

Wetland Delineation and Chesapeake Bay Preservation Report

Jenkins Neck Road

Gloucester County Tax Map #: 53-216B

Hayes, VA 23072



Prepared for:

Peggy Pitts

1738 Jenkins Neck Road

Hayes, VA 23072

Prepared by:

Rick Harris

VA PWD #: 3402000173

COVA Environmental

1785 North Muddy Creek Road

Virginia Beach, VA 23456

August 28, 2023



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1 Introduction and Executive Summary

Coastal Virginia Environmental Services, Inc. (COVA Environmental) has been contracted by Peggy Pitts to complete a wetland delineation for a property located along Jenkins Neck Road in Hayes, VA (Gloucester County). The property currently does not have an assigned address but can be identified by its assigned Gloucester County Tax Map #: 53-216B and Gloucester County RPC #: 15017. The study area for this wetland delineation consists of the entirety of this parcel of land that was determined to be approximately 2.64 acres. The study area contains mostly forested land and a tidal saltmarsh was observed within the northern portion.

COVA Environmental personnel conducted the site investigation for the wetland delineation on August 25, 2023. Our initial findings from the wetland delineation identified approximately 2.49 acres of wetlands located throughout the majority of the study area. The wetlands were mostly comprised forested wetlands and estuarine wetlands consisting of a tidal saltmarsh were observed within the northern wetlands. Approximately 0.15 acres of uplands were observed within the southeast corner of the study area. The uplands consisted of forested land located upon a slightly convex landscape that appeared to be man-made via former fill activities. A remnant ditch was observed within the western half of the study area that was approximately 237 linear feet. This remnant ditch was overgrown with vegetation, but did appear to at least partially drain the immediate vicinity. This wetland delineation is considered preliminary until ultimately confirmed by the U.S. Army Corps of Engineers (USACE) and/or Virginia Department of Environmental Quality (VDEQ). However, the site conditions depicted within Exhibit 2, Appendix 3 illustrate the findings observed by COVA Environmental during the site investigation.

The wetlands observed throughout the study area will most likely be regulated under the Chesapeake Bay Preservation Act (CBPA) and most likely require 50-foot seaward and 100-foot landward Resource Protection Area (RPA) buffers. The wetlands encompass the majority of the study area; therefore, the entire study area is located within the 50-foot seaward and 100-foot landward RPA buffers. The CBPA is a program designed to improve water quality in the Chesapeake Bay and other waters of Virginia by requiring the use of effective land management and land use planning. The CBPA requires RPA buffering around regulated wetland features that limit vegetation clearing, certain development, and other activities. These regulated features usually include tidal wetlands, perennial streams, and other connected and contiguous wetlands associated with tidal areas or perennial streams. We recommend coordination with Gloucester County to confirm the CBPA/RPA findings described within this report.

The wetland delineation was completed using the routine determination method found in the *1987 Corps of Engineers Wetlands Delineation Manual* and in accordance with procedures and criteria described in the *Atlantic and Gulf Coastal Plain Regional Supplement (Version 2, Nov. 2010)*. The methodology used for the wetland delineation is designed to determine whether portions of the study area meet all three technical parameters for wetland classification; these three technical parameters consist of wetland hydrology, hydrophytic vegetation, and hydric soil. Prior to completing the field investigation portion of the wetland delineation, COVA Environmental conducted extensive research of all available background resources to gain a better understanding of the study area and its vicinity.

These background resources include the USGS topographic map, USFWS National Wetlands Inventory

mapping, local Soil Survey provided by NRCS, LiDAR elevation data, and other available sources. The data obtained from the field investigation and background resources was analyzed thoroughly to complete the wetland delineation and determine the limits of wetlands within the study area. The data, analysis, and findings are described in detail below.

2 Background Research

2.1 USGS Topographical Map

The *USGS Achilles, VA Topographical Quadrangle* was used to produce the topographical map (Exhibit 1, Appendix 3) that illustrates many details of the study area and its vicinity. The study area is depicted at elevations situated between 0 and 5 feet above sea level. The study area is located upon the Jenkins Neck marine terrace landform that dominates much the immediate vicinity. A perennial drainage feature is depicted along the northern study area boundary that drains in a northeastern direction into Monday Creek. The study area is depicted as mostly vegetated with no structures within its limits. Jenkins Neck Road is illustrated along the southern study area boundary.

2.2 LiDAR Map

Light Detection and Ranging (LiDAR) data is typically gathered by an airborne system that measures distances between ground features and the on-board sensor with pulsed laser lights. These measurements of the laser light return data are used to create 3D representations of ground features like houses and trees and can also accurately depict soil surface characteristics to display elevation, slope, and gradients across a given landscape. LiDAR maps can be particularly useful for wetland delineations by identifying low-lying areas, flat landscapes, streams, and many other aspects associated with wetland identification. The LiDAR data obtained for the LiDAR map (Exhibit 3, Appendix 3) has been enhanced to illustrate elevations through a color spectrum with the lower elevations in blue and the higher elevations in red. The LiDAR data exhibits similar conditions illustrated in the USGS topographical map, but with a more refined depiction of the study area's specific topographical characteristics. The study area is mostly comprised of a flat to very gently sloped landscape that appears to drain towards a drainage feature along the northern boundary. The drainage feature along the northern study area boundary appears to drain in a northeastern direction. A small convex landscape feature is depicted near the southern study area boundary and represented via the orange and red colors.

2.3 National Wetlands Inventory Map

The National Wetlands Inventory (NWI) is produced by the U.S. Fish and Wildlife Service (USFWS) with digital map data and other resources to provide the public with an estimate of the nation's total wetland resources. The NWI mapped wetlands are displayed by wetland classification and illustrate the extent of each wetland class. It is important to note that the USFWS issues a limitation disclaimer on this data that states their mapped wetland resources are prepared from the analysis of high-altitude imagery and a margin of error is inherent in the use of imagery. Thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis. The NWI map produced by COVA Environmental (Exhibit 4, Appendix 3) identifies four wetland classifications throughout the study area. The PFO4R wetland classification is for a palustrine wetland system that is forested and dominated by needle-leaved

evergreen vegetation. The water regime is characterized as being seasonally flooded-tidal; meaning, tidal fresh surface water is present for extended periods (generally for more than a month) during the growing season, but is absent by the end of the season in most years. When surface water is absent, the depth to substrate saturation may vary considerably among sites and among years. The PFO4S wetland classification is for a palustrine wetland system that is forested and dominated by needle-leaved evergreen vegetation. The water regime is characterized as being temporarily flooded-tidal; meaning, tidal fresh surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for the most of the season. The PSS4S wetland classification is for a palustrine wetland system that contains a scrub-shrub landscape dominated by needle-leaved evergreen vegetation. The water regime is characterized as being temporarily flooded-tidal; meaning, tidal fresh surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for the most of the season. The E2EM1P wetland classification is for an estuarine wetland system that is located within the intertidal zone and dominated by emergent vegetation characterized by herbaceous hydrophytes that normally remain standing at least until the beginning of the next growing season. The water regime is characterized as being irregularly flooded; meaning, tides flood substrate less often than daily.

