin a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes No X	, , , , , , , , , , , , , , , , , , , ,			
Remarks: The DCP was estable	lished south of Wetland 3, flag 102.				
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indic	ators (minimum of two requ	ired)
Primary Indicators (minimum of one	is required, check all that apply)		Surface	Soil Cracks (B6)	
Surface Water (A1)	Aquatic Fauna	a (B13)	Sparsely	Vegetated Concave Surface	ce (B8)
High Water Table (A2)	Marl Deposits	(B15) (LRR U)	Drainag	e Patterns (B10)	
Saturation (A3)	Hydrogen Sulf	fide Odor (C1)	Moss Tr	im Lines (B16)	
Water Marks (B1)	Oxidized Rhize	ospheres on Living Roots (C3)	Dry-Sea	son Water Table (C2)	
Sediment Deposits (B2)	Presence of R	leduced Iron (C4)	Crayfish	Burrows (C8)	
Drift Deposits (B3)	Recent Iron Re	eduction in Tilled Soils (C6)	Saturation	on Visible on Aerial Imagery	(C9)
Algal Mat or Crust (B4)	Thin Muck Sur	rface (C7)	Geomor	phic Position (D2)	
Iron Deposits (B5)	Other (Explain	in Remarks)		Aquitard (D3)	
Inundation Visible on Aerial I	magery (B7)			utral Test (D5)	
Water Stained Leaves (B9)			Sphagn	um moss (D*) (LRR T, U)	
Field Observations:					
Surface Water Present? Yes	No X Depth (inc	ches):			
Water Table Present? Yes	No X Depth (inc	ches):			
Saturation Present? Yes (includes capillary fringe)	No X Depth (inc	ches):	Wetland Hydrology Pres	sent? Yes	No <u>X</u>
Describe Recorded Data (stream gag	ge, monitoring well, aerial photos, previ	ious inspections), if available:			
Remarks:					
-					

US Army Corps of Engineers

	Sama	ling Point: DCD 0	
	Samp	ling Point: DCP-8	
Indicator	Dominance Test worksheet:		
Status	Number of Dominant Species That Are		
	OBL, FACW, or FAC:	1	(A)
	Total Number of Deminant Species		
	Total Number of Dominant Species Across All Strata:	2	_(B)
	Barrant of Barringert Conscion That Are		
	Percent of Dominant Species That Are OBL, FACW, or FAC:	50%	_ (A/B)
	Prevalence Index worksheet:		
	Total % Cover of:	Multiply by:	_
0	OBL species x 1 =	:	_
	FACW species x 2 =	·	_
	FAC species x 3 =		
		·	_
	UPL species x 5 =		_
	Column Totals: (A)		_ (B)
	Prevalence Index = B/A =	·	_
	Hudaankadia Vanatadiaa Indiantana		
	Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrop	hytic Vocatation	
	2 - Dominance Test is >5	-	
0	3 - Prevalence Index is ≤		
	4 - Morphological Adapta		
	supporting data in Remai		sheet
FAC	Problematic Hydrophytic	Vegetation <sup>1</sup> (Explai	n)
UPL	<sup>1</sup> Indicators of hydric soil and wetland hydr		
FACU	be present, unless disturbed or problemat	ic.	
UPL	Definitions of Vegetation Strata:		
UPL			
FACU	Tree - Woody plants, excluding woody vin	es,	
FAC	approximately 20 ft (6 m) or more in heigh		
	(7.6 cm) or larger in diameter at breast he	ight (DBH).	
	Sapling/Shrub - Woody plants, excluding	-	\
	a less than 3in. DBH and greater than or e	equal to 3.28 ft (1 m	) tall.
	Harb All harbaneous (non woods) plants	rogardiana	
10 0	Herb - All herbaceous (non-woody) plants	_	
18.8	of size, and woody plants less than 3.28 ft	. tali	
	Woody vine - All woody vines, greater tha	n 3 28 ft in height	
	, , , gradior tria		

Tree Stratum	(Plot size: 30' Radius	) _	% Cover	Species?	Status	November of Descriptor	-4 O: Th-4 A			
1.						Number of Dominar OBL, FACW, or FA			1	(A)
2.								_		
						Total Number of Do	ominant Species		0	<b>(D)</b>
3						Across All Strata:		-	2	(B)
4						Percent of Dominar	nt Species That Are			
5						OBL, FACW, or FA		_	50%	(A/B)
6										
7.						Prevalence Inde	x worksheet:			
				= Total Cover		Total %	Cover of:		Multiply by:	
	50% of total cover:	0		of total cover:	0			x 1 =		
Sapling / Shrub Stratum	(Plot size: 30' Radius			-	-					
1	·					FAC species				
						1 I				
2						UPL species				
3						1 1				
4						Column Totals:		(A) _		(B)
5										
6							Prevalence Index :	= B/A = _		_
7										
8						Hydrophytic Veg	getation Indicator	s:		
9							1 - Rapid Test for I	Hydrophy	tic Vegetation	
		-	0 =	= Total Cover			2 - Dominance Tes	st is >50%	6	
	50% of total cover:	0	20%	of total cover:	0		3 - Prevalence Ind	ex is ≤3.0	)1	
							4 - Morphological	Adaptatio	ns <sup>1</sup> (Provide	
Herb Stratum	(Plot size: 30' Radius	)					supporting data in	Remarks	or on a separat	e sheet)
1. Grass spp.*			40	Υ	FAC		Problematic Hydro	phytic Ve	getation <sup>1</sup> (Expla	in)
2. Veronica hederifolia			20	Y	UPL	1 Indicators of hyd	dric soil and wetlar	nd hydrolo	gy must	
3. Allium vineale			45		FACU	be present, unles	s disturbed or prob	olematic.		
4. Lamium purpureum			0	N	UPL		egetation Strata:			
Geranium carolinianui			-	N	UPL		. <b>.</b>			
Solidago altissima				N	FACU	Tree - Woody pla	ants, excluding woo	ndy vines		
7. Andropogon virginicus					FAC	1 1	ft (6 m) or more in	-		
						1 1 * *		_		
8						(7.6 cm) or larger	r in diameter at bre	asi neign	і (ВВП).	
9										
10.						1 1	Woody plants, exc	_	-	\
11.				<del></del> -		a less than 3in. D	BH and greater the	an or equ	al to 3.28 ft (1 m	ı) tall.
12				<del></del>						
		-	94 :	= Total Cover		Herb - All herbac	eous (non-woody)	plants, re	egardless	
	50% of total cover:	47	20%	of total cover:	18.8	of size, and wood	dy plants less than	3.28 ft. ta	ıll	
Woody Vine Stratum	(Plot size: 30' Radius	)								
1						Woody vine - All	woody vines, grea	iter than 3	3.28 ft. in height.	
2										
3										
4										
' <u>'</u>			0 :	= Total Cover						
	50% of total cover:	0	20%	of total cover:	0					
			- /-	· · · · · ·	·					
						Hydrophytic				
						, , , w				
						Vegetation Present?	Vaa		No <u>X</u>	

Dominant

Absolute

Remarks: (Include photo numbers here or on a separate sheet).

<sup>\*</sup>The grass species was unidentifiable due to lack of distinguishing characteristics, therefore an indicator status of FAC is assumed.

