DEPARTMENT OF THE ARMY US ARMY CORPS OF ENGINEERS NORFOLK DISTRICT FORT NORFOLK 803 FRONT STREET NORFOLK VA 23510-1011



May 18, 2021

NOTIFICATION OF APPROVED JURISDICTIONAL DETERMINATION

Northern Virginia Regulatory Section NAO-2021-00347-rdb

Requestor: Prince William County Department of Transportation C/O Ricardo Canizales, 5 County Complex Court, Virginia, 22192

Agent/Consultant: Dewberry Engineers Inc. 8401 Arlington Blvd., Fairfax, VA 22031

Attn: Kelly Donovan Phone: 703-849-0175 Email: kdonovan@dewberry.com

Property Owner (if different from Requestor): NA

PROPERTY/PROJECT/EVALUATION AREA INFORMATION

Size (acres): 278 Town/County: Prince William County

Nearest Waterway: Latitude: N 38.597301

USGS HUC: 02070011 Longitude: W -77.317977

Location Description: As the parcel is a vacant property, it does not have an address. However, the project area is between the existing Van Buren Road beginning at VA-234 and the existing Van Buren Road south of Cardinal Drive.

Directions from Dumfries, VA: Take VA-234 West and turn right onto Van Buren Road, the current terminus of Van Buren Road is the beginning of the project area

Wetlands (acres): 17.0 Acres

Streams (linear feet): 17,369

A. <u>DETERMINATION</u>

On February 8, 2021, the U.S. Army Corps of Engineers (Corps) received your request for an approved jurisdictional determination for the above-described area. Based upon an office (desktop) evaluation, 33 CFR 329 – Definition of Navigable Waters of the United States, and 33 CFR 328 – Definition of Waters of the United States and federal regulations of navigable waters, the Corps determines:

X__There are waters of the U.S. within the above-described area, which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). These waters exhibit wetland criteria as defined in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region.

This site also contains waters with an ordinary high water mark (or high tide line) and are part of the tributary system to Navigable Waters of the U.S.

- **_X**_The Corps verifies this delineation of waters of the U.S. depicted on the map, copy attached and on file with the Corps entitled "Van Buren Northern Extension Project Delineated Wetlands and Streams," Plates 1-9, dated January 2021, date stamped by our office April 2, 2021, and conducted by Dewberry Engineers Inc.
- A recent site visit indicates that there are jurisdictional waters on the above-described area. The Corps strongly suggests you have those waters delineated. Due to the size of the above-described area and/or our present workload, the Corps may not be able to accomplish this delineation in a timely manner. For a timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

Please be aware that you may be required to obtain a Corps permit for any discharge of dredged and/or fill material, either temporary or permanent, into a water of the U.S. In addition, you may be required to obtain a Corps permit for certain activities occurring within, under, or over a navigable water of the U.S. subject to the Section 10 of the Rivers and Harbors Act. Furthermore, you may be required to obtain state and local authorizations, including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC), and/or a permit from your local wetlands board. Any discharge of dredged of fill material into waters not subject to Corps jurisdiction (excluded waters) will not require a Corps permit but may require a DEQ permit.

This determination is not confirming the Cowardin classifications of these waters or the limits/jurisdictional status of any waters mapped outside the above-described area.

- The above-described area is comprised entirely of uplands. The Corps did not identify any waters regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344), or Section 10 of the Rivers and Harbors Act (33 U.S.C. 403).
- _X_ The above-described area contains excluded waters, which do not meet the definition of waters of U.S.; thus, they are not subject to the permitting requirements of Section 404 of the CWA nor Section 10 of the RHA. However, you may be required to obtain a permit from the DEQ for activities affecting these excluded waters.

The delineation included herein has been conducted to identify the location and extent of the water boundaries and the jurisdictional status of the waters for purposes of the CWA for the above-described area identified in this request.

This delineation and jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. Therefore, if you or your tenant are US Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should discuss the applicability of a

certified wetland determination with the local USDA service center, prior to starting work.

B. ADMINISTRATIVE APPEALS INFORMATION

This notification constitutes an approved jurisdictional determination for the above-described area. If you object to this determination, you may request an administrative appeal under the Corps regulations (33 CFR Part 331). Please find the enclosed Notification of Appeal Options and Process (NAP) and Request for Appeal (RFA). If you request to appeal this determination, you must submit a completed RFA to the following address:

Attn: Ms. Naomi J. Handell, Regulatory Program Manager United States Army Corps of Engineers CENAD-PD-OR Fort Hamilton Military Community 301 General Lee Avenue Brooklyn, New York 11252-6700

The Corps will determine whether the RFA is complete and meets the criteria for appeal under 33 CFR 331.5. The RFA must be received at the above address within 60 days of the NAP, and by July 17, 2021. The Corps will not accept incomplete or late RFAs. You do not need to submit an RFA if you do not object to the approved jurisdictional determination.

C. EXPIRATION DATE

This approved jurisdictional determination is valid for five years from the date of this notification unless new information warrants revision prior to the expiration date.

If you have any questions regarding this notification, please contact Regena Bronson at (757) 201-7828 or via email at Regena.D.Bronson@usace.army.mil.

Sincerely,

Regena

Digitally signed by Regena Bronson Date: 2021.05.18

Regens Bronson 15:01:18 -04'00'

Environmental Scientist

Northern Virginia Regulatory Section

Enclosures



I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): May 18, 2021

ORM Number: NAO-2021-00347-RDB

Associated JDs: N/A or ORM numbers and identifiers (e.g. HQS-2020-00001-MSW-MITSITE)

Review Area Location1:

State/Territory: VA City: County/Parish/Borough: Prince William County Center Coordinates of Review Area: Latitude 38.596989 Longitude -77.317456

II. FINDINGS

Α.	Summary: Check all that apply. At least one box from the following list MUST be selected. Complete
	the corresponding sections/tables and summarize data sources.

The review area is comprised entirely of dry land (i.e., there are no waters or water features	,
including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationa	le

- There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in section II.B).
- There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	8	10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A	N/A		N/A	N/A

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters)³

(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A	N/A	N/A	N/A

Tributaries ((a)(2) waters):

(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
A	2903 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System A flows directly into tidal Quantico Creek
AC	152 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System AC contributes flow to System A leading to tidal Quantico Creek.
AD	18 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System AD contributes flow directly into System A leading to tidal Quantico Creek.

¹ Map(s)/Figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



D	311 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System D contributes flow directly into System A leading to tidal Quantico Creek.
E	1259 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System E contributes flow directly into System A leading to tidal Quantico Creek.
EA	79 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System EA contributes flow directly into System A leading to tidal Quantico Creek.
EB	798 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System EB contributes flow directly into System A leading to tidal Quantico Creek.
Н	1117 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System H contributes flow directly into System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
НА	370 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System HA contributes flow directly into System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
I	254 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System I contributes flow directly into System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
K	957 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
KA	322 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System KA contributes flow directly into System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
M	326 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System M contributes flow to System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
N	560 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System N contributes flow to System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
P	3877 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System P contributes flow to System K. System K is known as Powells Creek and begins to have tidal influence approximately 2.5 miles downstream of the project area.
PA	125 feet	(a)(2) Intermittent tributary contributes surface water flow	System PA contributes flow into System P. System P meets system A and continues downstream directly into

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		directly or indirectly to an (a)(1) water in a typical year	tidal Quantico Creek.
PD	100 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System PD contributes flow directly into System PE. System PE receives flow from system P and continues downstream directly into tidal Quantico Creek.
PG	145 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System PG contributes flow into System P. System P meets system A and continues downstream directly into tidal Quantico Creek.
PI	63 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System PI contributes flow into System P. System P meets system A and continues downstream directly into tidal Quantico Creek.
Т	275 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System T leaves the study area and flows into a stormwater management system that discharges to System V
V	498 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System V contributes flow to System X. System X flows to System A, leading to tidal Quantico Creek.
W	553 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System W flows into System X. System X flows to System A, leading to tidal Quantico Creek.
Х	1295 feet	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System X flows to System A, leading to tidal Quantico Creek.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):

(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A	N/A	N/A	N/A

Adjacent wetlands ((a)(4) waters):

(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
AA	0.04 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System AA is physically separated from an (a)(1) - (a)(3) water only by a natural berm.
AB	0.07 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System AB directly abuts an (a)(1) – (a)(3)
В	0.12 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System B is physically separated from an (a)(1) - (a)(3) water only by a natural berm.
G	14.41 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System G directly abuts an (a)(1) – (a)(3)
J	0.14 acres	(a)(4) Wetland separated from an	Wetland System J is physically separated from an

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		(a)(1)-(a)(3) water only by a natural feature	(a)(1) - (a)(3) water only by a natural berm.
L	0.78 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System L is physically separated from an (a)(1) - (a)(3) water only by a natural berm.
0	0.1 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System O directly abuts an (a)(1) – (a)(3)
РВ	0.02 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System PB directly abuts an (a)(1) – (a)(3)
PC	0.2 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System PC directly abuts an (a)(1) – (a)(3)
PE	0.18 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System PE directly abuts an (a)(1) – (a)(3)
PF	0.01 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System PF directly abuts an (a)(1) – (a)(3)
PH	0.02 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System PH directly abuts an (a)(1) – (a)(3)
Q	0.13 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System Q directly abuts an (a)(1) – (a)(3)
R	0.05 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System R is physically separated from an (a)(1) - (a)(3) water only by a natural berm.
U	0.06 acres	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by a natural feature	Wetland System U is physically separated from an (a)(1) - (a)(3) water only by a natural berm.