2.4 NRCS Soil Survey Map

Soil Surveys are produced by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS). The NRCS Soil Survey map (Exhibit 5, Appendix 3) created by COVA Environmental displays GIS soil survey data and information procured from the NRCS. This soil survey data is provided in part to assist landowners for silvicultural, agricultural, and other developmental activities. The soil survey map data for Gloucester County, VA obtained from the NRCS lists two soil series within the study area. The Lumbee sandy loam (Soil Map Unit: 16) is a 0 to 2 percent sloped soil that is composed of 85 percent Lumbee/similar soils and 10 percent minor components. The typical Lumbee soil profile for this soil series is characterized as having a sandy loam surface layer down to approximately 9 inches below the soil surface, and sandy clay loam layer from 9 to 29 inches below the soil surface, and is underlain by a sandy layer from 29 to 60 inches below the soil surface. This soil series is typically found within flat landforms across linear landscapes and is comprised of marine deposit parent materials. The natural drainage class of this soil series is rated as poorly drained. The Sulfaquents (Soil Map Unit: 30) is a 0 to 2 percent sloped soil that is composed of 90 percent Sulfaquents/similar soils and 10 percent minor components. The typical Sulfaquents soil profile for this soil series is characterized as having a mucky silty clay loam surface layer down to approximately 20 inches below the soil surface, and mucky silty clay layer from 20 to 60 inches below the soil surface, and is underlain by a mucky silty clay loam layer from 60 to 80 inches below the soil surface. This soil series is typically found within saltmarsh landforms across linear landscapes and is comprised of marine deposit parent materials. The natural drainage class of this soil series is rated as very poorly drained and is frequently flooded. Both soil series is listed on the NRCS's list of hydric soils for Gloucester County, VA meaning it possesses the potential to be hydric.

3 Wetland Delineation Findings

3.1 Wetlands

The wetland delineation field investigation resulted in identifying approximately 2.49 acres of wetlands located throughout the majority of the study area. The wetlands were mostly comprised forested wetlands and estuarine wetlands consisting of a tidal saltmarsh were observed within the northern wetlands.

3.1.1 Forested Wetlands

The wetland delineation field investigation resulted in identifying approximately 1.73 acres of forested wetlands located throughout the majority of the study area. The forested wetlands were dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the herbaceous stratum with *Phragmites australis*. The forested wetlands were located upon a flat landscape that was situated upon a marine terrace landform. These forested wetlands were lower than the uplands located to the south, but higher than the estuarine wetlands located to the north. The forested wetland soil profile displayed low chroma colors throughout the upper 24 inches of the soil surface. Redoximorphic features were observed beginning at 6 inches below the soil surface. The dominant vegetation within the forested wetlands consisted of loblolly pine (*Pinus taeda*), wax myrtle (*Morella cerifera*), eastern baccharis (*Baccharis halimifolia*), and common reed (*Phragmites australis*). The dominance test hydrophytic vegetation indicator was met throughout the forested wetlands and therefore qualified for the hydrophytic vegetation parameter. The depleted below dark surface and depleted matrix hydric soil indicators were observed throughout the forested wetlands and the hydric soil parameter was met. No primary wetland hydrology indicators were observed throughout the forested wetlands. The geomorphic position and FAC-Neutral test secondary wetland hydrology indicators were observed throughout the forested wetlands. The wetland hydrology parameter was met throughout the forested wetlands.

3.1.2 Estuarine Wetlands

The wetland delineation field investigation resulted in identifying approximately 0.76 acres of estuarine wetlands located throughout the northern portion of the study area. The estuarine wetlands consisted of a tidal saltmarsh dominated by salt-tolerant species. The landscape was relatively flat and situated within a concave position relative to the southern portions of the study area. The hydrology was characteristic of a tidal saltmarsh system situated between the intertidal and high marsh zone. The soil profile displayed low chroma colors throughout the upper 24 inches of the soil surface. Redoximorphic features were observed beginning at 8 inches below the soil surface. A muck presence was observed within the uppermost soil layer and a hydrogen sulfide odor was observed throughout the soil profile. The dominant vegetation within the estuarine wetlands consisted of marsh elder (*Iva frutescens*), smooth cordgrass (*Spartina alterniflora*), and saltmeadow cordgrass (*Spartina patens*). The dominance test hydrophytic vegetation indicator was met throughout the estuarine wetlands and therefore qualified for the hydrophytic vegetation parameter. The hydrogen sulfide, muck presence, depleted below dark surface, and depleted matrix hydric soil indicators were observed throughout the estuarine wetlands and the hydric soil parameter was met. The surface water, high water table, saturation, drift deposits, aquatic fauna, hydrogen sulfide odor, and oxidized rhizospheres along living roots primary wetland hydrology indicators were observed. The geomorphic position and FAC-Neutral

test secondary wetland hydrology indicators were observed. The hydrology parameter was met throughout the estuarine wetlands.

3.2 Uplands

The wetland delineation field investigation resulted in identifying approximately 0.15 acres of uplands observed throughout the southeast portion of the study area. The uplands were forested and dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the shrub stratum with wax myrtle (*Morella cerifera*). The uplands were located upon a slightly convex landscape that was gently sloped and situated a couple feet higher than the wetlands adjacently located to the north. The convex landscape in this area appeared to be man-made via former fill activities. A remnant ditch was observed adjacently to the west that appeared to at least partially drain the immediate vicinity. The upland soil profile displayed both high and low chroma colors throughout the upper 11-13 inches of the soil surface and only low chroma colors below. Redoximorphic features were observed beginning between 13 to 15 inches below the soil surface. The upper 16 to 18 inches of the soil surface exhibited variations in the soil matrix colors and textures, suggesting potential soil disturbance formerly occurred in this area.

The dominant vegetation within the forested uplands consisted of loblolly pine (*Pinus taeda*), wax myrtle (*Morella cerifera*), poison ivy (*Toxicodendron radicans*), and greenbrier (*Smilax rotundifolia*). The dominance test hydrophytic vegetation indicator was met throughout the forested uplands and therefore qualified for the hydrophytic vegetation parameter. No hydric soil indicators were observed throughout the forested uplands and the hydric soil parameter was not met. No primary or secondary wetland hydrology indicators were observed throughout the forested uplands and the wetland hydrology parameter was not met.

3.3 Remnant Ditch

The wetland delineation field investigation resulted in identifying a remnant ditch within the western half of the study area that was approximately 237 linear feet. This ditch was approximately 2 to 3 feet wide and 3 to 4 feet deep. An ordinary high water mark was observed throughout the ditch. However, no surface water was observed within the ditch at the time of the site investigation. The remnant ditch was overgrown with vegetation but appeared to at least partially drain the immediate vicinity.

3.4 Chesapeake Bay Preservation Act Compliance

The Chesapeake Bay Preservation Act (CBPA) is a program designed to improve water quality in the Chesapeake Bay and other waters of Virginia by requiring the use of effective land management and land use planning. The CBPA requires Resource Protection Area (RPA) buffering around regulated wetland features that limit vegetation clearing, certain development, and other activities. The typical buffer limits usually include a 50-foot seaward buffer and a 100-foot landward buffer around identified regulated features. These regulated features usually include tidal wetlands, perennial streams, and other connected and contiguous wetlands associated with tidal areas or perennial streams.