Profile Descrip	tion: (Describe to the	depth needed	to document the in	dicator or c	onfirm the a	bsence of	indicators.)		
							,		
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Featu %	res Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Re	marks
0-9	10YR 3/2	70	10YR 6/6	30	C	M	sandy loam	110	manto
9-20	10YR 6/4	70	10YR 5/3	25	D	M	sandy loam		
			7.5YR 5/6	5	C	M			
1 0					10 :		21 51		
Type: C=conce	entration, D=Depletion,	RM=Reduced	Matrix, CS=Covered	or Coated S	and Grains.		Location: PL=F	Pore Lining, M=M	atrıx.
Hydric Soil Ind	icators:						Indicators for F	Problematic Hyd	ric Soils³:
Histosol (A	.1)		Polyvalue Below	Surface (S8	3) (LRR S, T,	U)	1 cm Muck	(A9) <b>(LRR O)</b>	
Histic Epip	,	_	Thin Dark Surface	ce (S9) <b>(LRR</b>	R S, T, U)	,	2 cm Muck	(A10) (LRR S)	
Black Histi	` '	_	Loamy Mucky M		LRR O)				ide MLRA 150A,B)
Hydrogen S	Sulfide (A4) avers (A5)	_	Loamy Gleyed N Depleted Matrix					-ioodpiain Solis (i Bright Loamy So	F19) <b>(LRR P, S, T)</b> oils (F20)
	odies (A6) <b>(LRR P, T, U</b> )	_	X Redox Dark Sur	` '			(MLRA 15		5110 (1 20)
	y Mineral (A7) (LRR P,	T, U)	Depleted Dark S	, ,				t Material (TF2)	
	ence (A8) <b>(LRR U)</b> (A9) <b>(LRR P, T)</b>	_	Redox Depression	` '				ow Dark Surface ( lain in Remarks)	(TF12) <b>(LRR T, U)</b>
	Relow Dark Surface (A11		Marl (F10) (LRR Depleted Ochric		A 151)		Other (Exp	iain in Remarks)	
	Surface (A12)	_	Iron-Manganese			P, T)	<sup>3</sup> Indicators	of hydrophytic ve	egetation and
	rie Redox (A16) (MLRA		Umbric Surface	(F13) <b>(LRR</b> I	P, T, U)	•	wetland hy	drology must be	present,
	cky Mineral (S1) (LRR C	), S) _	Delta Ochric (F1				unless dis	turbed or problem	natic.
Sandy Gle	yed Matrix (S4) lox (S5)	-	Reduced Vertic Piedmont Floods						
Stripped M		_	Anomalous Brigl				53C, 153D)		
Dark Surfa	ce (S7) <b>(LRR P, S, T, U</b>	)							
•	er (if observed):								
Type: Depth (inch			<u> </u>			Hydric Sc	oil Present?	Yes X	No
Deptil (illei			<del></del>			Tiyunc 30	ni Fresent:	ies X	
Remarks:									

Project/Site: Somers	set County Expansion Project	City/County:	Somerset Sampling Date: 4-Mar-20	
Applicant/Owner:	Chesapeake Utilities		State: Maryland Sampling Point: DCP-9	
Investigator(s):	J.Weber	Section, Township	o, Range: N/A	
Landform (hillslope, terrace, etc.):	flat	Local relief (concave	, convex, none): none Slope (%): 1	
Subregion (LLR or MLRA):	MLRA153D Lat:		: -75.69077° Datum: NAD83	
Soil Map Unit Name:	Transquaking and Mispillion soils, v		NWI classification: EEM/PEM	
	the site are typical for this time of year?		No (If no, explain in Remarks)	
Are Vegetation , Soil	**		Are "Normal Circumstances" present? Yes X No	
Are Vegetation , Soil			(If needed, explain any answers in Remarks.)	
	ch site map showing sampling poir			
COMMENT OF THE PROOF ALL	chi site map showing sampling pon	it locations, transects, ii	mportant reatures, etc.	
Hydrophytic Vegetation Present?	Yes <u>X</u> No			
Hydric Soil Present?	Yes <u>X</u> No	Is the Sampled Area	within a Wetland? Yes X No	
Wetland Hydrology Present?	Yes <u>X</u> No			
Remarks: The DCP was estab	olished adjacent to Wetland 4, flag 102.	l		
The Ber was solar	onoriou adjacom to vvotana 1, nag 102.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one	e 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 (		Drainage Patterns (B10)	
X Saturation (A3)	Hydrogen Sulfic	, ,	Moss Trim Lines (B16)	
Water Marks (B1)		spheres on Living Roots (C3		
Sediment Deposits (B2)		educed Iron (C4)	Crayfish Burrows (C8)	
	<del></del>	, ,	X Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)		duction in Tilled Soils (C6)		
Algal Mat or Crust (B4)	Thin Muck Surf	, ,	Geomorphic Position (D2)	
Iron Deposits (B5) Inundation Visible on Aerial	Other (Explain i	in Remarks)	Shallow Aquitard (D3)  X FAC-Neutral Test (D5)	
Water Stained Leaves (B9)	imagery (B7)		Sphagnum moss (D*) (LRR T, U)	
			Spriagram moss (D ) (ERR 1, 0)	
Field Observations:		,		
Surface Water Present? Yes	: `	, <u> </u>		
Water Table Present? Yes	No X Depth (inch	· ——	W :	
Saturation Present? Yes	X No Depth (inch	ies): <u>surface</u>	Wetland Hydrology Present? Yes X No	
(includes capillary fringe)				
Describe Recorded Data (stream ga	ge, monitoring well, aerial photos, previo	us inspections), if available:		
Remarks:				

US Army Corps of Engineers

Tree Stratum  1	(Plot size: 30' Radius	) <u>% Cover</u>		Status	Number of Domina	ant Species That Are		4	(A)
1					_ OBL, FACW, OF FA	AC.	=	<del></del>	_ (^)
					Total Number of D Across All Strata:	ominant Species	Ē	5	(B)
					Percent of Domina	nt Species That Are			
					OBL, FACW, or FA	AC:	=	80%	(A/B)
					Prevalence Inde	ex worksheet:			
			= Total Cover		Total %	Cover of:	_	Multiply by:	
	50% of total cover:	0 20	% of total cover:	0	OBL species		x 1 =		_
Sapling / Shrub Stratum	(Plot size: 30' Radius	)			FACW species		x 2 =		_
1. Acer rubrum		10	<u>Y</u>	FAC	FAC species		x 3 =		_
2. Acer negundo		5	Y	FAC	FACU species		x 4 =		_
3. Cornus sericea		5	Y	FACW	UPL species		x 5 =		_
4					Column Totals:		(A)		(B)
5					4				
						Prevalence Index :	= B/A = _		_
					I hadronhadio Vo	anatation Indicator			
					7 1 7 7 7	getation Indicators 1 - Rapid Test for I		tic Vocatation	
9			= Total Cover		×	2 - Dominance Tes		_	
	50% of total cover:		_ = Total Cover: % of total cover:	4		3 - Prevalence Ind			
		10 20	70 OI total cover.			4 - Morphological			
Herb Stratum	(Plot size: 30' Radius	)				supporting data in	-		te sheet)
Phragmites australis	(1.101.01201.		Y	FACW		Problematic Hydro			
Juncus effusus			N	OBL		dric soil and wetlar			,
3. Lonicera japonica			N	FACU	<b>1</b>	ss disturbed or prob	-		
					1	egetation Strata:			
					Tree - Woody pl	ants, excluding woo	ody vines	,	
					approximately 20	Oft (6 m) or more in	n height a	and 3 in.	
					(7.6 cm) or large	er in diameter at bre	ast heigh	nt (DBH).	
					Sapling/Shrub	Woody plants, exc	luding w	oody vines,	
					a less than 3in. I	DBH and greater th	an or equ	ual to 3.28 ft (1 n	n ) tall.
					4				
			= Total Cover			ceous (non-woody)	-	=	
		40 20	% of total cover:	16	of size, and woo	dy plants less than	3.28 ft. ta	all	
Woody Vine Stratum	(Plot size: 30' Radius	)		E4 01 1				0006:1:1	
1. Lonicera japonica			<u> </u>	FACU	_   woody vine - Al	I woody vines, grea	iter than	3.28 ft. in neight	•
					1				
					_				
					1				
o			= Total Cover		1				
	50% of total cover:		_ = Total cover:	3					
					Hydrophytic				
					Vegetation				
					Present?	Yes	Х	No	_
Danielia, (laskida akata)		4							
Remarks: (Include photo	numbers here or on a separa	te sneet).							