D. Excluded Waters or Features

Excluded waters $((b)(1) - (b)(12))^4$:

Exclusion Name	Exclusion Size	Exclusion ⁵	Rationale for Exclusion Determination
С	113 feet	(b)(10) Stormwater control feature constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff	System C contributes stormwater flow directly into System A leading to tidal Quantico Creek.
DA	123 feet	(a)(2) Intermittent tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year	System DA contributes stormwater flow directly into System A leading to tidal Quantico Creek.
F	78 feet	(b)(10) Stormwater control feature constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff	System F contributes stormwater flow directly into System A leading to tidal Quantico Creek.
Υ	391 feet	(b)(10) Stormwater control feature	System Y contributes stormwater flow directly into

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		constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff	System X leading to tidal Quantico Creek.
Z	307 feet	(b)(10) Stormwater control feature constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff	System X contributes stormwater flow directly into System A leading to tidal Quantico Creek.

III. SUPPORTING INFORMATION

- A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.
 - **_X**_ Information submitted by, or on behalf of, the applicant/consultant: map entitled "Van
 - Buren Northern Extension Project Delineated Wetlands and Streams," Plates 1-9, dated January 2021, date stamped by our office April 2, 2021, and conducted by Dewberry Engineers Inc.

This information is sufficient for purposes of this AJD.

Rationale: N/A

 Data sheets	prepared b	y the (Corps:	Title(s)	and/or	date(S)

- ____ Photographs: (NA, aerial, other, aerial and other) Title(s) and/or date(s).
- ___ Corps Site visit(s) conducted on: *Date(s)*.
- Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- ____ Antecedent Precipitation Tool: provide detailed discussion in Section III.B.
- _x_ USDA NRCS Soil Survey: Figure 4
- _x_ USFWS NWI maps: Figure 3 December 8, 2020
- _X_ USGS topographic maps: 7.5 Minute Topographic Quadrangle for Quantico, VA

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	N/A.

- B. Typical year assessment(s): N/A.
- C. Additional comments to support AJD: The majority of the Site consists of maintained pasture lands and earthen roads. The property is located within the Potomac River watershed (HUC 02070008 and

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02070010) and is drained by surface flow and an unnamed tributary flowing north into Howsers Branch

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Van Buren Northern Extension Project Wetland Delineation Report Prince William County, Virginia



Prepared for:

Prince William County
Department of Transportation
C/O Ricardo Canizales
5 County Complex Court
Virginia, 22192

Prepared by:



February 2021

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APPENDICES

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February 2021

1.0 INTRODUCTION AND BACKGROUND

Dewberry Engineers Inc. (Dewberry) is pleased to present the results of the wetland delineation conducted for the Van Buren Northern Extension roadway project located in Prince William County, Virginia. The limits of investigation consist of approximately 278 acres of mainly undeveloped land. The purpose of this wetland evaluation was to identify and delineate the extent of potentially jurisdictional wetlands and Waters of the United States (WOUS), as regulated under Section 401 and 404 of the Clean Water Act, within the study area. Methods from the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual (Y-87-I) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0) were used to identify jurisdictional WOUS and wetlands.

Prior to the field investigation, a review of previous permits, published literature and records was completed to identify potential wetland areas. Several existing maps and sources of land use information were collected to assist with the onsite investigation. Documents collected and reviewed included: U.S. Geological Survey 7.5 Minute Topographic Quadrangle for Quantico, VA (Figure 1), aerial photography of the project location (Figure 2), U.S. Fish and Wildlife Service National Wetland Inventory Map (Figure 3), United States Department of Agriculture, Natural Resources Conservation Services Web Soil Survey Report (Figure 4), and a FEMA National Flood Insurance Program Map (Figure 5).

In Dewberry's opinion, there are potentially jurisdictional wetlands and WOUS within the study area. Findings of the field investigation are summarized in this report.

2.0 FIELD DATA

Based on the results of the investigation, Dewberry identified fifteen palustrine forested (PFO) wetlands, nine perennial (R3) stream channels, fourteen intermittent (R4) stream channels, and five ephemeral (EPH) stream channels within the project area. The WOUS boundaries have been mapped on the enclosed Wetland Delineation Map (Appendix A). Representative photographs of the WOUS and wetlands are included in Appendix B and data forms are included in Appendix C.



3.0 SUMMARY

The delineated areas have been field surveyed and are shown on the Wetland Delineation Map in Appendix A. The following tables summarize the data gathered during our field investigations.

Table 1. Wetlands and Waters of the U.S. System Summary

Delineated Waters of the U.S. & Wetlands					
System Name	Plate	Cowardin Classification	WOUS Length (Linear Feet)	Area (Sq. Ft.)	Area (Acre)
A	1, 2, 3	R3	2903		
AA	3	PFO		1543	0.04
AB	3	PFO		3090	0.07
AC	3	R4	152		
AD	3	R4	18		
В	3	PFO		5304	0.12
С	2	ЕРН	113		
D	2	R4	311		
DA	2	ЕРН	123		
Е	2	R4	1259		
EA	2	R4	79		
EB	2	R4	798		
F	2	ЕРН	78		
G	7, 8	PFO		628,036	14.41
Н	8	R3	1117		
НА	8	R4	370		
I	8	R3	254		
J	9	PFO		5998	0.14
K	9	R3	957		
KA	9	R4	322		
L	9	PFO		33914	0.78
M	9	R4	326		
N	8	R4	560		
О	1	PFO		4202	0.10
P	2, 3, 4	R3	3877		
PA	4	R4	125		
PB	4	PFO		970	0.02
PC	4	PFO		8500	0.20
PD	4	R4	100		
PE	4	PFO		7798	0.18

2



PF	4	PFO		367	0.01
PG	4	R3	145		
PH	2	PFO		955	0.02
PI	3	R3	63		
Q	5	PFO		5845	0.13
R	5	PFO		2389	0.05
T	5	R4	275		
U	6	PFO		2621	0.06
V	7	R4	498		
W	7	R3	553		
X	6, 7	R3	1295		
Y	6	ЕРН	391		
Z	6	ЕРН	307		
		PFO	NA	711,532	17
		PEM	NA	0	0.00
		POW	NA	0	0.00
		WOUS (R3)	11,164	NA	NA
Syste	m Totals	WOUS (R4)	5,193	NA	NA
		WOUS (EPH)	1,012	NA	NA
		TOTAL WETLAND	NA	711,532	17
		TOTAL WOUS	17,369	NA	NA

3



^{*}Note: Some wetland/streams continue outside the Limits of Investigation

4.0 REFERENCES

Federal Emergency Management Agency. 2020. FEMA Flood Map Service Center.

- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List*; 2014 Update of Wetland Ratings. Phytoneuron 2014-41: 1-42.
- Macbeth. 2000. Revised Washable Edition, Munsell Soil Color Charts. Gretag Macbeth.
- U.S. Army Corps of Engineers. 1987. <u>Corps of Engineers Wetlands Delineation Manual</u>. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. Technical Report. Y-87-I. 100 pp.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0, ed. J.F. Berkowitz, J.S. Wakeley, R.W. Lichvar, C.V. Noble. ERDC/EL-TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture. 2020. Web Soil Survey National Cooperative Soil Survey.
- U.S. Department of the Interior. 2020. U.S. Fish and Wildlife Service. National Wetlands Inventory Map, FWS Wetlands Mapper.
- U.S. Geological Survey. Quantico, Virginia Quadrangle Base Map, 7.5 Minute Series, 2019.