The wetlands observed within the study area will most likely be regulated under the CBPA and most likely require 50-foot seaward and 100-foot landward RPA buffers. The wetlands encompass the majority of the study area; therefore the entire study area is located within the 50-foot seaward and 100-foot landward RPA buffers. We recommend coordination with Gloucester County to confirm the CBPA/RPA findings described within this report.

4 Conclusions

The wetland delineation identified approximately 2.49 acres of wetlands located throughout the majority of the study area. The wetlands were mostly comprised forested wetlands and estuarine wetlands consisting of a tidal saltmarsh were observed within the northern wetlands. Approximately 0.15 acres of uplands were observed within the southeast corner of the study area. The uplands consisted of forested land located upon a slightly convex landscape that appeared to be man-made via former fill activities. A remnant ditch was observed within the western half of the study area that was approximately 237 linear feet. This remnant ditch was overgrown with vegetation, but did appear to at least partially drain the immediate vicinity.

This wetland delineation is considered preliminary until ultimately confirmed by the U.S. Army Corps of Engineers (USACE) and/or Virginia Department of Environmental Quality (VDEQ). However, the site conditions depicted within Exhibit 2, Appendix 3 illustrate the findings observed by COVA Environmental during the site investigation. Jurisdictional wetlands and other Waters of the U.S. features are regulated under section 404 and 401 of the Clean Water Act. Filling, excavating, grading, and other activities in wetlands and/or Waters of the U.S. require permits from appropriate government agencies. Unauthorized activity in wetlands is subject to violation.

The wetlands observed within the study area will most likely be regulated under the Chesapeake Bay Preservation Act (CBPA) and most likely require 50-foot seaward and 100-foot landward Resource Protection Area (RPA) buffers. The wetlands encompass the majority of the study area; therefore the entire study area is located within the 50-foot seaward and 100-foot landward RPA buffers. We recommend coordination with Gloucester County to confirm the CBPA/RPA findings described within this report.

Appendix 1: Site Information

Wetland Delineation Site Information

Jenkins Neck Road Wetland Delineation

Gloucester County Tax Map #: 53-216B

Gloucester County RPC #: 15017

(2.64 acres)

Hayes, VA 23072

Latitude/ Longitude in Decimal Degrees using coordinate plane (NAD 1983)

37.266555° North / -76.401968° West (approximate center of the study area)

Has a previous delineation or JD been performed?

It is unknown if a previous JD has been issued.

Hydrologic Unit Code (HUC)

8-Digit HUC – 02080102 (Great Wicomico - Piankatank)

10-Digit HUC – 0208010204 (Frontal Lower Chesapeake Bay - Mobjack Bay)

12-Digit HUC – 020801020407 (Frontal Mobjack Bay - Severn River)

USGS Topographic Sheet

USGS Achilles, VA Topographical Quadrangle

Nearest Waterbody

The nearest named waterbody is Monday Creek located along the northern study area boundary

Delineation Methods

- U.S. Army Corps of Engineers 1987 Wetland Delineation Manual in conjunction with Atlantic and Gulf Coastal Plain Regional Supplement (Version 2, Nov. 2010)

- Atlantic and Gulf Coastal Plain 2016 Regional Wetland Plant List (published April 28, 2016)

On-Site Investigation Date

Wetland boundary delineation and site data collection conducted on August 25, 2023

Wetland Delineation Plan

The proposed wetland boundaries and Data Sampling Point locations are depicted on the plan entitled Exhibit 2: Site Map prepared by Rick Harris on August 26, 2023

100-Year Floodplains

As depicted on the Federal Emergency Management Agency's (FEMA) on-line Flood Insurance Rate Map #51073C0220F, effective on 10/21/2021, the study area is located within Zone AE, characterized as an area of high flood hazard with a base flood elevation of 7 feet.

USDA Soil Survey

Soil Survey information for the study area is described in detail within section 2.4 of the included report and illustrated in Exhibit 5, Appendix 3. The full soil series information obtained from the USDA's NRCS for all identified soils within the study area are included with this site information summary.

Waters Table:

Wetland/Water	Latitude	Longitude	Cowardin Class	Area (Acres) / Length (feet)	
1	37.267107°N	-76.402047°W	E2EM1P	0.76 acres	Tidal
2	37.266489°N	-76.401963°W	PFO4R	1.73 acres	Non-Tidal
3	37.266351°N	-76.402079°W	R4SBCx	237 linear feet	Non-Tidal

Waters Table Notes:

The #1 wetland feature listed above represents the estuarine, tidal saltmarsh wetlands observed throughout the northern study area.

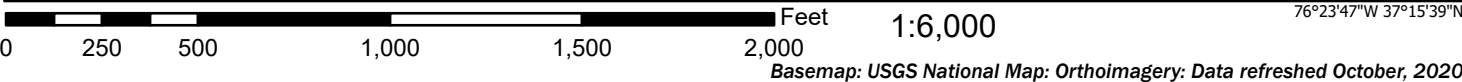
The #2 wetland feature listed above represents the forested wetlands observed throughout the majority of the study area.

The #3 waters feature listed above represents the ditch within the study area.

National Flood Hazard Layer FIRMMette



76°24'24"W 37°16'8"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/2/2023 at 12:04 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Gloucester County, Virginia

16—Lumbee sandy loam

Map Unit Setting

National map unit symbol: 3zs1

Elevation: 20 to 350 feet

Mean annual precipitation: 40 to 55 inches

Mean annual air temperature: 57 to 61 degrees F

Frost-free period: 165 to 196 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Lumbee and similar soils: 85 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lumbee

Setting

Landform: Flats

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Marine deposits

Typical profile

H1 - 0 to 9 inches: sandy loam

H2 - 9 to 29 inches: sandy clay loam

H3 - 29 to 60 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Minor Components

Lumbee variant

Percent of map unit: 5 percent

Landform: Flats

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Meggett

Percent of map unit: 5 percent

Landform: Marine terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Gloucester County, Virginia

Survey Area Data: Version 18, Aug 26, 2022

Gloucester County, Virginia

30—Sulfaquents, frequently flooded

Map Unit Setting

National map unit symbol: 3zsq

Elevation: 0 to 50 feet

Mean annual precipitation: 40 to 55 inches

Mean annual air temperature: 57 to 61 degrees F

Frost-free period: 165 to 196 days

Farmland classification: Not prime farmland

Map Unit Composition

Sulfaquents and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sulfaquents

Setting

Landform: Salt marshes

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Marine deposits

Typical profile

H1 - 0 to 20 inches: mucky silty clay loam

H2 - 20 to 60 inches: mucky silty clay

H3 - 60 to 80 inches: mucky silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Very frequent

Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydrologic Soil Group: D

Hydric soil rating: Yes

Minor Components

Fluvaquents

Percent of map unit: 10 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Gloucester County, Virginia