Dominant

Absolute

Indicator Dominance Test worksheet:

Profile Descrint	ion: (Describe to the	lenth needer	d to document the in	dicator or co	onfirm the a	hsence of	indicators )	
Frome Descript	ion. (Describe to the t	aeptii needet	u to document the in	ulcator or co	ommin the a	DSCIICE OI	mulcators.)	
Depth	Matrix			Redox Featur	res			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-5	10YR 4/2	90	5YR 5/6	10	C	PL	sandy loam	
5-20	10YR 5/2	75	5YR 5/6	25	C	M	sandy loam	
							· <del></del>	
						-	· <del></del>	
<sup>1</sup> Type: C=conce	ntration, D=Depletion, I	RM=Reduced	Matrix, CS=Covered	or Coated Sa	and Grains.		<sup>2</sup> Location: PL=Po	re Lining, M=Matrix.
Hydric Soil Indi	cators:						Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
History (A	4)		Polyvoluo Polov	v Surface (S0	) /I DD C T	IIN	1 om Muck (	AO) (I BB O)
Histosol (A: Histic Epipe	,		Polyvalue Below Thin Dark Surfa			U)		A9) <b>(LRR O)</b> A10) <b>(LRR S)</b>
Black Histic	` '	,	Loamy Mucky M					rtic (F18) (outside MLRA 150A,B)
Hydrogen S	` '		Loamy Gleyed N					podplain Soils (F19) (LRR P, S, T)
Stratified La	ayers (A5)		X Depleted Matrix					Bright Loamy Soils (F20)
	dies (A6) (LRR P, T, U)		Redox Dark Sur	, ,			(MLRA 153	
	y Mineral (A7) (LRR P,	T, U)	Depleted Dark S					Material (TF2)
	ence (A8) (LRR U)	,	Redox Depressi	` ,				V Dark Surface (TF12) (LRR T, U)
	(A9) <b>(LRR P, T)</b> elow Dark Surface (A11	,	Marl (F10) (LRR Depleted Ochrid		Δ 151\		Other (Expla	in in Remarks)
	Surface (A12)	,	Iron-Manganese		-	э т\	<sup>3</sup> Indicators o	f hydrophytic vegetation and
	ie Redox (A16) <b>(MLRA</b>	150A)	Umbric Surface			, 1)		rology must be present,
	ky Mineral (S1) (LRR O	•	Delta Ochric (F1					rbed or problematic.
	ved Matrix (S4)	•	Reduced Vertic	(F18) (MLRA	150A, 150E			•
Sandy Red			Piedmont Flood					
Stripped Ma			Anomalous Brig	ht Loamy Soi	ils (F20) <b>(ML</b>	RA 149A, 1	153C, 153D)	
Dark Surface	ce (S7) <b>(LRR P, S, T, U</b>	)						
Restrictive Laye	er (if observed):							
Restrictive Laye	er (if observed):							
						Hydric Sc	oil Present?	Yes <u>X</u> No
Type:						Hydric So	oil Present?	Yes <u>X</u> No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type:						Hydric So	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric So	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes <u>X</u> No
Type: Depth (inch						Hydric Sc	oil Present?	Yes <u>X</u> No
Type: Depth (inch						Hydric So	oil Present?	Yes <u>X</u> No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes <u>X</u> No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No
Type: Depth (inch						Hydric Sc	oil Present?	Yes X No

Project/Site: Son	nerset County Expansion	n Project	City/County:	Son	nerset	_ Sampling Date	:	4-Ma	ır-20
Applicant/Owner:	C	hesapeake Utilities		Sta	ite: Maryland	_ Sampling Point	:	DCF	P-10
Investigator(s):	J.Weber		Section, To	ownship, Ran	ge:	1	N/A		
Landform (hillslope, terrace, etc.)	hil	Islope	Local relief (c	oncave, conv	ex, none):n	one S	Slope (%): _		5
Subregion (LLR or MLRA):	MLRA153D	Lat:	38.18421°	Long:	-75.69060°		Datum:		NAD83
Soil Map Unit Name:	Transquaking a	and Mispillion soils, v	ery frequently flooded	d, tidal		NWI classification	:	N/	Ά
Are climatic/hydrologic conditions	on the site are typical	for this time of year?	Yes	<b>X</b> No	(If no, ex	kplain in Remarks)	)		
Are Vegetation, Soil	, or Hydrology	significantly	disturbed?	Are	"Normal Circumsta	nces" present?	Yes _	Х	No
Are Vegetation, Soil		naturally pro	blematic?	(If ne	eeded, explain any	answers in Remai	rks.)		
SUMMARY OF FINDINGS- A	tach site map show	ing sampling poin	t locations, transe	ects, import	ant features, etc.				
Hydrophytic Vegetation Present?	Yes 2	( No							
Hydric Soil Present?		No X	Is the Sampled	Area within :	a Wetland?	Yes		No	Х
Wetland Hydrology Present?	Yes	No	is the dampied	artica within t	a Welland:	103		-	
	162	NO							
Remarks: The DCP was es	stablished upslope from	Wetland 4, flag 103.							
HYDROLOGY									
Wetland Hydrology Indicators						cators (minimum o	of two requi	red)	
Primary Indicators (minimum of	one is required, check					Soil Cracks (B6)		·= -:	
Surface Water (A1)		Aquatic Fauna (				ly Vegetated Cond	ave Surfac	e (B8)	
High Water Table (A2)		Marl Deposits (E				ge Patterns (B10)			
Saturation (A3)		Hydrogen Sulfid	` '			rim Lines (B16)			
Water Marks (B1)			pheres on Living Roo	ots (C3)		ason Water Table	(C2)		
Sediment Deposits (B2)		Presence of Re	` '			n Burrows (C8)			
Drift Deposits (B3)			luction in Tilled Soils	(C6)		ion Visible on Aeri		(C9)	
Algal Mat or Crust (B4)		Thin Muck Surfa	, ,			rphic Position (D2	)		
Iron Deposits (B5)	<del></del>	Other (Explain in	n Remarks)			Aquitard (D3)			
Inundation Visible on Aer	• • • •					eutral Test (D5)			
Water Stained Leaves (B	9)				Sphagn	ium moss (D*) (LF	RR T, U)		
Field Observations:									
Surface Water Present? Y	es No	Depth (inch	es):						
Water Table Present? Y	es No	Depth (inch	es):						
Saturation Present? Y	es No	Depth (inch	es):	Wet	land Hydrology Pre	sent? Yes		No	X
(includes capillary fringe)									
Describe Recorded Data (stream	gage, monitoring well,	aerial photos, previou	us inspections), if ava	ailable:					
Remarks:									
Kemarks.									

US Army Corps of Engineers

	Sampling Point: DCP-10
Indicator	Dominance Test worksheet:
Status	Number of Dominant Species That Are
	OBL, FACW, or FAC:1(A)
	Total Number of Dominant Species Across All Strata:(B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:
	Prevalence Index worksheet:
	Total % Cover of: Multiply by:
0	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
	X 2 - Dominance Test is >50%
0	3 - Prevalence Index is ≤3.0¹
	4 - Morphological Adaptations <sup>1</sup> (Provide
	supporting data in Remarks or on a separate sheet)
FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
FACW	be present, unless disturbed or problematic.
FACU	Definitions of Vegetation Strata:
FACU	
FAC	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/Shrub - Woody plants, excluding woody vines,
	a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.