FIGURES

Figure 1. U.S.G.S. 7.5 Minute Quadrangle Topographic Map

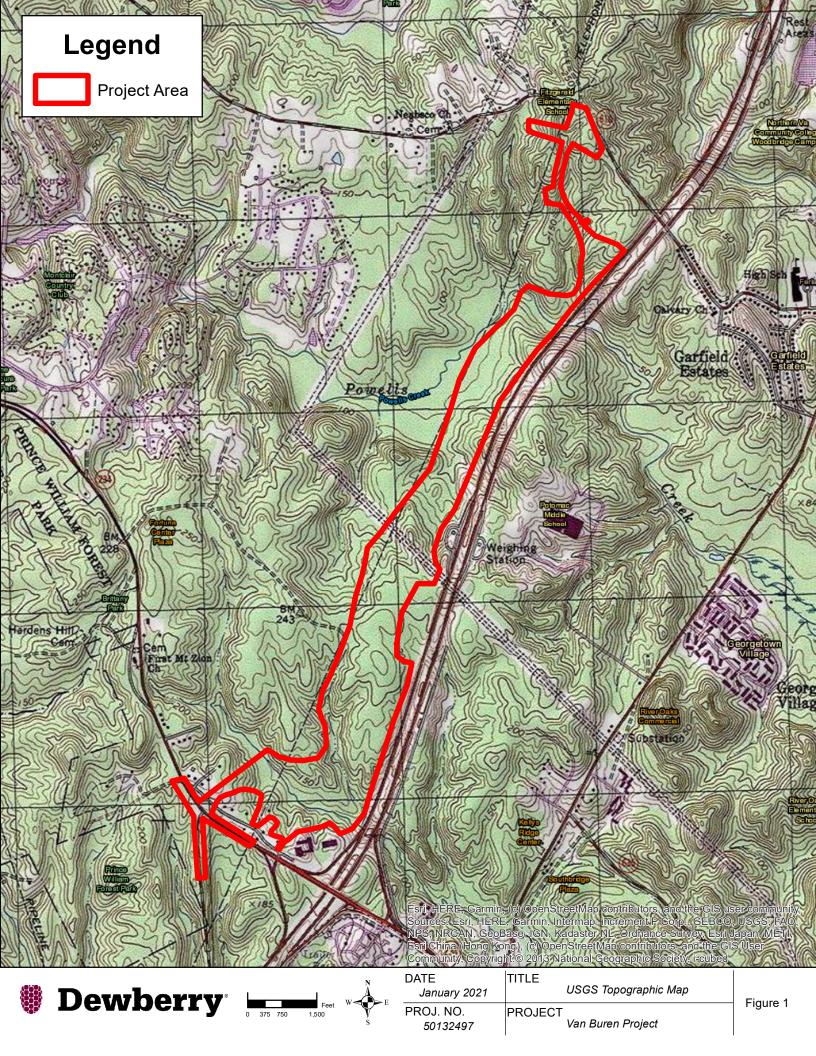
Figure 2. Project Location Map

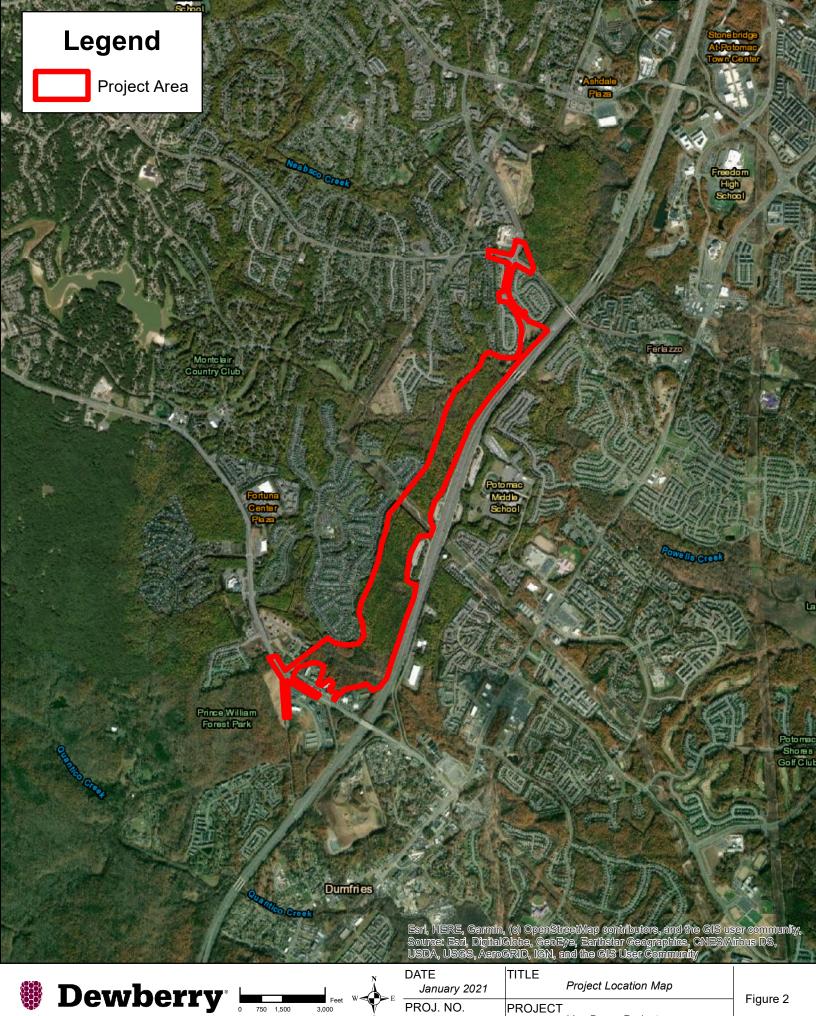
Figure 3. National Wetland Inventory Map

Figure 4. Natural Resource Conservation Service Soils Map

Figure 5. FEMA National Flood Insurance Program Map







Dewberry :



PROJ. NO. 50132497

Van Buren Project

U.S. Fish and Wildlife Service

Figure 3

National Wetlands Inventory



December 8, 2020

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Riverine

Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

U.S. Fish and Wildlife Service

National Wetlands Inventory



December 8, 2020

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

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Lake



Riverine

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PESI A LS LILLIPE SERVICE

U.S. Fish and Wildlife Service

National Wetlands Inventory



December 8, 2020

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Pond

Freshwater Forested/Shrub Wetland

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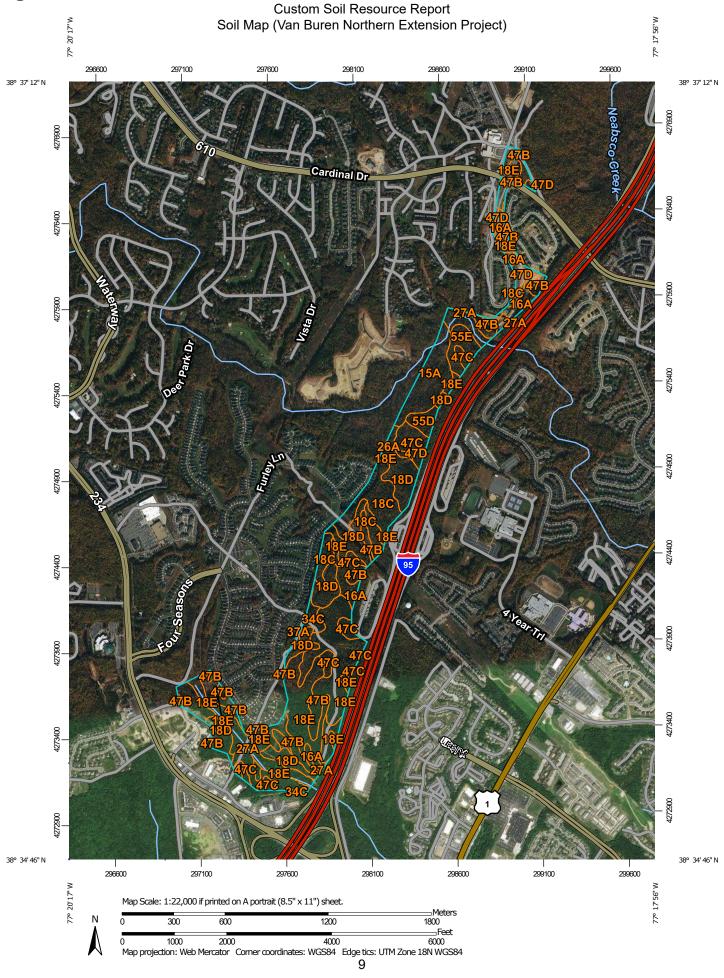
Lake

Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Figure 4



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

 \odot

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole Slide or Slip

Sodic Spot

Spoil Area



Stony Spot

Very Stony Spot



Wet Spot



Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

 \sim

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15.800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Prince William County, Virginia Survey Area Data: Version 17, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2015—Aug 1, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Van Buren Northern Extension Project)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
15A	Comus loam, 0 to 2 percent slopes	18.9	6.7%
16A	Delanco fine sandy loam, 0 to 4 percent slopes	8.6	3.1%
18C	Dumfries sandy loam, 7 to 15 percent slopes	25.0	8.9%
18D	Dumfries sandy loam, 15 to 25 percent slopes	40.7	14.5%
18E	Dumfries sandy loam, 25 to 50 percent slopes	63.4	22.6%
26A Hatboro silt loam, 0 to 2 percent slopes		2.1	0.8%
27A Hatboro-Codorus complex, 0 to 2 percent slopes		22.1	7.9%
Lunt loam, 7 to 15 percent slopes		3.5	1.2%
Marumsco loam, 0 to 4 percent slopes		0.4	0.2%
47B	Quantico sandy loam, 2 to 7 percent slopes	50.6	18.1%
47C	Quantico sandy loam, 7 to 15 percent slopes	26.9	9.6%
47D	Quantico sandy loam, 15 to 25 percent slopes	6.0	2.2%
55D	Watt channery silt loam, 15 to 25 percent slopes	4.4	1.6%
55E	Watt channery silt loam, 25 to 50 percent slopes	7.6	2.7%
Totals for Area of Interest	·	280.2	100.0%

NOTES TO USERS

To obtain more detailed information in areas where Base Flood Elevations: (IFE) and/or floodways have been determined, users are encouraged to consult. The Flood Preliates and Floodway Data and/or floodways Total and Standard Elevations. Italies commanded within the Flood Insurance Study (FS) report florid accompanies. First FSM, Users shired the aware that EPES where no the FSM regiment sounded whole-flood elevations. These EPEs are intended for flood innurance samp purposes only and should not be used as the sale is source of the extension purposes only and should not be used as the sale is source of the extension purposes only and should not be used as the sale is source of the FSM report should be utilized in conjunction with the FSM for purposes of construction and/or floodprian management.

Coastal Base Flood Elevations shown on this map apply only landward of 60° National Geodetic Vertical Datum of 150° NGV/G). Users of this FRRII should be asset that coastal flood elevations are also provided in the Summary of Stituser Elevations buildes in the Flood Insusance Study report for this purishcition. Elevations busines in the Flood Insusance Study report for this purishcition. Elevations busines in the Summary of Stilluster Elevations table should be used for

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraufic considerations with regard to requirements of the National Flood Insurance Program. Roadway widths and other perinent floodway data are provided in the Flood Insurance Study report for this surediction.

The projection used in the preparation of this map was Virginia State Plane North-zone. The Berlisbantal debans was NAD 83HAPR, GROSS sphoods Differences in datum, spheroic projection or State Plane sones used in the production of PASIs for adjacent puredischois may result in eight positional differences in sep-ted or the pasing specific projection. These differences on not affect the solutions of the FRM.

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NGS information Services NGAA, NINGS12 National Gaodetic Survey SSMC-3, 89302 1315 East-Vent Highway Siver Spring, Maryland 20919-3282 (301) 713-3242

To obtain current elevation, description, and/or location information for banch marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3342, or visit its website at

Base map information shown on this FIRM was provided by the Commonwealth of Virginia through the Virginia Base Mapping Program (VBMP). The orthophosos were flown in 2009 at scales of 1.100 and 1.200.

Based on updated topographic information, this map reflects more detailed and up-to-clairs stream channel coeffigurations and fleedigital defineations than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Flooding Data tables in the Flood Insulance Study Report (which contains authoritative hydrautic data) may reflect stream channel distances that differ from what is shown on this map. Also, the rose to flood/pain relationships for unrenteed streams may differ from what is shown on previous maps.

Cooporate limits shown on this map are based on the best data available at the lime of publication, fleciaces thanges due to annexations or de - annexations may have occurred after this may see published, may users should contact appropriate community difficials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repositry addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the penels on which each community is located.

The AE Zone category has been divided by a Limit of Modeste Wave Action (LIMRA). The LIMINA represents the approximate landward limit of the 1.5 - loot breaking wave. The effects of nave hazands between the VE Zone and the LIMINA for doesee the shoreline and the LIMINA for areas where VE Zones are not identified will be similar to but his severe than those in the VE Zone.

Contact the FERRA Map Information eXchange at 1-877-290-2927 for information on available products associated with this FPRII. Available anduction may include previously asset Letters of May Change, a Frood insurance Study Report, and/or oligital versions of this map. The FERRA filling information schonage may also be reached by Fix as if 1-400-340-502 and their versions of the language may also set.

If you have questions about this map or questions concerning the National Place insurance Program in general, please call 5-877-FEMA-MAP (1-517-336-2627) or visit the FEMA website of http://www.fema.gov/businessahifp

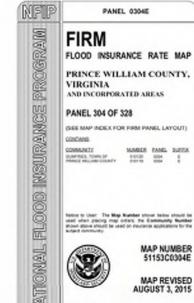
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NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject is flooding, particularly from local disingle sources of small sice. The community map repository should be consulted for possible updated or additional flood hazard information.

tables contained within the Flood Insusance Shady (FS) report that accompanies for FPRM. Upens should be aware that BPSs shown on the FPRM represent nouncled whole-foot elevations. These BFEs are intended for flood insusance rating purposes only and should not be used as the sele source of flood elevation information. Accordingly, flood elevation data presented in the FPS report should be utilized in donyunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1529 (VGV/C). Users of this IRRM should be asset that coastal flood elevation as also provided in the Summary of Stituater Elevations tables in the Flood Insusance Study report for this purspiction. Directions from the Flood Insusance Study report for this purspiction. Directions from in the Summary of Stituater Elevations table should be used for construction and/or Socialish management purposes when they are higher than the elevations shown on this FIRM.

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To obtain current elevation, description, and/or location information for bench smarks shown on this map, please contact the information Services Branch of the National Geodetic Survey at (301) T13-3342, or visit its website at

Base map information shown on this FIETH was provided by the Comm Vignia through the Wignia Base Mapping Program (VBMP). The orthophotos were flown in 2009 at scales of 1:100 and 1:200.

Based on updated topographic information, this map reflects more detailed and up-to-date stream channel configurations and floodgrain defineations than those shown on the previous FPRM for this jurisdiction. As a result, the Flood Fnoties and Floodway Data solvies in the Flood Insurance Souty Report (which contains authoritative hydrautic data) may reflect stream channel distances that differ from what is shown on this map. Also, the reals the foodpain relationships for unrevised steams may differ from what is shown on previous maps.