Survey Area Data: Version 18, Aug 26, 2022

Appendix 2: Photographs



Photograph 1: Aerial drone imagery of the study area and immediate vicinity



Photograph 2: Aerial drone imagery of the study area's forested landscape



Photograph 3: Aerial drone imagery of the eastern vicinity



Photograph 4: Aerial drone imagery of the western vicinity



Photograph 5: Aerial drone imagery of the northern vicinity



Photograph 6: Aerial drone imagery of the southern vicinity



Photograph 7: Aerial drone imagery of the tidal drainage feature along the northern study area boundary



Photograph 8: Aerial drone imagery of Monday Creek located to the north



Photograph 9: Representative view of the forested uplands within the study area



Photograph 10: Representative view of the soil profile within the study area's forested uplands



Photograph 11: Representative view of the remnant ditch within the study area



Photograph 12: Representative view of the forested wetlands within the study area



Photograph 13: Representative view of the forested wetlands near the boundary of the estuarine wetlands



Photograph 14: Representative view of the estuarine, tidal saltmarsh wetlands along the northern study area boundary



Photograph 15: Representative view of Jenkins Neck Road along the southern study area boundary

Appendix 3: Exhibit Maps



Exhibit 1: USGS Topographical Map, Jenkins Neck Road Wetland Delineation, Hayes, VA

Source: USGS Achilles, VA Topographical Quadrangle

Legend



Study Area ~ 2.64 acres

COVA Project #: 2023-039
Date: 08/10/2023
Created By: Rick Harris
VA PWD #: 3402000173



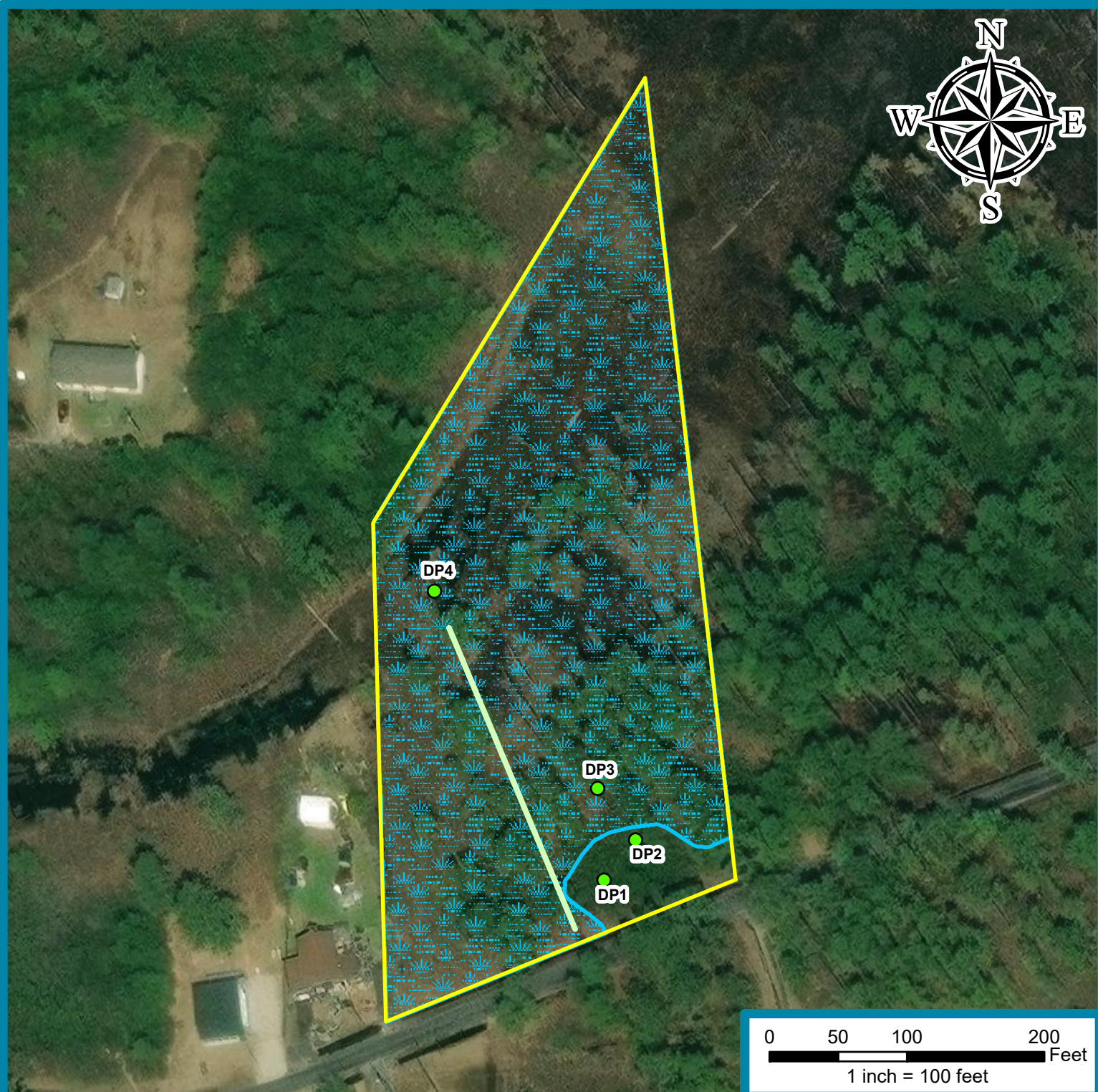


Exhibit 2: Site Map, Jenkins Neck Road Wetland Delineation, Hayes, VA

Source: ESRI GIS User Community Aerial Basemap; Delineation Data Collected via Trimble R1 GNSS Sub-Meter Receiver

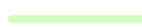
Legend



Study Area ~ 2.64 acres



Wetlands ~ 2.49 acres



Remnant Ditch ~ 237 linear feet



Data Point

COVA Project #: 2023-039
Date: 08/26/2023
Created By: Rick Harris
VA PWD #: 3402000173