1.	(Plot size: 30 Radius	) % Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	)	1	(A)
						_		
					Total Number of Dominant Species Across All Strata:	_	1	(B)
4					Descent of Deminent Coopies That Ave			
					Percent of Dominant Species That Are OBL, FACW, or FAC:	=	100%	(A/B)
6								
7					Prevalence Index worksheet:			
	500/ - 51-1-1 0		= Total Cover	0	Total % Cover of:		Multiply by:	
Canling / Chruh Ctratum	50% of total cover: 0 (Plot size: 30' Radius		6 of total cover:	0	OBL species			
Sapling / Shrub Stratum					FACW species FAC species			
					FACU species			
					UPL species  Column Totals:			
					Column Totals.	_ (^) _		(D)
					Prevalence Index	κ = B/A =		
						· -		_
					Hydrophytic Vegetation Indicate	ors:		
					1 - Rapid Test fo	r Hydrophy	tic Vegetation	
			= Total Cover		X 2 - Dominance T	est is >50%	6	
	50% of total cover: 0	20%	6 of total cover:	0	3 - Prevalence In	dex is ≤3.0	)1	
					4 - Morphologica	I Adaptatio	ns <sup>1</sup> (Provide	
Herb Stratum	(Plot size: 30' Radius	)			supporting data i	n Remarks	or on a separa	te sheet)
1. Grass spp.*		60	<u> </u>	FAC	Problematic Hyd	rophytic Ve	egetation <sup>1</sup> (Expla	ain)
2. Allium vineale		8	<u>N</u>	FACU	Indicators of hydric soil and wetla	and hydrolo	ogy must	
3. Phragmites australis		7	<u>N</u>	FACW	be present, unless disturbed or pr	oblematic.		
4. Glechoma hederacea			<u>N</u>	FACU	Definitions of Vegetation Strata	:		
5. Plantago lanceolata		2	<u>N</u>	FACU				
6. Ranunculus bulbosus			<u>N</u>	FAC	Tree - Woody plants, excluding w	-		
					approximately 20 ft (6 m) or more	_		
					(7.6 cm) or larger in diameter at b	least neigh	іі (БВП).	
					-     Sapling/Shrub - Woody plants, e:	xcluding w	nody vines	
					a less than 3in. DBH and greater t	•		n ) tall
						0. 040	10 0.20 (	,
			= Total Cover		Herb - All herbaceous (non-wood)	y) plants, re	egardless	
	50% of total cover: 41	20%	6 of total cover:	16.4	of size, and woody plants less tha	n 3.28 ft. ta	all	
Woody Vine Stratum	(Plot size: 30' Radius	)						
1					Woody vine - All woody vines, gre	eater than	3.28 ft. in height	t.
2					]			
3					4			
4					4			
5					4			
			= Total Cover					
	50% of total cover: 0	20%	6 of total cover:	0		-		
					I hadrombadio			
					Hydrophytic Vegetation			
					-	s X	No	
					Te de la contraction de la con		140	_
	umbers here or on a separate shee s unidentifiable due to lack of distin	,	racteristics, the	refore an ir	ndicator status of FAC is assumed.			

Absolute

Dominant

US Army Corps of Engineers

SOIL Sampling Point: DCP-10

Profile Descripti	on: (Describe to the o	depth needed	I to document the i	ndicator or co	onfirm the al	bsence of i	indicators.)	
Depth	Matrix			Redox Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 3/2 10YR 5/6	100 80	10YR 4/2	20			silt loam	
4-20	1011 5/6	00	101K 4/2			IVI	clay loam	
<sup>1</sup> Type: C=concer	ntration, D=Depletion, F	RM=Reduced	Matrix, CS=Covered	d or Coated Sa	and Grains.		<sup>2</sup> Location: P	
Hydric Soil Indic	cators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
5 cm Mucky Muck Prese 1 cm Muck ( Depleted Be Thick Dark ( Coast Prairi Sandy Muck Sandy Gleye Sandy Redo	don (A2) (A3) ulfide (A4) yers (A5) dies (A6) (LRR P, T, U) Mineral (A7) (LRR P, nce (A8) (LRR U) (A9) (LRR P, T) elow Dark Surface (A11 Surface (A12) e Redox (A16) (MLRA xy Mineral (S1) (LRR O ed Matrix (S4) ox (S5)	T, U)	Polyvalue Belo Thin Dark Surfa Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LR Depleted Ochri Iron-Manganes Umbric Surface Delta Ochric (F Reduced Vertic Piedmont Flood Anomalous Brig	ace (S9) (LRR Mineral (F1) (L Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8) R U) c (F11) (MLRA de Masses (F1: e (F13) (LRR F E17) (MLRA 15 c (F18) (MLRA dplain Soils (F	S, T, U) .RR O) A 151) 2) (LRR O, F P, T, U) (1) . 150A, 150B 19) (MLRA 1	P, T) S) 49A)	2 cm Min Reduce Piedmo Anomal (MLRA Red Pa Very Shother (E) 3 Indicate wetland unless	uck (A9) (LRR O) uck (A10) (LRR S) d Vertic (F18) (outside MLRA 150A,B) nt Floodplain Soils (F19) (LRR P, S, T) ous Bright Loamy Soils (F20) 153B) rent Material (TF2) allow Dark Surface (TF12) (LRR T, U) Explain in Remarks) ors of hydrophytic vegetation and I hydrology must be present, disturbed or problematic.
Restrictive Laye	r (if observed):							
Type: Depth (inche	es):					Hydric So	il Present?	Yes NoX
Remarks:								

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

	WEIEAND DETERMINATION	DATA I ORIN-Adamico	ana Gan	Oodstai i id	iii itegioii			
	et County Expansion Project	City/County:	Somerse		Sampling Date:		4-Ma	
Applicant/Owner:	Chesapeake Utilities		State:	Maryland			DCF	P-11
Investigator(s):	J.Weber	Section, Township	, , ,			/A		
Landform (hillslope, terrace, etc.):	flat	Local relief (concave		· <del></del>	one Slo	ope (%):		1
Subregion (LLR or MLRA):	MLRA153D Lat:	38.16457° Long	:	-75.68973°		Datum:		NAD83
Soil Map Unit Name:	Transquaking and Mispillion soils, ve		NI-		NWI classification:		EEM/PF	О/РЕМ
, ,	the site are typical for this time of year?	Yes X		`	plain in Remarks)	V	v	NI-
Are Vegetation, Soil	<del> </del>				nces" present?	Yes	Х	No
Are Vegetation, Soil	· · · · · · · · · · · · · · · · · · ·		`	, ,	answers in Remark	(S.)		
SUMMARY OF FINDINGS- Attac	h site map showing sampling point	locations, transects, in	nportant f	eatures, etc.				
Hydrophytic Vegetation Present?	Yes <u>X</u> No							
Hydric Soil Present?	Yes <u>X</u> No	Is the Sampled Area v	vithin a We	tland?	Yes	Х	No	
Wetland Hydrology Present?	Yes X No	·			•		•	
Remarks: The DCP was estable	lished adjacent to Wetland 5, flag 101.							
Remarks. The DCF was estable	ished adjacent to Wetland 5, hag 101.							
HYDROLOGY								
Wetland Hydrology Indicators:			<u>S</u>	econdary Indic	cators (minimum of	two requ	iired)	
Primary Indicators (minimum of one	is required, check all that apply)			Surface	Soil Cracks (B6)			
X Surface Water (A1)	Aquatic Fauna (E	313)	_	X Sparsely	y Vegetated Conca	ve Surfa	ce (B8)	
X High Water Table (A2)	Marl Deposits (B	15) (LRR U)	_	Drainag	e Patterns (B10)			
X Saturation (A3)	Hydrogen Sulfide	e Odor (C1)	_	Moss Tr	im Lines (B16)			
Water Marks (B1)	Oxidized Rhizos	oheres on Living Roots (C3)		Dry-Sea	son Water Table (	C2)		
Sediment Deposits (B2)	Presence of Red	uced Iron (C4)		Crayfish	Burrows (C8)			
Drift Deposits (B3)	Recent Iron Red	uction in Tilled Soils (C6)		Saturation	on Visible on Aeria	I Imagery	(C9)	
Algal Mat or Crust (B4)	Thin Muck Surface	ce (C7)	_	X Geomor	phic Position (D2)			
Iron Deposits (B5)	Other (Explain in	Remarks)	_	Shallow	Aguitard (D3)			
X Inundation Visible on Aerial I	` · ·	,	_		utral Test (D5)			
X Water Stained Leaves (B9)			_	Sphagn	um moss (D*) (LRF	R T, U)		
Field Observations:								
Surface Water Present? Yes	X No Depth (inche	es): <1						
Water Table Present? Yes	X No Depth (inche	es): 3						
Saturation Present? Yes	X No Depth (inche	s): surface	Wetland	Hydrology Pres	sent? Yes	Х	No	
(includes capillary fringe)					•		•	
Describe Recorded Data (stream gag	ge, monitoring well, aerial photos, previou	s inspections), if available:						
Remarks:								