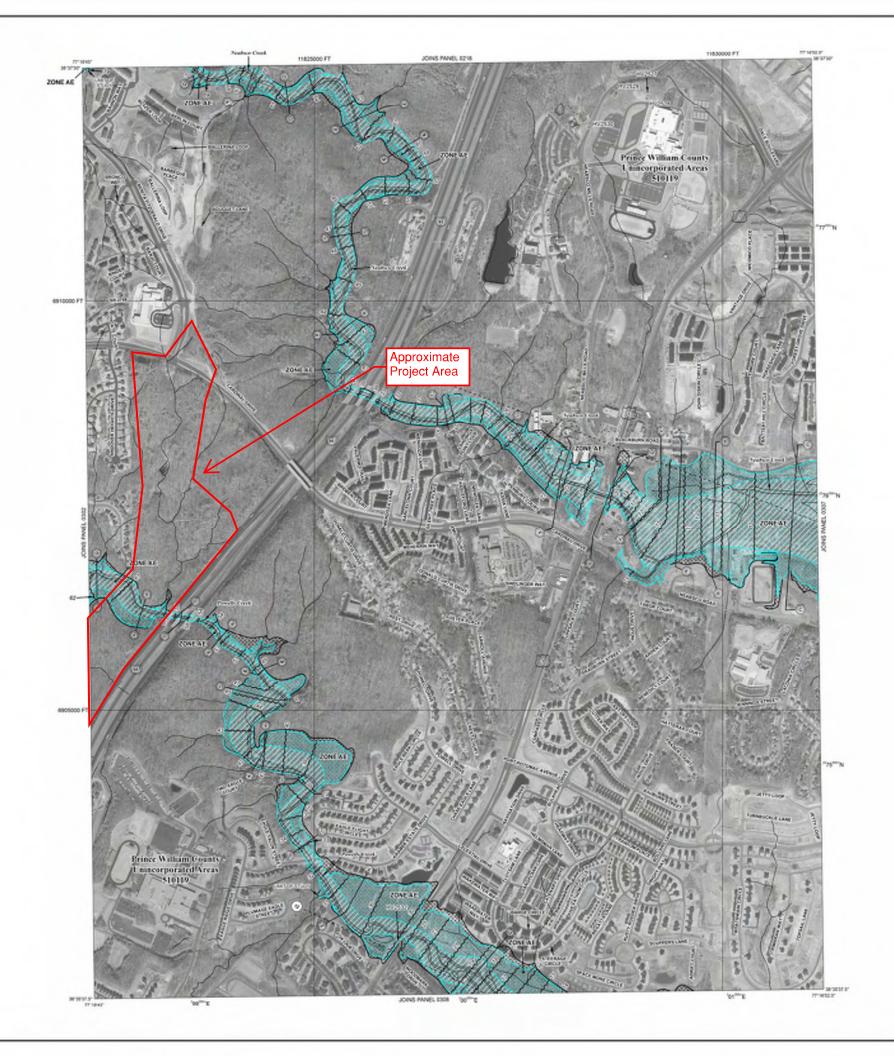
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Contact the FERMA Map Information eXchange at 1-817-336-3827 for information on available products associated with this FPRIX. Available products may include previously asset Littles of May Change, a Frood insurance Study Report, and/or oligital versions of this map. The FERMA Step Information eXchange may also be reached by Fix at 1-400-339-6020 and there whole at https://www.macSema.gov.

If you have questions about this map or questions concerning the National Place insurance Program in general, please call 5-877-FEMA-MAP (1-517-336-2627) or visit the FEMA website of http://www.fema.gov/businessahfp



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OTHERWISE PROTECTED AREAS (OPAG)

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FIRM FLOOD INSURANCE RATE MAP