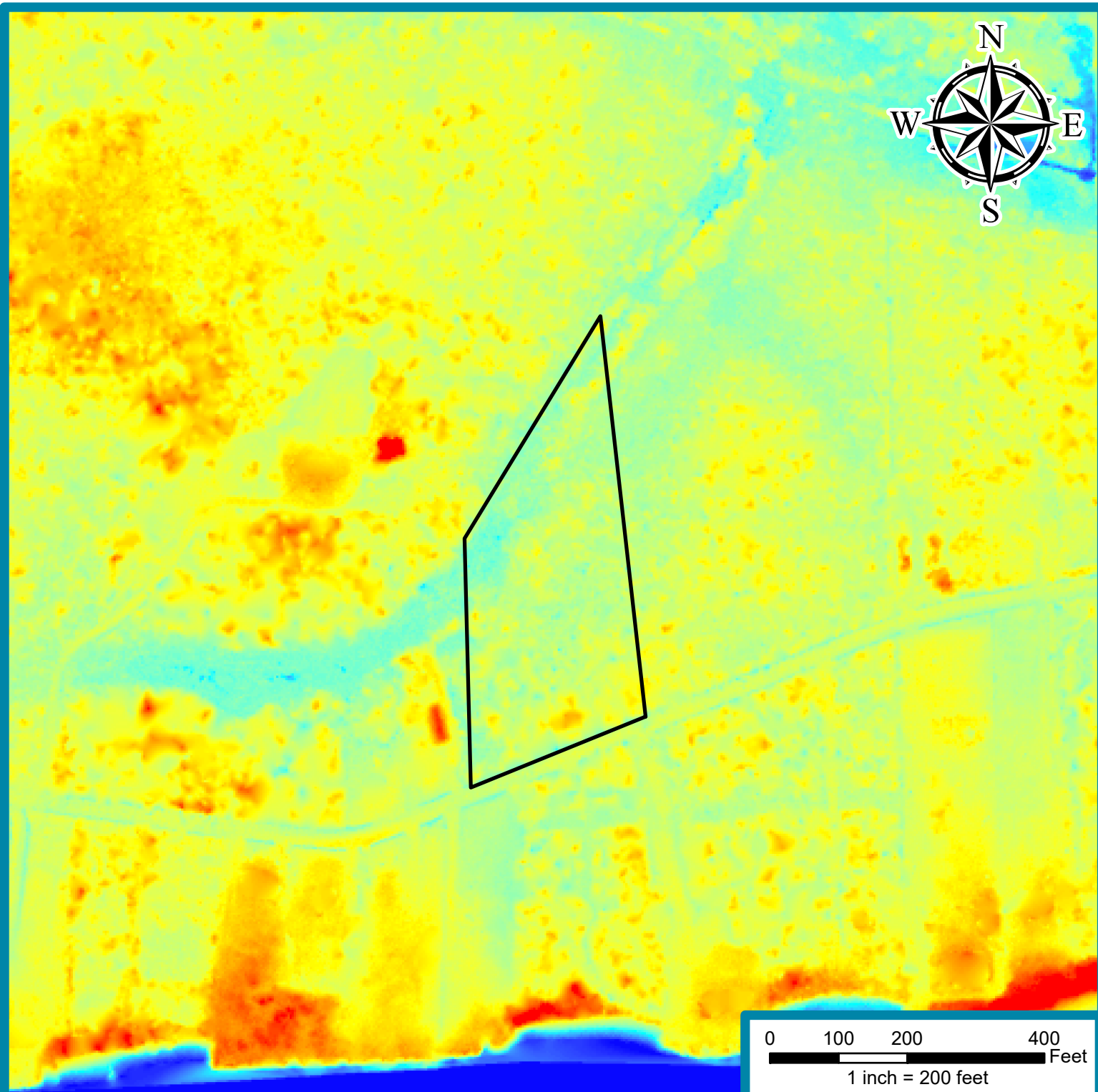


Exhibit 3: LiDAR Map, Jenkins Neck Road Wetland Delineation, Hayes, VA

Source: USGS CMGP Chesapeake Bay Topobathy VA 2015 DEM LiDAR Data

Legend



Study Area ~ 2.64 acres



COVA Project #: 2023-039
Date: 08/10/2023
Created By: Rick Harris
VA PWD #: 3402000173



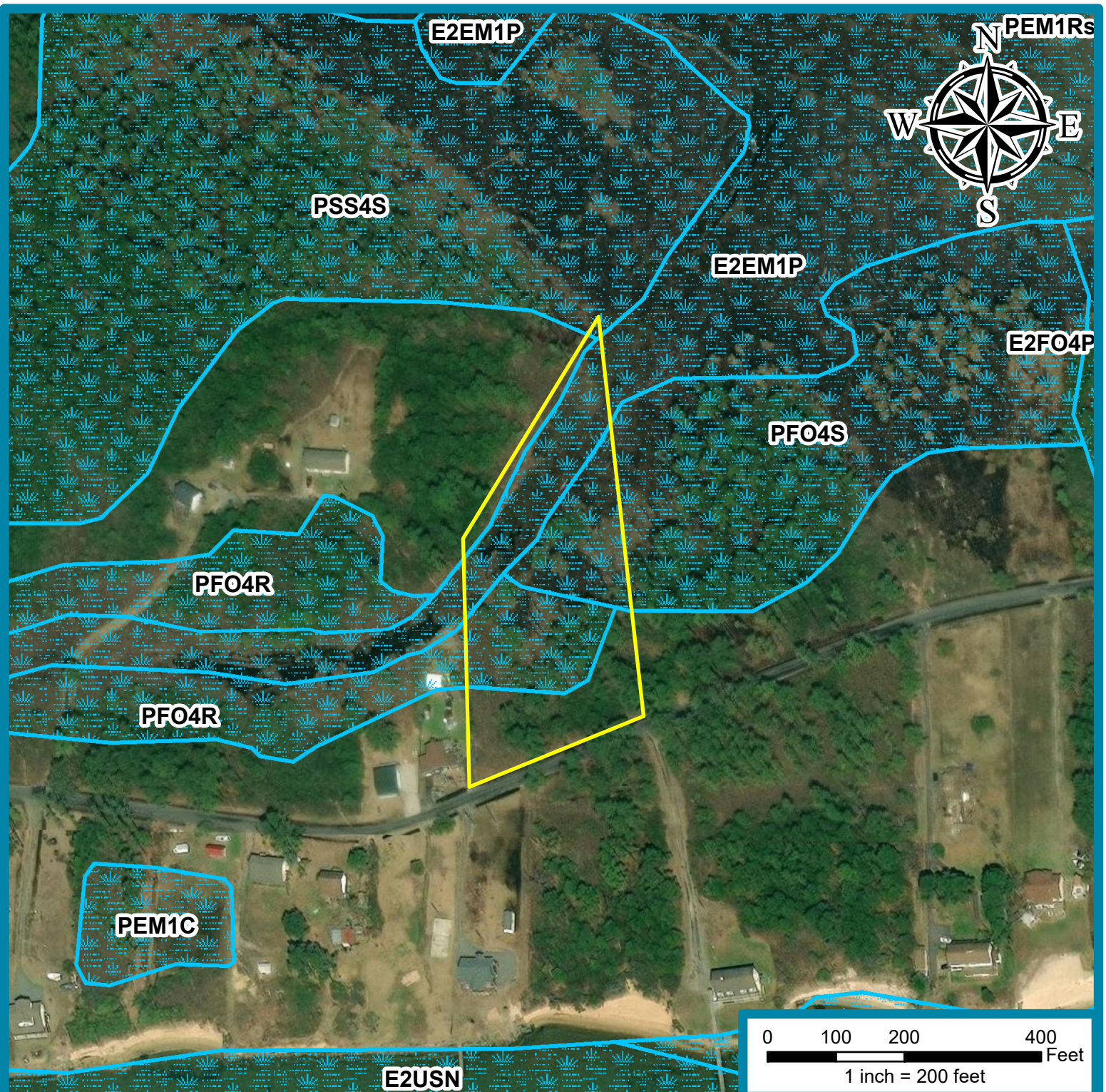
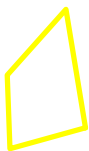