US Army Corps of Engineers

Atlantic and Gulf Coastal Plain Region-Version 2.0

		Sampling	g Point: DCP-1	1
Indicator	Dominance Test worksheet:			
Status				
FAC	Number of Dominant Species That OBL, FACW, or FAC:	at Are	4	_ (A)
	Total Number of Dominant Specie Across All Strata:	es _	4	(B)
	Percent of Dominant Species Tha OBL, FACW, or FAC:	t Are	100%	(A/B)
	Prevalence Index workshee	t:		
	Total % Cover of:		Multiply by:	_
10	OBL species			_
	FACW species	x 2 =		_
FAC	FAC species	x 3 =		_
OBL	FACU species			
FACU	UPL species	_		
	Column Totals:	(A)		— (B)
	Prevalence I	ndex = B/A = _		_
	Hydrophytic Vegetation Indi	cators:		
	1 - Rapid Te	st for Hydrophy	tic Vegetation	
	X 2 - Dominan	ce Test is >50%	<b>,</b>	
5.6	3 - Prevalenc	ce Index is ≤3.0	<b>)</b> 1	
	4 - Morpholo	gical Adaptation	ns <sup>1</sup> (Provide	
			or on a separate	e sheet)
FACW	Problematic	Hydrophytic Ve	getation <sup>1</sup> (Expla	in)
FAC	1 Indicators of hydric soil and			
FAC	be present, unless disturbed of			
FAC	Definitions of Vegetation St			
	Tree - Woody plants, excludir	ng woody vines,		
	approximately 20 ft (6 m) or m	nore in height a	nd 3 in.	
	(7.6 cm) or larger in diameter	at breast heigh	t (DBH).	
	Sapling/Shrub - Woody plant	s excluding we	oody vines	
	a less than 3in. DBH and grea		•	llet ( r
	a less than one. Don and gree	ater than or equ	ai to 5.20 it (1 ii	i ) taii.
	Herb - All herbaceous (non-w	oody) plants, re	gardless	
8.4	of size, and woody plants less	than 3.28 ft. ta	ıll	
	Woody vine - All woody vines	s, greater than 3	3.28 ft. in height.	
0				

ree Stratum	(Plot size: 30 Radius	) % Cover	Species?	Status	Number of Deminent Cassiss	That Ara		
1. Acer rubrum		50	<u> </u>	FAC	Number of Dominant Species OBL, FACW, or FAC:	nat Are	4	(A)
2								
					Total Number of Dominant Sp Across All Strata:	Decies	4	(B)
						_		
					Percent of Dominant Species OBL, FACW, or FAC:	That Are	100%	(A/B)
					OBE, I AOW, OI I AO.	-	10070	(,,,_)
					Prevalence Index works	heet:		
·			= Total Cover		Total % Cover of		Multiply by:	
	50% of total cover: 25		of total cover:	10		x 1 =		
Sapling / Shrub Stratum	(Plot size: 30' Radius		or total cover.			x 2 =		
Morella cerifera	·	<del></del>	Y	FAC	· · · · · · · · · · · · · · · · · · ·	x 3 =		
			N	OBL	FACU species			
Juniperus virginiana				FACU		x 5 =		
				1 700	1 I	(A)		
					Column rotals.	(A)		(B)
					Provolon	ce Index = B/A =		
					Fievalen	ce muex = b/A =		_
					Hydronhytic Vogotation	Indicators		
					Hydrophytic Vegetation		tic Vogotation	
9			= Total Cover			I Test for Hydrophy nance Test is >50%	_	
	FOO/ of total account 44			F.C		lence Index is ≤3.0		
	50% of total cover: 14		of total cover:	5.6	1	nological Adaptatio		
Llowb Ctroture	(Dist size, 20) Dadius	`				= :		۱۰ ماممه
Herb Stratum	(Plot size: 30' Radius	)		E4 014/	11	ng data in Remarks		•
Phragmites australis		30	<u>Y</u>	FACW	T .	atic Hydrophytic Ve		ain)
			<u>Y</u>	FAC	Indicators of hydric soil a	-	ogy must	
3. Ilex opaca			N	FAC	be present, unless disturb			
				FAC	Definitions of Vegetation	1 Strata:		
						dia a a ab da a a		
					Tree - Woody plants, excl			
					approximately 20 ft (6 m)	=		
					(7.6 cm) or larger in diame	eter at breast neigr	іі (ВВП).	
					Sapling/Shrub - Woody p			\ II
					a less than 3in. DBH and	greater than or equ	ial to 3.28 ft (1 n	n ) tall.
12.			T		<del> </del>	12.1		
			= Total Cover		Herb - All herbaceous (no	• • • • • • • • • • • • • • • • • • • •	•	
	50% of total cover: 21		of total cover:	8.4	of size, and woody plants	less than 3.28 ft. ta	all	
Woody Vine Stratum	(Plot size: 30' Radius	)						
1					Woody vine - All woody v	ines, greater than	3.28 ft. in height	:-
					-			
3								
4								
5					-			
			= Total Cover					
	50% of total cover: 0	20%	of total cover:	0				
					Hydrophytic			
					Vegetation			
					Present?	Yes X	No	_
					1 1			

Absolute

Dominant

Remarks: (Include photo numbers here or on a separate sheet).

<sup>\*</sup>The grass species was unidentifiable due to lack of distinguishing characteristics, therefore an indicator status of FAC is assumed.

SOIL Sampling Point: DCP-11

	ion. (Describe to the	depth needed	to document the	indicator or o	confirm the a	bsence of i	indicators.)		
Depth	Matrix			Redox Featu	iroe				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remar	ks
0-2	10YR 2/1	100	Color (moiot)		1,700		muck	Remai	
2-5	10YR 3/2	100					silt loam		
5-20	10YR 6/2	100					sandy loam		
		<del></del>							
<sup>1</sup> Type: C=concer	ntration, D=Depletion,	RM=Reduced	Matrix, CS=Covere	d or Coated S	Sand Grains.		<sup>2</sup> Location: PL=I	Pore Lining, M=Matrix	
Hydric Soil Indic	cators:						Indicators for I	Problematic Hydric	Soils <sup>3</sup> :
Histosol (A1 Histic Epipe	,	_	Polyvalue Belo			U)		(A9) <b>(LRR O)</b> (A10) <b>(LRR S)</b>	
Black Histic	(A3)	_	Loamy Mucky		LRR O)			/ertic (F18) (outside	
Hydrogen S	` '		Loamy Gleyed					Floodplain Soils (F19	
Stratified La	• ' '	_	X Depleted Matri	` '				s Bright Loamy Soils	(F20)
	dies (A6) <b>(LRR P, T, U</b> Mineral (A7) <b>(LRR P,</b>		Redox Dark Some Depleted Dark	` ,			(MLRA 15	3B) It Material (TF2)	
	nce (A8) <b>(LRR U)</b>		Redox Depres	` ,				ow Dark Surface (TF	2) (LRR T. U)
	(A9) <b>(LRR P, T)</b>	_	Marl (F10) (LR	, ,				plain in Remarks)	<i>2)</i> (2.111 1, 0)
	elow Dark Surface (A1	1)	Depleted Ochr		RA 151)		` .	,	
Thick Dark S	Surface (A12)	·	Iron-Manganes	se Masses (F	12) <b>(LRR O, F</b>	P, T)	<sup>3</sup> Indicators	of hydrophytic veget	ation and
	e Redox (A16) (MLRA	· -	Umbric Surfac					ydrology must be pre	,
	ky Mineral (S1) (LRR (	O, S) _	Delta Ochric (F				unless dis	turbed or problemation	
Sandy Gleye Sandy Redo	ed Matrix (S4)	_	Reduced Verti Piedmont Floo	` , <b>.</b>	•	•			
Stripped Ma	` '	_	Anomalous Br				153C 153D)		
	e (S7) <b>(LRR P, S, T, l</b>	ال		igin Louiny of	5.10 (1 20) <b>(1112</b>		1000, 1002,		
	. , ,	•							
Dootsietive Lave	r (if abanyad).					T			
Restrictive Laye Type:	er (it observed):								
Depth (inch	es):					Hydric So	oil Present?	Yes X	No
	,								
Remarks:									