PRINCE WILLIAM COUNTY, VIRGINIA AND INCORPORATED AREAS

PANEL 308 OF 328

(SEE MAP INDEX FOR FIRM PANEL LAYOUT) CONCAND

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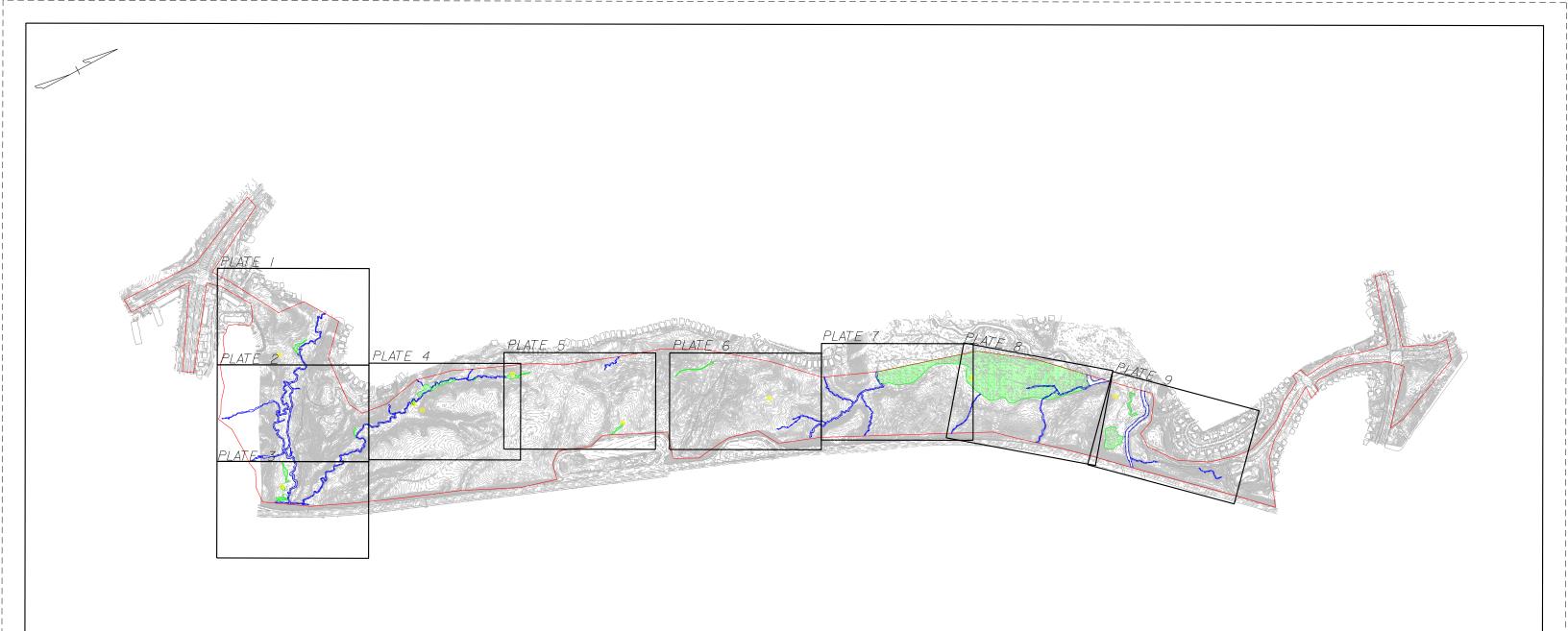
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MAP REVISED AUGUST 3, 2015

Federal Emergency Management Agency

APPENDIX A WETLAND DELINEATION MAP





NOTES:

I.THE BOUNDARIES OF WATERS OF THE U.S.(WOUS), INCLUDING WETLANDS, WERE DELINEATED AND SURVEYED BY DEWBERRY ENGINEERS INC IN DECEMBER 2020 BASED ON THE REQUIREMENTS OF THE U.S. ARMY COPRS OF ENGINEERS (USACE) WETLAND DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL: ATLANTIC AND GULF COASTAL PLAIN REGION (VERSION 2.0)

2.EXISTING TOPOGRAPHIC AND PLANIMETRIC INFORMATION PROVIDED BY DEWBERRY

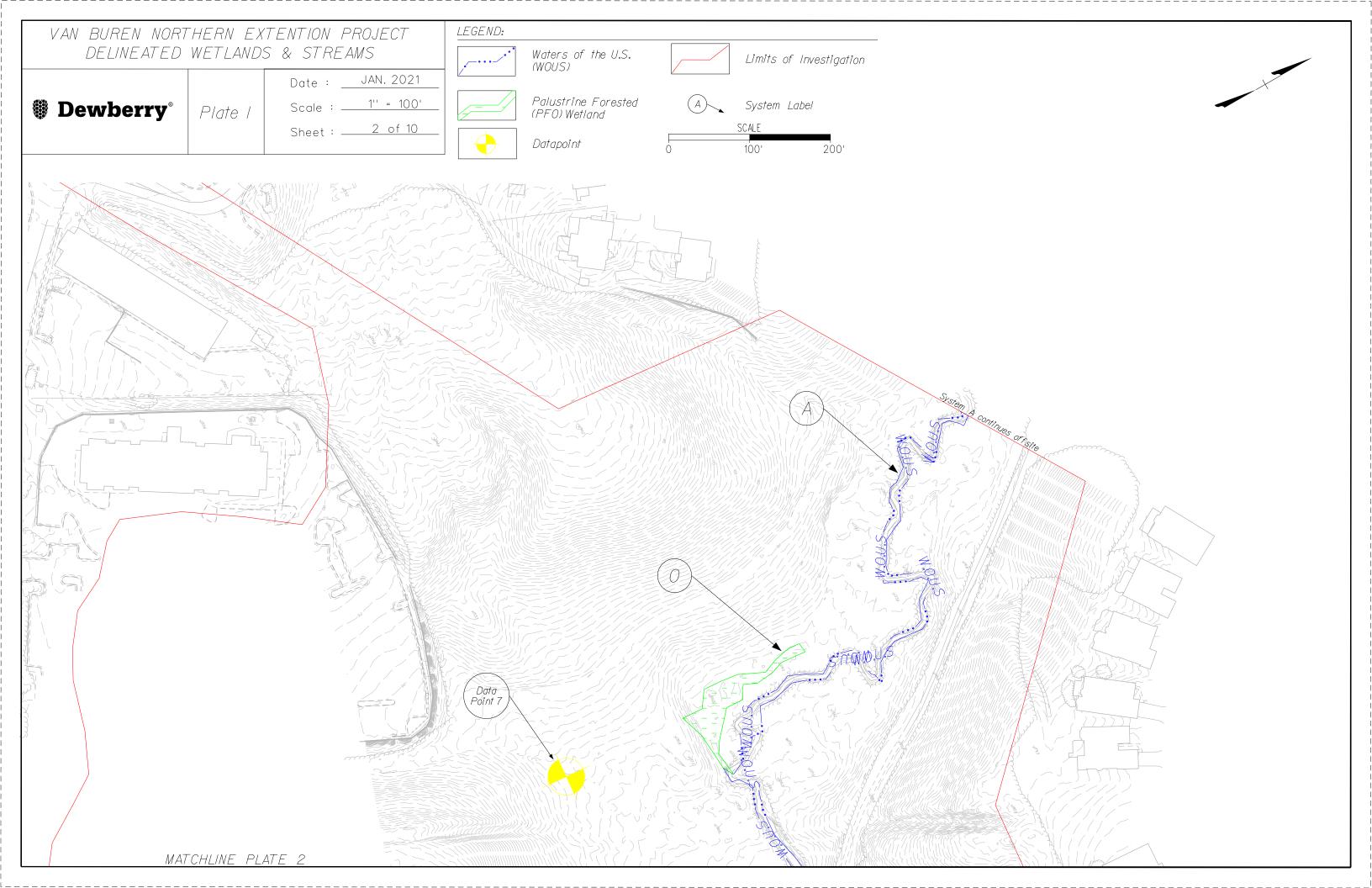
VAN BUREN NORTHERN EXTENSION PROJECT
WETLAND DELINEATION MAP
PRINCE WILLIAM COUNTY, VIRGINIA