Exhibit 4: National Wetlands Inventory Map, Jenkins Neck Road Wetland Delineation, Hayes, VA

Source: ESRI GIS User Community Aerial Basemap; USFWS NWI shapefile for Virginia

Legend



Study Area ~ 2.64 acres



NWI Wetlands

COVA Project #: 2023-039
Date: 08/10/2023
Created By: Rick Harris
VA PWD #: 3402000173



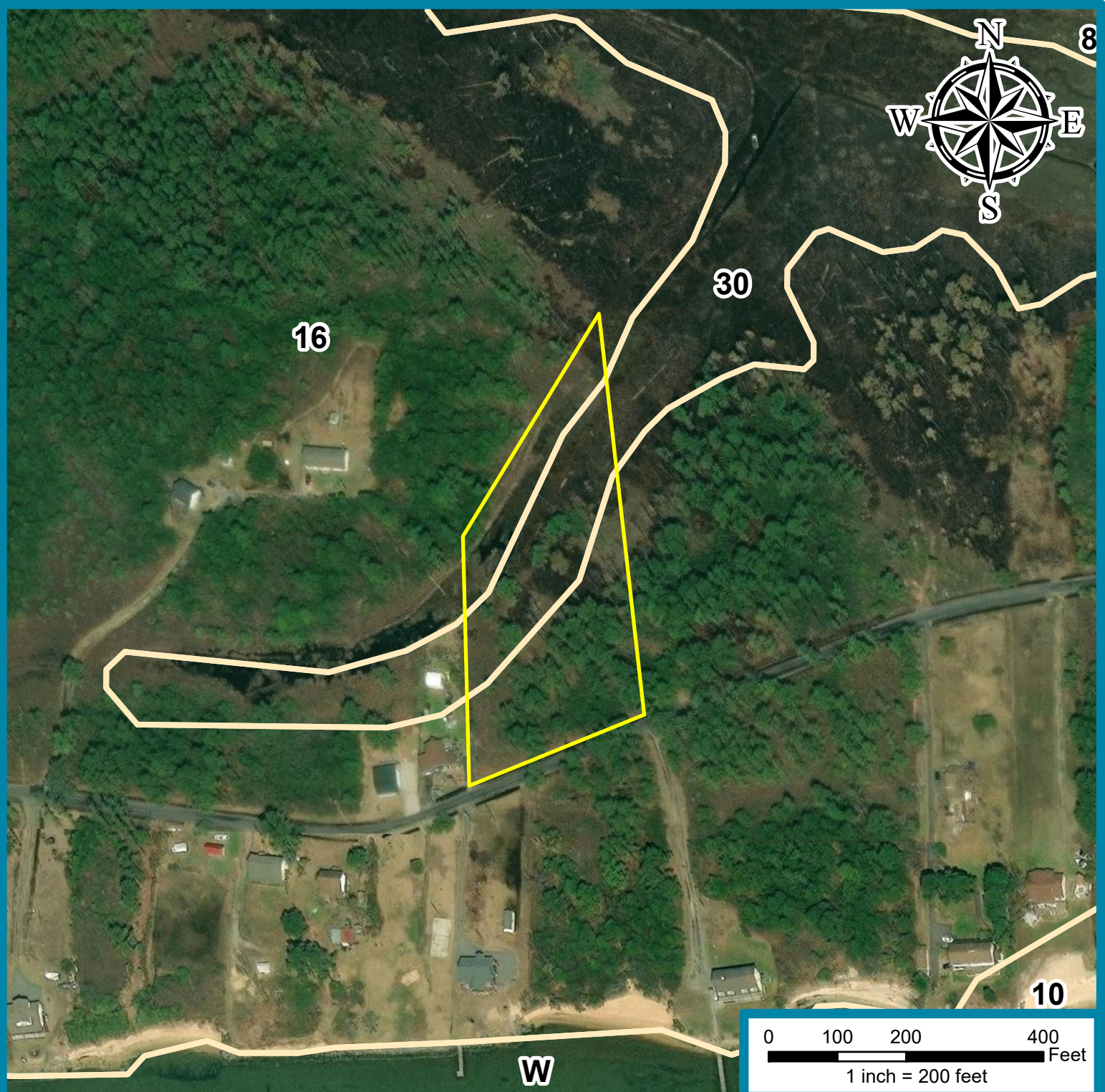
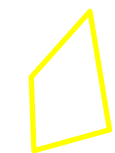


Exhibit 5: NRCS Soil Survey Map, Jenkins Neck Road Wetland Delineation, Hayes, VA

Source: ESRI GIS User Community Aerial Basemap; NRCS Soil Survey shapefile for Gloucester County, VA

Legend



Study Area ~ 2.64 acres



Soil Map Unit Boundary

16 — Lumbee sandy loam
30 — Sulfaquents, frequently flooded

COVA Project #: 2023-039
Date: 08/10/2023
Created By: Rick Harris
VA PWD #: 3402000173



Appendix 4: Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Jenkins Neck Road (Gloucester County Tax Map #: 53-216B) City/County: Hayes (Gloucester County) Sampling Date: 08/25/2023
 Applicant/Owner: Peggy Pitts State: VA Sampling Point: DP1
 Investigator(s): COVA Environmental (Rick Harris) Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): marine terrace Local relief (concave, convex, none): slightly convex Slope (%): 1-2%
 Subregion (LRR or MLRA): LRR T Lat: 37.266110° N Long: -76.401820° W Datum: _____
 Soil Map Unit Name: 16 — Lumbee sandy loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks: The hydrophytic vegetation parameter was met. However, the hydric soil and wetland hydrology parameters were not met. The area consisted of forested uplands dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the shrub stratum with <i>Morella cerifera</i> . This area was located upon a slightly convex landscape that was gently sloped and situated a couple feet higher than the wetlands adjacently located to the north. The convex landscape in this area appeared to be man-made via former fill activities. A remnant ditch was observed adjacently to the west that appeared to at least partially drain the immediate vicinity. The soil profile displayed both high and low chroma colors throughout the upper 13 inches of the soil surface and only low chroma colors below 13 inches. Redoximorphic features were observed beginning at 15 inches below the soil surface. The upper 18 inches of the soil surface exhibited variations in the soil matrix colors and textures, suggesting potential soil disturbance formerly occurred in this area.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No ☒ Depth (inches): <u>> 24"</u> Saturation Present? Yes _____ No ☒ Depth (inches): <u>> 24"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No ☒
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No primary or secondary wetland hydrology indicators were observed. The wetland hydrology parameter was not met. This area was located upon a slightly convex landscape that was gently sloped and situated a couple feet higher than the wetlands adjacently located to the north. The convex landscape in this area appeared to be man-made via former fill activities. A remnant ditch was observed adjacently to the west that appeared to at least partially drain the immediate vicinity.		