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

Project/Site: Somers	set County Expansion Project	City/County:	Somerset	Sampling Date:	4-Mar-20
Applicant/Owner:	Chesapeake Utilities		State: Maryland	Sampling Point:	DCP-12
Investigator(s):	J.Weber	Section, Township,		N/A	
Landform (hillslope, terrace, etc.):	hillslope	Local relief (concave,		ne Slope (%):	15
Subregion (LLR or MLRA):	MLRA153D Lat:		-75.68951°	Datum:	NAD83
Soil Map Unit Name:	Transquaking and Mispillion soils, ve			IWI classification:	N/A
Are climatic/hydrologic conditions on	the site are typical for this time of year?	Yes X	No (If no, exp	olain in Remarks)	
Are Vegetation, Soil	, or Hydrology significantly	disturbed?	Are "Normal Circumstan	ces" present? Yes	X No
Are Vegetation, Soil		blematic?	(If needed, explain any a	nswers in Remarks.)	
SUMMARY OF FINDINGS- Attac	h site map showing sampling poin	t locations, transects, im	portant features, etc.		
Hydrophytic Vegetation Present?	Yes No X				
Hydric Soil Present?	Yes X No	Is the Sampled Area wi	thin a Wetland?	Yes	No <u>X</u>
Wetland Hydrology Present?	Yes No X				
Remarks: The DCP was estab	lished upslope of Wetland 5, flag 102.				
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indic	ators (minimum of two requ	uired)
Primary Indicators (minimum of one	is required, check all that apply)		Surface	Soil Cracks (B6)	<del></del>
Surface Water (A1)	Aquatic Fauna (	B13)	Sparsely	Vegetated Concave Surfa	ce (B8)
High Water Table (A2)	Marl Deposits (E	315) (LRR U)	Drainage	Patterns (B10)	
Saturation (A3)	Hydrogen Sulfid	e Odor (C1)	Moss Tri	m Lines (B16)	
Water Marks (B1)	Oxidized Rhizos	pheres on Living Roots (C3)	Dry-Seas	son Water Table (C2)	
Sediment Deposits (B2)	Presence of Red	duced Iron (C4)	Crayfish	Burrows (C8)	
Drift Deposits (B3)	Recent Iron Rec	luction in Tilled Soils (C6)	Saturation	on Visible on Aerial Imagery	/ (C9)
Algal Mat or Crust (B4)	Thin Muck Surfa	ace (C7)	Geomor	ohic Position (D2)	
Iron Deposits (B5)	Other (Explain in	n Remarks)		Aquitard (D3)	
Inundation Visible on Aerial I	magery (B7)			utral Test (D5)	
Water Stained Leaves (B9)			Sphagnu	ım moss (D*) (LRR T, U)	
Field Observations:					
Surface Water Present? Yes	No X Depth (inche	es):			
Water Table Present? Yes	No X Depth (inche	,			
Saturation Present? Yes	No X Depth (inche	es):	Wetland Hydrology Pres	ent? Yes	No <u>X</u>
(includes capillary fringe)					
Describe Recorded Data (stream gag	ge, monitoring well, aerial photos, previou	us inspections), if available:			
Remarks:					

US Army Corps of Engineers

Atlantic and Gulf Coastal Plain Region-Version 2.0

		Sampli	ing Point: DCP-12	!
Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  Percent of Dominant Species That Are OBL, FACW, or FAC:  Prevalence Index worksheet:  Total % Cover of:  OBL species  FAC Species  FAC UPL species  Column Totals:  (A)  Prevalence Index = B/A =  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is \$3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation of the present, unless disturbed or problematic.  FACU  FACU  FACU  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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	ndicator	Dominance Test worksheet:		
Total Number of Dominant Species Across All Strata:  Percent of Dominant Species That Are OBL, FACW, or FAC:  OBL species  FACW species  FACW species  FACU UPL species  Column Totals:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is \$3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation Vegetation Strata:  FACU  FACU  FACU  FACU  Tree - Woody plants, excluding woody vines, a pproximately 20 ft (6 m) or more in height and 3 in.  (7.6 cm) or larger in diameter at breast height (DBH).  Sapling/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	Status	Number of Dominant Species That Are		
Across All Strata:  Percent of Dominant Species That Are OBL, FACW, or FAC:  Total % Cover of:  OBL species FACW species FACU FACU UPL species  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%  FACU FACU FACU FACU  The Amorphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain) FACU FACU FACU FACU FACU FACU FACU FACU			2	_(A)
OBL, FACW, or FAC: 50% (A/B    Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species			4	_(B)
Total % Cover of:    OBL species			50%	_ (A/B
Total % Cover of:    OBL species				
OBL species			N. A. alakim la a la a a	
FACU FACU FACU FACU FACU FACU FACU FACU	0			_
FACU FACU FACU FACU FACU FACU FACU FACU	U			_
FACU   FACU species	E40	FAC v species x 2 =		_
UPL species x 5 =				
Column Totals:	FACU			_
Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU  FACU  FACU  Tee - 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall				_ (D)
Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU FACU FACU FACU 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall		Column Totals: (A)	-	_ (B)
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU FACU FACU Definitions of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  FACU 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall				_
2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹  4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU  FACU  FACU  Table Present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			by tie Me actation	
3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU  FACU  Tacu  The present, unless disturbed or problematic.  FACU  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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			-	
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU  FACU  FACU  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	-			
supporting data in Remarks or on a separate shee Problematic Hydrophytic Vegetation¹ (Explain)  FACU FACU FACU FACU FACU FACU FACU  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	5			
FACU FACU FACU  I Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall				choo
FACU FACU FACU Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	EAC			
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FACU  Definitions of 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/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall				
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approximately 20 ft (6 m) or more in height and 3 in.  (7.6 cm) or larger in diameter at breast height (DBH).  Sapling/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall	ACU	Tree - Woody plants, excluding woody vine	ae	
(7.6 cm) or larger in diameter at breast height (DBH).  Sapling/Shrub - Woody plants, excluding woody vines, a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall				
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a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall		(7.0 cm) of larger in diameter at breast neigh	grit (DDI I).	
a less than 3in. DBH and greater than or equal to 3.28 ft (1 m ) tall.  Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall		Sanling/Shrub - Woody plants, evoluting	woody vines	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall			-	llet /
9.4 of size, and woody plants less than 3.28 ft. tall		a less than sin. DBH and greater than or ex	qual to 3.20 it (1 iii	) taii.
		Herb - All herbaceous (non-woody) plants,	regardless	
Woody vine - All woody vines, greater than 3.28 ft. in height.	9.4	of size, and woody plants less than 3.28 ft.	tall	
		Woody vine - All woody vines, greater than	n 3.28 ft. in height.	
<del> </del>				