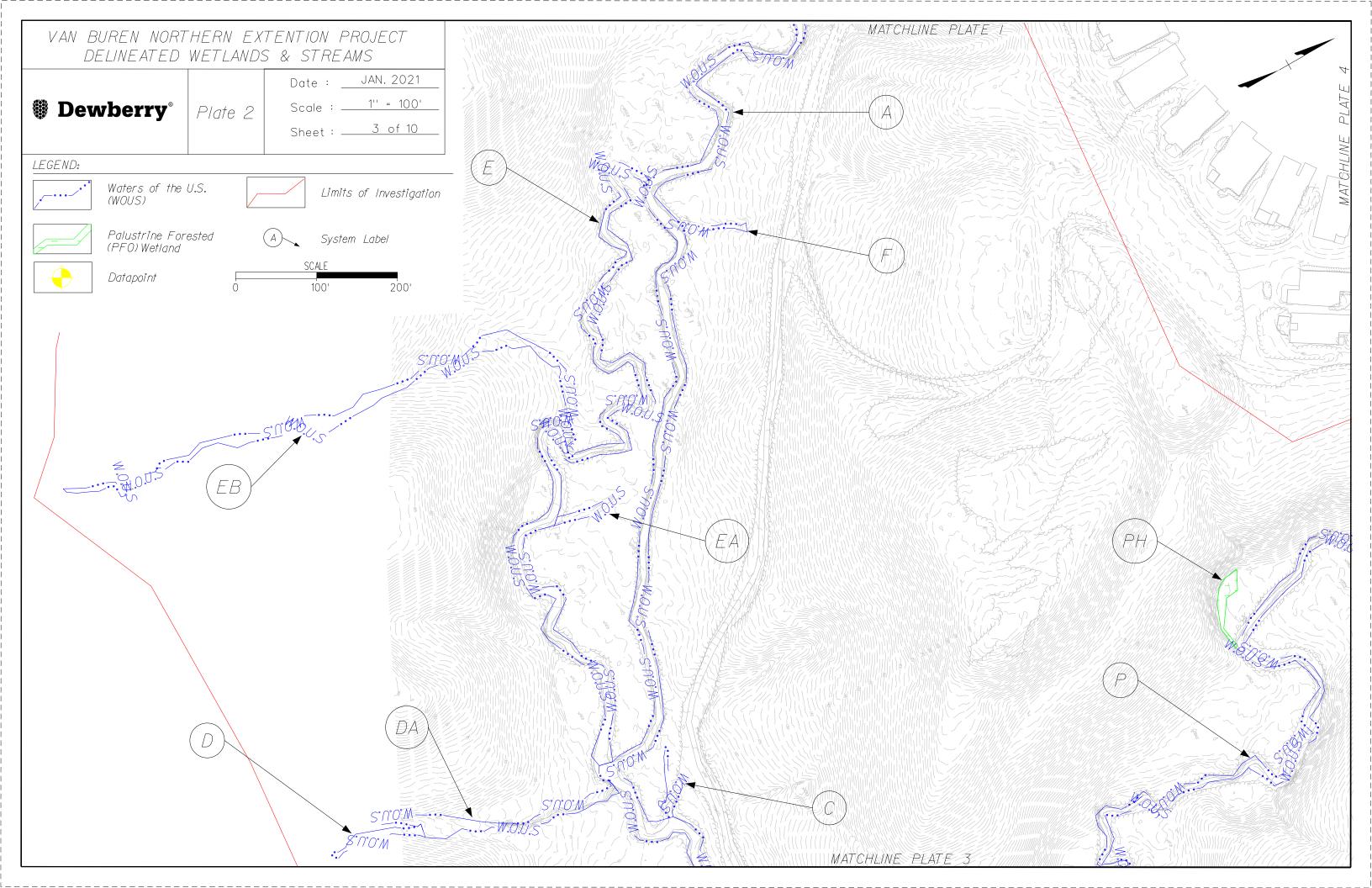
Dewberry*

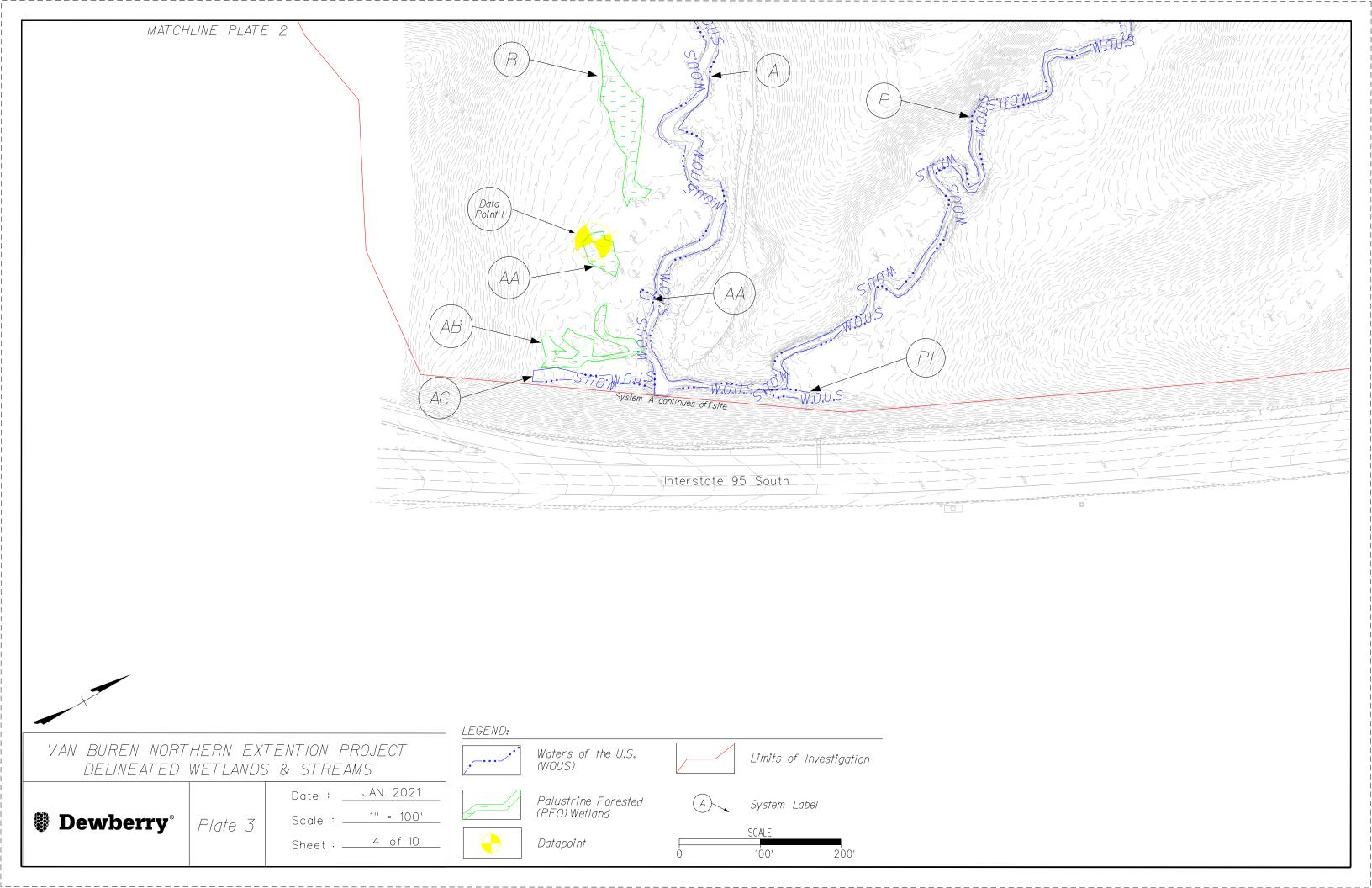
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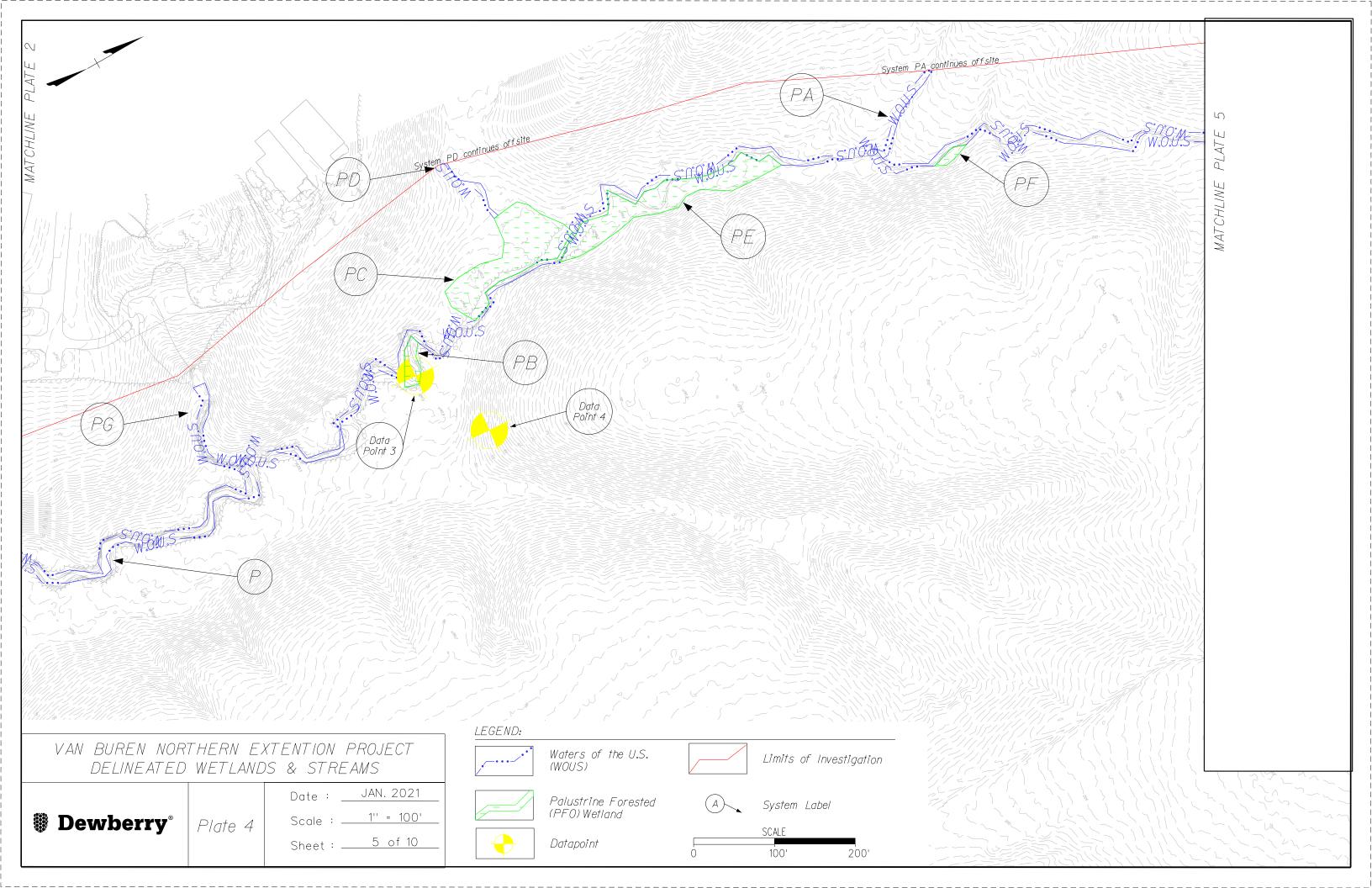
Scale : ____1''=1,000' Sheet : ____1 OF 10