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

 Sampling Point: DP1

Tree Stratum (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pinus taeda</u>	<u>48</u>	<u>YES</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>48</u> = Total Cover 50% of total cover: <u>24</u> 20% of total cover: <u>9.6</u>				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 = _____
Sapling/Shrub Stratum (Plot size: <u>30 foot radius</u>)				
1. <u>Morella cerifera</u>	<u>68</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Juniperus virginiana</u>	<u>6</u>	<u>NO</u>	<u>FACU</u>	
3. <u>Prunus serotina</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>79</u> = Total Cover 50% of total cover: <u>39.5</u> 20% of total cover: <u>15.8</u>				
Herb Stratum (Plot size: <u>30 foot radius</u>)				
1. <u>Toxicodendron radicans</u>	<u>11</u>	<u>YES</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Smilax rotundifolia</u>	<u>7</u>	<u>YES</u>	<u>FAC</u>	
3. <u>Morella cerifera</u>	<u>4</u>	<u>NO</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>22</u> = Total Cover 50% of total cover: <u>11</u> 20% of total cover: <u>4.4</u>				
Woody Vine Stratum (Plot size: <u>30 foot radius</u>)				
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Hydrophytic Vegetation Present? Yes ☒ No _____				

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

 The dominance test hydrophytic vegetation indicator was met for this data point and therefore qualified for the hydrophytic vegetation parameter. The landscape was forested and dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the shrub stratum with *Morella cerifera*.

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 3	10YR 3/2	100					sandy loam	
3 - 5	10YR 4/2	100					sandy loam	
5 - 13	10YR 5/3	100					sandy loam	
13 - 15	10YR 5/2	100					sandy loam	
15 - 24+	10YR 5/2	97	10YR 6/6	3	C	M	sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒**Remarks:**

The soil profile displayed both high and low chroma colors throughout the upper 13 inches of the soil surface and only low chroma colors below 13 inches. Redoximorphic features were observed beginning at 15 inches below the soil surface. The upper 18 inches of the soil surface exhibited variations in the soil matrix colors and textures, suggesting potential soil disturbance formerly occurred in this area. No hydric soil indicators were observed and the hydric soil parameter was not met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Jenkins Neck Road (Gloucester County Tax Map #: 53-216B) City/County: Hayes (Gloucester County) Sampling Date: 08/25/2023
Applicant/Owner: Peggy Pitts State: VA Sampling Point: DP2
Investigator(s): COVA Environmental (Rick Harris) Section, Township, Range: _____
Landform (hillslope, terrace, etc.): marine terrace Local relief (concave, convex, none): slightly convex Slope (%): 1-2%
Subregion (LRR or MLRA): LRR T Lat: 37.266194° N Long: -76.401747° W Datum: _____
Soil Map Unit Name: 16 — Lumbee sandy loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes _____ No ☒
Hydric Soil Present? Yes _____ No ☒	
Wetland Hydrology Present? Yes _____ No ☒	
Remarks: The hydrophytic vegetation parameter was met. However, the hydric soil and wetland hydrology parameters were not met. The area consisted of forested uplands dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the shrub stratum with <i>Morella cerifera</i> . This area was located upon a slightly convex landscape that was gently sloped and situated a couple feet higher than the wetlands adjacently located to the north. The convex landscape in this area appeared to be man-made via former fill activities. The soil profile displayed both high and low chroma colors throughout the upper 11 inches of the soil surface and only low chroma colors below 11 inches. Redoximorphic features were observed beginning at 13 inches below the soil surface. The upper 16 inches of the soil surface exhibited variations in the soil matrix colors and textures, suggesting potential soil disturbance formerly occurred in this area.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Marl Deposits (B15) (LRR U)	☐ Sparsely Vegetated Concave Surface (B8)	
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)	
☐ Water Marks (B1)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Moss Trim Lines (B16)	
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Dry-Season Water Table (C2)	
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Crayfish Burrows (C8)	
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Iron Deposits (B5)	☐ Other (Explain in Remarks)	☐ Geomorphic Position (D2)	
☐ Inundation Visible on Aerial Imagery (B7)		☐ Shallow Aquitard (D3)	
☐ Water-Stained Leaves (B9)		☐ FAC-Neutral Test (D5)	
		☐ Sphagnum moss (D8) (LRR T, U)	
Field Observations:			
Surface Water Present? Yes _____ No ☒	Depth (inches): <u>N/A</u>	Wetland Hydrology Present? Yes _____ No ☒	
Water Table Present? Yes _____ No ☒	Depth (inches): <u>> 24"</u>		
Saturation Present? Yes _____ No ☒	Depth (inches): <u>> 24"</u>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: No primary or secondary wetland hydrology indicators were observed. The wetland hydrology parameter was not met. This area was located upon a slightly convex landscape that was gently sloped and situated a couple feet higher than the wetlands adjacently located to the north. The convex landscape in this area appeared to be man-made via former fill activities.			

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

 Sampling Point: DP2

Tree Stratum (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pinus taeda</u>	<u>44</u>	<u>YES</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>44</u> = Total Cover 50% of total cover: <u>22</u> 20% of total cover: <u>8.8</u>				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 = _____
Sapling/Shrub Stratum (Plot size: <u>30 foot radius</u>)				
1. <u>Morella cerifera</u>	<u>72</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Juniperus virginiana</u>	<u>6</u>	<u>NO</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>78</u> = Total Cover 50% of total cover: <u>39</u> 20% of total cover: <u>15.6</u>				
Herb Stratum (Plot size: <u>30 foot radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>✓</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Toxicodendron radicans</u>	<u>8</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Smilax rotundifolia</u>	<u>6</u>	<u>YES</u>	<u>FAC</u>	
3. <u>Morella cerifera</u>	<u>3</u>	<u>NO</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>17</u> = Total Cover 50% of total cover: <u>8.5</u> 20% of total cover: <u>3.4</u>				
Woody Vine Stratum (Plot size: <u>30 foot radius</u>)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				
The dominance test hydrophytic vegetation indicator was met for this data point and therefore qualified for the hydrophytic vegetation parameter. The landscape was forested and dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the shrub stratum with <i>Morella cerifera</i> .				

SOIL

Sampling Point: DP2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 4	10YR 3/2	100					sandy loam	
4 - 6	10YR 4/2	100					sandy loam	
6 - 11	10YR 5/3	100					sandy loam	
11 - 13	10YR 5/2	100					sandy loam	
13 - 24+	10YR 5/2	97	10YR 6/6	3	C	M	sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒**Remarks:**

The soil profile displayed both high and low chroma colors throughout the upper 11 inches of the soil surface and only low chroma colors below 11 inches. Redoximorphic features were observed beginning at 13 inches below the soil surface. The upper 16 inches of the soil surface exhibited variations in the soil matrix colors and textures, suggesting potential soil disturbance formerly occurred in this area. No hydric soil indicators were observed and the hydric soil parameter was not met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Jenkins Neck Road (Gloucester County Tax Map #: 53-216B) City/County: Hayes (Gloucester County) Sampling Date: 08/25/2023
 Applicant/Owner: Peggy Pitts State: VA Sampling Point: DP3
 Investigator(s): COVA Environmental (Rick Harris) Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): marine terrace Local relief (concave, convex, none): none - flat Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR T Lat: 37.266296° N Long: -76.401838° W Datum: _____
 Soil Map Unit Name: 16 — Lumbee sandy loam NWI classification: PFO4R

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: The hydrophytic vegetation, hydric soil, and wetland hydrology parameters were not met. The area consisted of forested wetlands dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the herbaceous stratum with Phragmites australis. This area was located upon a flat landscape that was situated upon a marine terrace landform. This area was lower than the uplands located to the south, but higher than the estuarine wetlands located to the north. The soil profile displayed low chroma colors throughout the upper 24 inches of the soil surface. Redoximorphic features were observed beginning at 6 inches below the soil surface.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☐ Surface Water (A1) ☐ Aquatic Fauna (B13) ☐ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☐ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes _____ No ☒ Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No ☒ Depth (inches): <u>> 24"</u> Saturation Present? Yes _____ No ☒ Depth (inches): <u>> 24"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No ☒
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No primary wetland hydrology indicators were observed. The geomorphic position and FAC-Neutral test secondary wetland hydrology indicators were observed. The wetland hydrology parameter was met. This area was located upon a flat landscape that was situated upon a marine terrace landform. This area was lower than the uplands located to the south, but higher than the estuarine wetlands located to the north.		