			Absolute	Dominant	Indicator	Dominance Test worksheet:			
Tree Stratum  1.	(Plot size: 30' Radius	)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:	!	2	(A)
						OBL, FACW, OF FAC.	•		(//)
						Total Number of Dominant Species			<b>(5</b> )
						Across All Strata:		4	(B)
						Percent of Dominant Species That Are			
5						OBL, FACW, or FAC:	-	50%	(A/B)
6									
7						Prevalence Index worksheet:			
			0	= Total Cover		Total % Cover of:		Multiply by:	
	50% of total cover:	0		of total cover:	0	OBL species			
Sapling / Shrub Stratum	(Plot size: 30' Radius	)				FACW species	_ x 2 =		_
Ligustrum sinense				<u> </u>			_ x 3 =		_
2. Juniperus virginiana						FACU species			
						Column Totals:	_ (A)		(B)
						4			
6						Prevalence Index	C = B/A = 0		_
7									
8						Hydrophytic Vegetation Indicate	rs:		
9						1 - Rapid Test for		=	
				= Total Cover		2 - Dominance To			
	50% of total cover:	12.5	20%	of total cover:	5	3 - Prevalence In			
						4 - Morphologica			
Herb Stratum	(Plot size: 30' Radius	)				supporting data in			
Microstegium vimineu	m		25	<u> </u>	FAC	Problematic Hydi			ain)
2. Lonicera japonica				<u> </u>	FACU	Indicators of hydric soil and wetla	and hydrol	ogy must	
3. <u>Ligustrum sinense</u>					FAC	be present, unless disturbed or pre	oblematic.		
4. Allium vineale					FACU	Definitions of Vegetation Strata:			
5. Juniperus virginiana					FACU	4			
						Tree - Woody plants, excluding wo	ody vines	5,	
						approximately 20 ft (6 m) or more	in height a	and 3 in.	
						(7.6 cm) or larger in diameter at bi	east heigl	ht (DBH).	
						4			
10						Sapling/Shrub - Woody plants, ex	_	-	
11						a less than 3in. DBH and greater t	han or equ	ual to 3.28 ft (1 n	n ) tall.
12						4			
			47	= Total Cover		Herb - All herbaceous (non-wood)	/) plants, r	egardless	
	50% of total cover:	23.5	20%	of total cover:	9.4	of size, and woody plants less that	n 3.28 ft. t	all	
Woody Vine Stratum	(Plot size: 30' Radius	)							
1						Woody vine - All woody vines, gre	ater than	3.28 ft. in height	
2						1			
3						1			
4						1			
5						4			
			0	= Total Cover					
	50% of total cover:	0	20%	of total cover:	0				
						Hydrophytic			
						Vegetation			
						Present? Ye	s	No <u>X</u>	_
Remarks: (Include photo	numboro boro er en e	oroto aba-t	4)			1 1			
, ,	os within the sample plot.	uiuio 31100	.,.						

SOIL Sampling Point: DCP-12

Profile Description	on: (Describe to the	depth needed	d to document the ir	dicator or co	onfirm the a	bsence of	indicators.)	
Donth	A A a tuis -			Podov Fast	.00			
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Featur %	res Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-7	10YR 3/2	90	10YR 6/4	10	С	M	clay loam	Nomano
7-20	10YR 5/2	90	10YR 6/8	10	С	М	loamy clay	
<del></del>								
·							·	
							2	
'Type: C=concer	ntration, D=Depletion,	RM=Reduced	Matrix, CS=Covered	or Coated Sa	and Grains.		<sup>2</sup> Location: F	L=Pore Lining, M=Matrix.
Hydric Soil Indic	ators:						Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	,	-	Polyvalue Below			U)		uck (A9) (LRR O)
Histic Epipe	` '		Thin Dark Surfa					uck (A10) (LRR S)
Black Histic Hydrogen St	` '	•	Loamy Mucky N Loamy Gleyed I		LRR O)			ed Vertic (F18) <b>(outside MLRA 150A,B)</b> ont Floodplain Soils (F19) <b>(LRR P, S, T)</b>
Stratified La	` '	•	X Depleted Matrix					lous Bright Loamy Soils (F20)
	lies (A6) <b>(LRR P, T, U</b> )		Redox Dark Sui	` '			(MLRA	
	Mineral (A7) (LRR P,	T, U)	Depleted Dark S	, ,				rent Material (TF2)
	nce (A8) (LRR U)		Redox Depress	` '				nallow Dark Surface (TF12) (LRR T, U)
	(A9) <b>(LRR P, T)</b> How Dark Surface (A11		Marl (F10) (LRF Depleted Ochrid		Δ 151)		Other (	Explain in Remarks)
	Surface (A12)		Iron-Manganese		-	ο т\	<sup>3</sup> Indicat	ors of hydrophytic vegetation and
	e Redox (A16) <b>(MLRA</b>	150A)	Umbric Surface			, ',		d hydrology must be present,
	xy Mineral (S1) (LRR C		Delta Ochric (F					disturbed or problematic.
	ed Matrix (S4)		Reduced Vertic					
Sandy Redo		•	Piedmont Flood	. ,	, .	•	4500 450D)	
Stripped Mar	trix (S6) e (S7) <b>(LRR P, S, T, U</b>	٠	Anomalous Brig	int Loamy Soi	IIS (FZU) (IVIL	KA 149A, 1	1530, 1530)	
Bank Gandok	o (07) (Litter, 0, 1, 0	,						
5	*** I B					1		
Restrictive Layer	r (it observed):							
Type:	` '							
Type: Depth (inche	es):		<u> </u>			Hydric Sc	oil Present?	Yes X No
	es): 		_			Hydric Sc	oil Present?	Yes X No
	es):					Hydric Sc	oil Present?	Yes X No
Depth (inche	es):					Hydric Sc	oil Present?	Yes <u>X</u> No
Depth (inche	es):					Hydric Sc	oil Present?	Yes <u>X</u> No
Depth (inche	es): 					Hydric Sc	oil Present?	Yes <u>X</u> No
Depth (inche	ps):					Hydric Sc	oil Present?	Yes X No
Depth (inche	es):					Hydric Sc	oil Present?	Yes X No
Depth (inche	es):					Hydric Sc	oil Present?	Yes X No
Depth (inche	es):					Hydric Sc	oil Present?	Yes X No
Depth (inche	es):					Hydric So	pil Present?	Yes <u>X</u> No
Depth (inche	es):					Hydric Sc	oil Present?	Yes <u>X</u> No
Depth (inche	es):					Hydric Sc	pil Present?	Yes X No
Depth (inche	es):					Hydric Sc	pil Present?	Yes X No
Depth (inche	es):					Hydric So	oil Present?	Yes X No
Depth (inche	es):					Hydric So	oil Present?	Yes X No
Depth (inche	es):					Hydric Sc	oil Present?	Yes X No
Depth (inche	es):					Hydric So	pil Present?	Yes X No
Depth (inche	es):					Hydric So	pil Present?	Yes X No
Depth (inche	es):					Hydric Sc	pil Present?	Yes X No
Depth (inche	es):					Hydric So	oil Present?	Yes X No
Depth (inche	es):					Hydric So	pil Present?	Yes X No
Depth (inche	es):					Hydric So	pil Present?	Yes X No
Depth (inche	es):					Hydric So	oil Present?	Yes X No
Depth (inche	es):					Hydric So	pil Present?	Yes X No

# APPENDIX C SITE PHOTOGRAPHS

PROJECT NAME: Somerset County Gas Main Expansion Project

**DATE PHOTOGRAPHED:** January and March 2020



PHOTOGRAPH 1: View of Waters A, facing west.



PHOTOGRAPH 3: View of Waters C, facing west.



PHOTOGRAPH 2: View of Waters B, facing west.



**PHOTOGRAPH 4:** View of Waters D, Manokin River (tidal), facing north.

**PROJECT NAME:** Somerset County Gas Main Expansion Project

**DATE PHOTOGRAPHED:** January and March 2020



**PHOTOGRAPH 5:** View of Waters E, facing west.



**PHOTOGRAPH 7:** View of Waters G, Taylor Branch (tidal), facing west.



**PHOTOGRAPH 6:** View of Waters F, facing northwest.



**PHOTOGRAPH 8:** View of Waters H, Kings Creek (tidal), facing west.



PHOTOGRAPH 9: View of Wetland 1, facing northeast.