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

 Sampling Point: DP3

Tree Stratum (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pinus taeda</u>	<u>42</u>	<u>YES</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>42</u> = Total Cover 50% of total cover: <u>21</u> 20% of total cover: <u>8.4</u>				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 = _____
Sapling/Shrub Stratum (Plot size: <u>30 foot radius</u>)				
1. <u>Morella cerifera</u>	<u>18</u>	<u>YES</u>	<u>FAC</u>	
2. <u>Baccharis halimifolia</u>	<u>6</u>	<u>YES</u>	<u>FAC</u>	
3. <u>Iva frutescens</u>	<u>4</u>	<u>NO</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
<u>28</u> = Total Cover 50% of total cover: <u>14</u> 20% of total cover: <u>5.6</u>				
Herb Stratum (Plot size: <u>30 foot radius</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>✓</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Phragmites australis</u>	<u>74</u>	<u>YES</u>	<u>FACW</u>	
2. <u>Spartina patens</u>	<u>9</u>	<u>NO</u>	<u>FACW</u>	
3. <u>Panicum virgatum</u>	<u>6</u>	<u>NO</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>89</u> = Total Cover 50% of total cover: <u>44.5</u> 20% of total cover: <u>17.8</u>				
Woody Vine Stratum (Plot size: <u>30 foot radius</u>)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				
The dominance test hydrophytic vegetation indicator was met for this data point and therefore qualified for the hydrophytic vegetation parameter. The landscape was forested and dominated by needle-leaved evergreen vegetation within the tree stratum and the understory was densely vegetated within the herbaceous stratum with <i>Phragmites australis</i> .				

SOIL

Sampling Point: DP3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 6	10YR 3/1	100					sandy loam	
6 - 12	10YR 5/1	96	10YR 6/6	4	C	M	sandy loam	
12 - 24+	10YR 6/1	92	10YR 6/6	8	C	M	sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

The soil profile displayed low chroma colors throughout the upper 24 inches of the soil surface. Redoximorphic features were observed beginning at 6 inches below the soil surface. The depleted below dark surface and depleted matrix hydric soil indicators were observed and the hydric soil parameter was met.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Jenkins Neck Road (Gloucester County Tax Map #: 53-216B) City/County: Hayes (Gloucester County) Sampling Date: 08/25/2023
 Applicant/Owner: Peggy Pitts State: VA Sampling Point: DP4
 Investigator(s): COVA Environmental (Rick Harris) Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): saltmarsh Local relief (concave, convex, none): concave Slope (%): 0-1%
 Subregion (LRR or MLRA): LRR T Lat: 37.266686° N Long: -76.402254° W Datum: _____
 Soil Map Unit Name: 30 — Sulfaquents, frequently flooded NWI classification: E2EM1P

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: The hydrophytic vegetation, hydric soil, and wetland hydrology parameters were not met. The area consisted of a tidal saltmarsh dominated by salt-tolerant species. The landscape was relatively flat and situated within a concave position relative to the southern portions of the study area. The hydrology was characteristic of a tidal saltmarsh system situated between the intertidal and high marsh zone. The soil profile displayed low chroma colors throughout the upper 24 inches of the soil surface. Redoximorphic features were observed beginning at 8 inches below the soil surface. A muck presence was observed within the uppermost soil layer and a hydrogen sulfide odor was observed throughout the soil profile.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☒ Surface Water (A1) ☒ Aquatic Fauna (B13) ☒ High Water Table (A2) ☐ Marl Deposits (B15) (LRR U) ☒ Saturation (A3) ☒ Hydrogen Sulfide Odor (C1) ☐ Water Marks (B1) ☒ Oxidized Rhizospheres along Living Roots (C3) ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iron (C4) ☒ Drift Deposits (B3) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Algal Mat or Crust (B4) ☐ Thin Muck Surface (C7) ☐ Iron Deposits (B5) ☐ Other (Explain in Remarks) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes ☒ No _____ Depth (inches): <u>2"</u> Water Table Present? Yes ☒ No _____ Depth (inches): <u>0" (at surface)</u> Saturation Present? Yes ☒ No _____ Depth (inches): <u>0" (at surface)</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The surface water, high water table, saturation, drift deposits, aquatic fauna, hydrogen sulfide odor, and oxidized rhizospheres along living roots primary wetland hydrology indicators were observed. The geomorphic position and FAC-Neutral test secondary wetland hydrology indicators were observed. The hydrology parameter was met. The landscape was relatively flat and situated within a concave position relative to the southern portions of the study area. The hydrology was characteristic of a tidal saltmarsh system situated between the intertidal and high marsh zone.		

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

 Sampling Point: DP4

Tree Stratum (Plot size: <u>30 foot radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				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 = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>30 foot radius</u>)				
1. <u>Iva frutescens</u>	<u>10</u>	<u>YES</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>				Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>30 foot radius</u>)				
1. <u>Spartina alterniflora</u>	<u>45</u>	<u>YES</u>	<u>OBL</u>	
2. <u>Spartina patens</u>	<u>40</u>	<u>YES</u>	<u>FACW</u>	
3. <u>Phragmites australis</u>	<u>10</u>	<u>NO</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>30 foot radius</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below). The dominance test hydrophytic vegetation indicator was met for this data point and therefore qualified for the hydrophytic vegetation parameter. The landscape consisted of a saltmarsh dominated by salt-tolerant species typically found within the intertidal and high marsh zones.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 2	10YR 2/1	100					sandy loam	muck presence
2 - 8	10YR 2/1	100					sandy loam	
8 - 24+	10YR 5/1	92	10YR 6/6	8	C	M	sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)****Indicators for Problematic Hydric Soils³:**

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____**Remarks:**

The soil profile displayed low chroma colors throughout the upper 24 inches of the soil surface. Redoximorphic features were observed beginning at 8 inches below the soil surface. A muck presence was observed within the uppermost soil layer and a hydrogen sulfide odor was observed throughout the soil profile. The hydrogen sulfide, muck presence, depleted below dark surface, and depleted matrix hydric soil indicators were observed and the hydric soil parameter was met.