**PHOTOGRAPH 11:** View of Wetland 3, facing northwest.



**PHOTOGRAPH 10:** View of Wetland 2, facing north.



**PHOTOGRAPH 12:** View of Wetland 4, facing south.



**PHOTOGRAPH 13:** DCP-1, overview.



**PHOTOGRAPH 15:** DCP-2, overview.



**PHOTOGRAPH 14:** DCP-1, soil sample.



**PHOTOGRAPH 16:** DCP-2, soil sample.



**PHOTOGRAPH 17:** DCP-3, overview.



**PHOTOGRAPH 19:** DCP-4, overview.



**PHOTOGRAPH 18:** DCP-3, soil sample.



**PHOTOGRAPH 20:** DCP-4, soil sample.



PHOTOGRAPH 21: DCP-5, overview.



**PHOTOGRAPH 23:** DCP-6, overview.



PHOTOGRAPH 22: DCP-5, soil sample.



**PHOTOGRAPH 24:** DCP-6, soil sample.



**PHOTOGRAPH 25:** DCP-7, overview.



**PHOTOGRAPH 27:** DCP-8, overview.



**PHOTOGRAPH 26:** DCP-7, soil sample.



**PHOTOGRAPH 28:** DCP-8, soil sample.



PHOTOGRAPH 29: DCP-9, overview.



**PHOTOGRAPH 31:** DCP-10, overview.



**PHOTOGRAPH 30:** DCP-9, soil sample.



**PHOTOGRAPH 32:** DCP-10, soil sample.



**PHOTOGRAPH 33:** DCP-11, overview.



**PHOTOGRAPH 35:** DCP-12, overview.



PHOTOGRAPH 34: DCP-11, soil sample.



PHOTOGRAPH 36: DCP-12, soil sample.

## APPENDIX D WETLAND DELINEATION PLAN

DATE	REVISION	BY

### PROJECT DATA: 1. PROJECT LOCATION:

CITY: PRINCESS ANNE
COUNTY: SOMERSET
STATE: MARYLAND

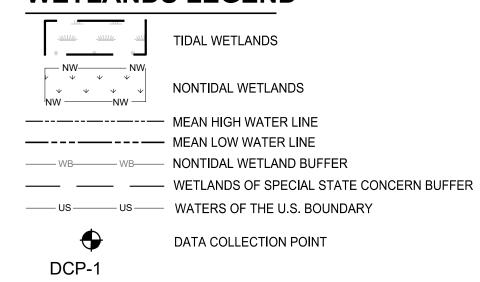
2. PROJECT INVOLVES THE FOLLOWING:

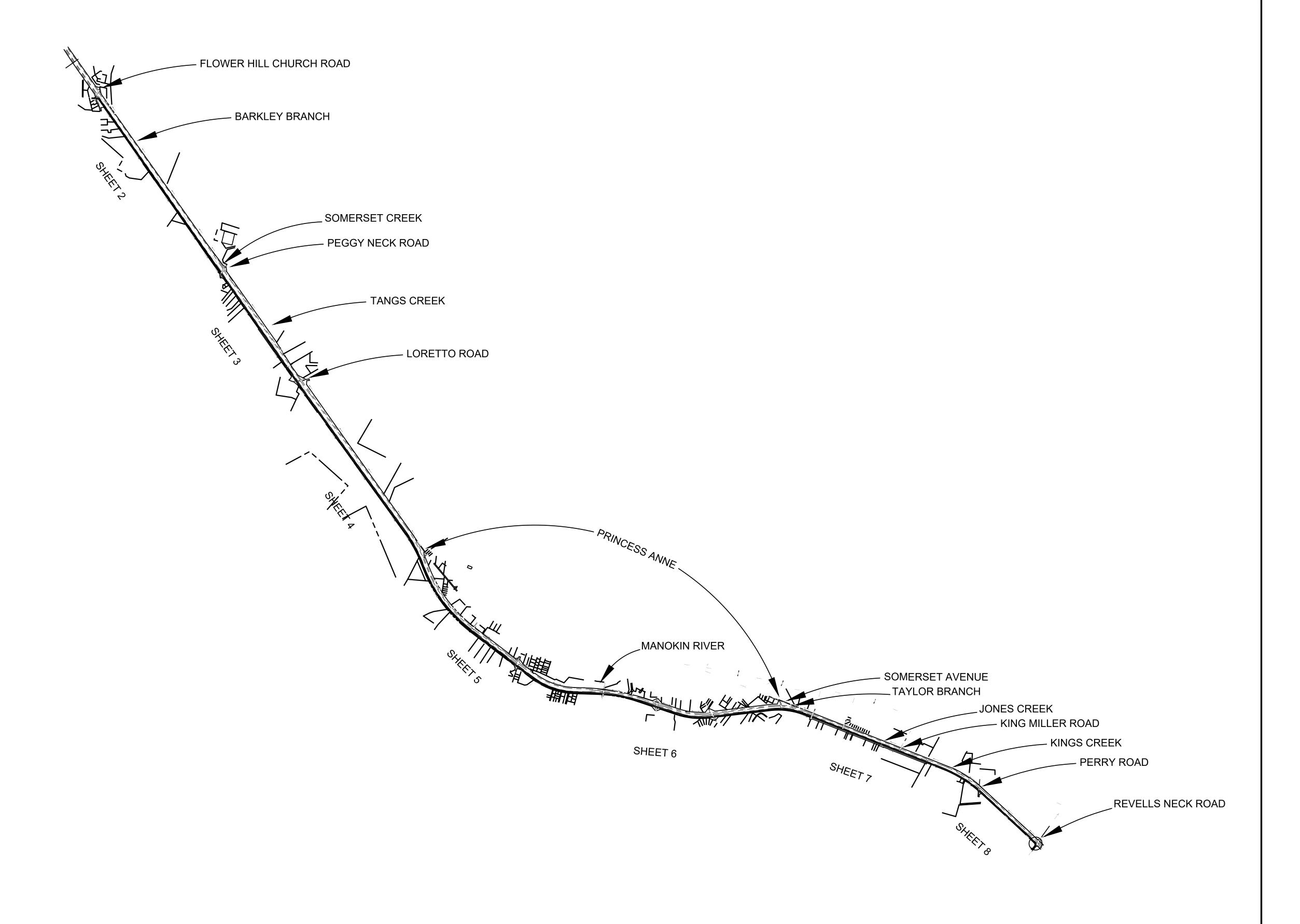
NEW MAIN: 51,550 L.F. 6" (CS)

3. DESIGN IS IN ACCORDANCE WITH ANSI B31.8b AND NATURAL GAS PIPELINE SAFETY ACT OF 1968

4. DRAWING REFERENCES:
MARYLAND SHA ROW PLANS
MARYLAND TAX MAPS

### **WETLANDS LEGEND**





WETLAND DELINEATION PLAN
REVISED MARCH 18, 2020 TO INCLUDE ADDITIONAL
WETLAND DELINEATION INFORMATION

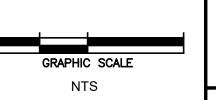


GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MD 21009

TEL: (410) 515-9446 FAX: (410) 515-4895
MRAGTA.COM





500 ENERGY LANE, SUITE 100 ● DOVER, DE 19901

32145 BEAVER RUN DRIVE • SALISBURY, MD 21804

CONCEPT SOMERSET COUNTY
GAS MAIN EXPANSION
SCHEMATIC DESIGN DRAWING
(PRINCESS ANNE, MARYLAND)

DRAWN BY JDT 5/20/2019
APPROVED PROJECT NO.

2019.121.00 SHEET 1 OF 8