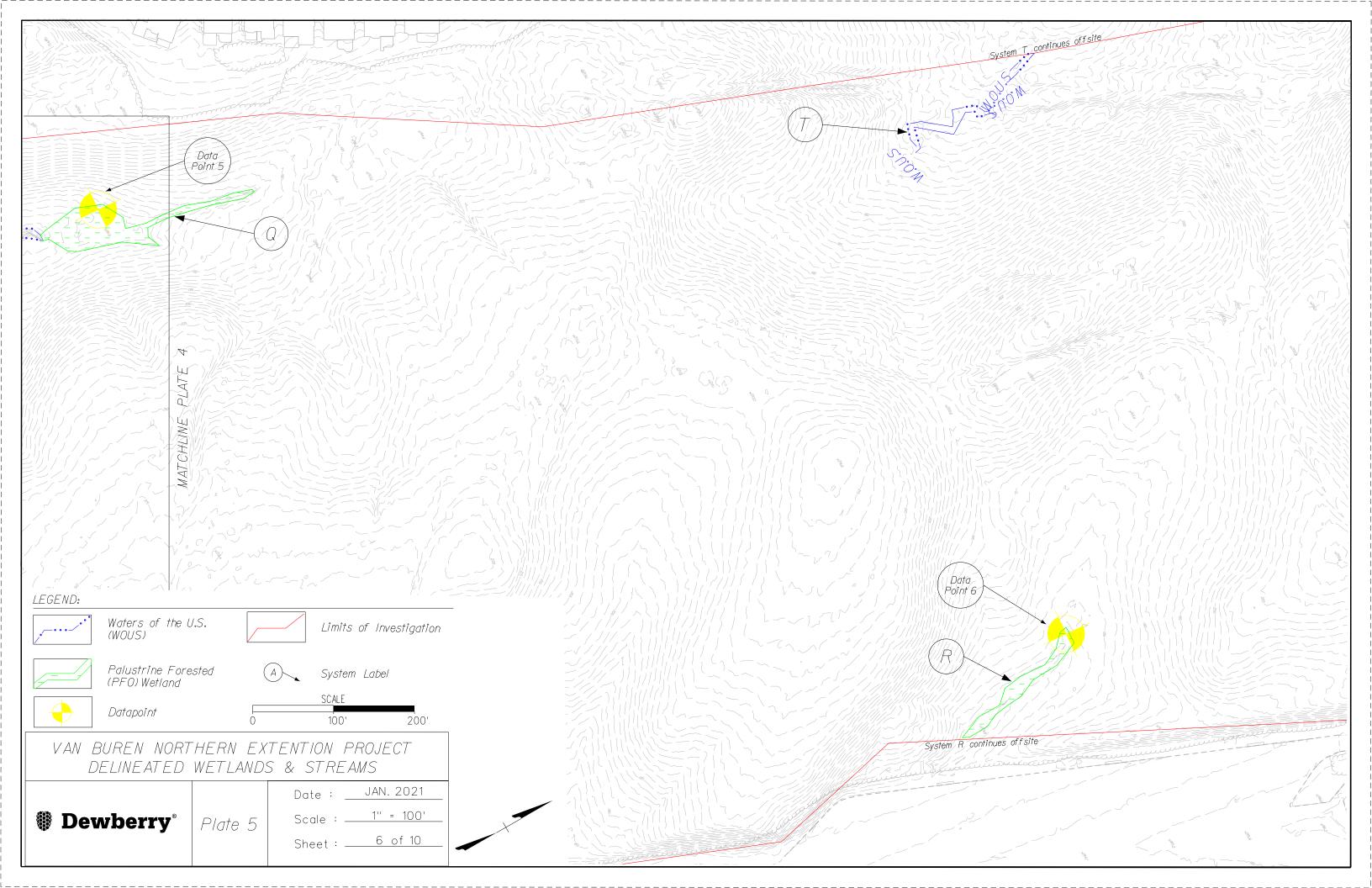


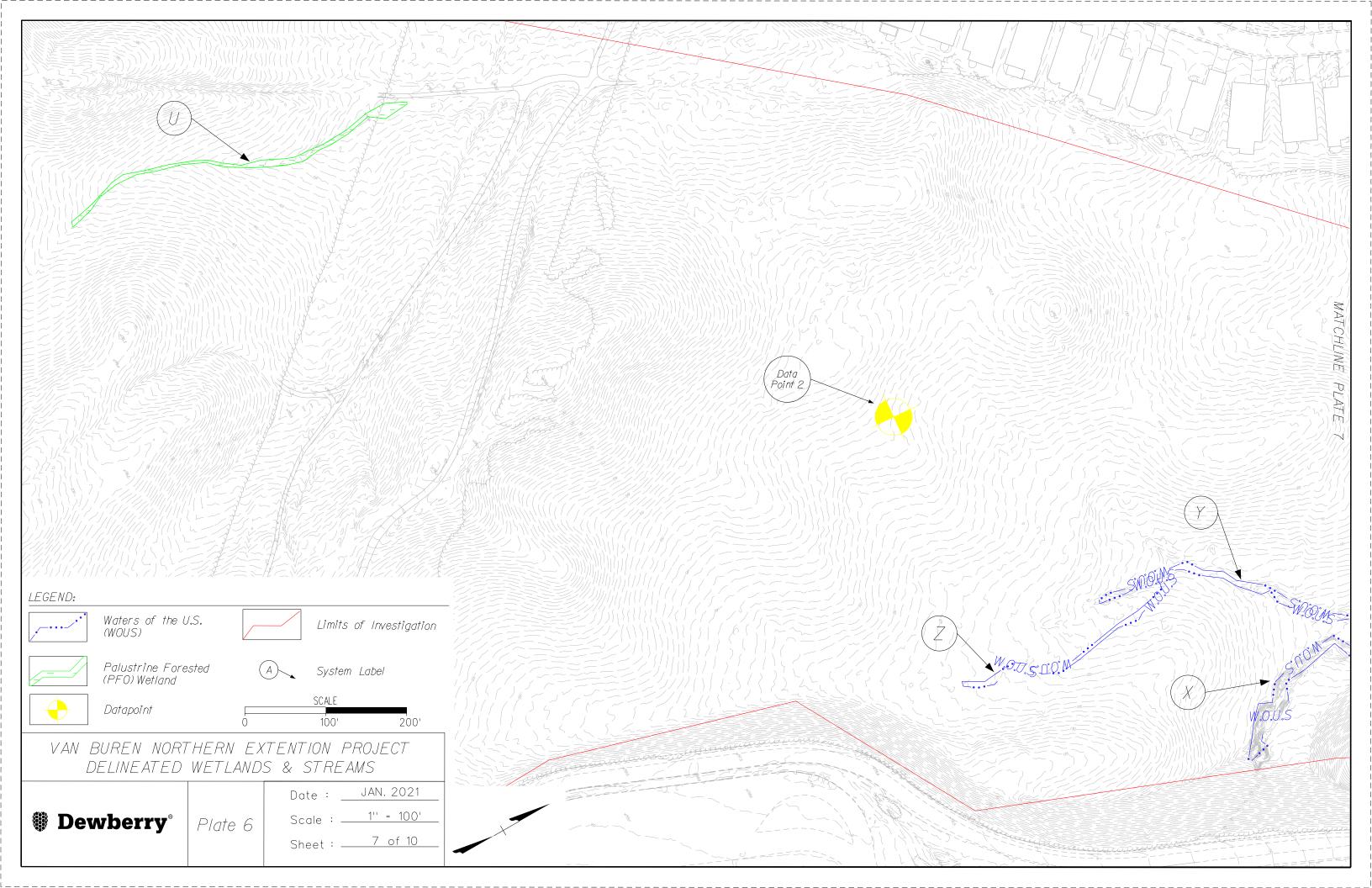


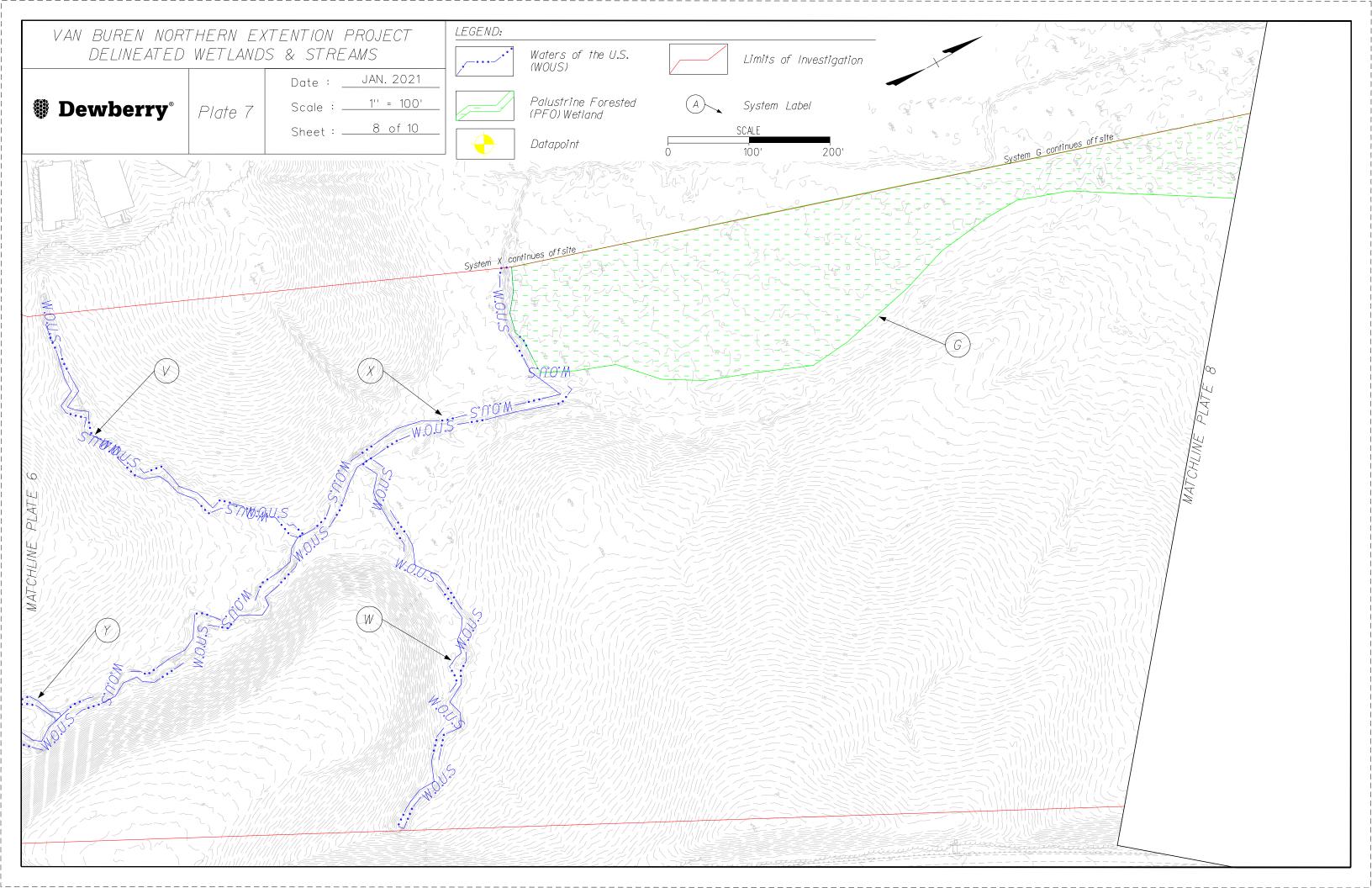


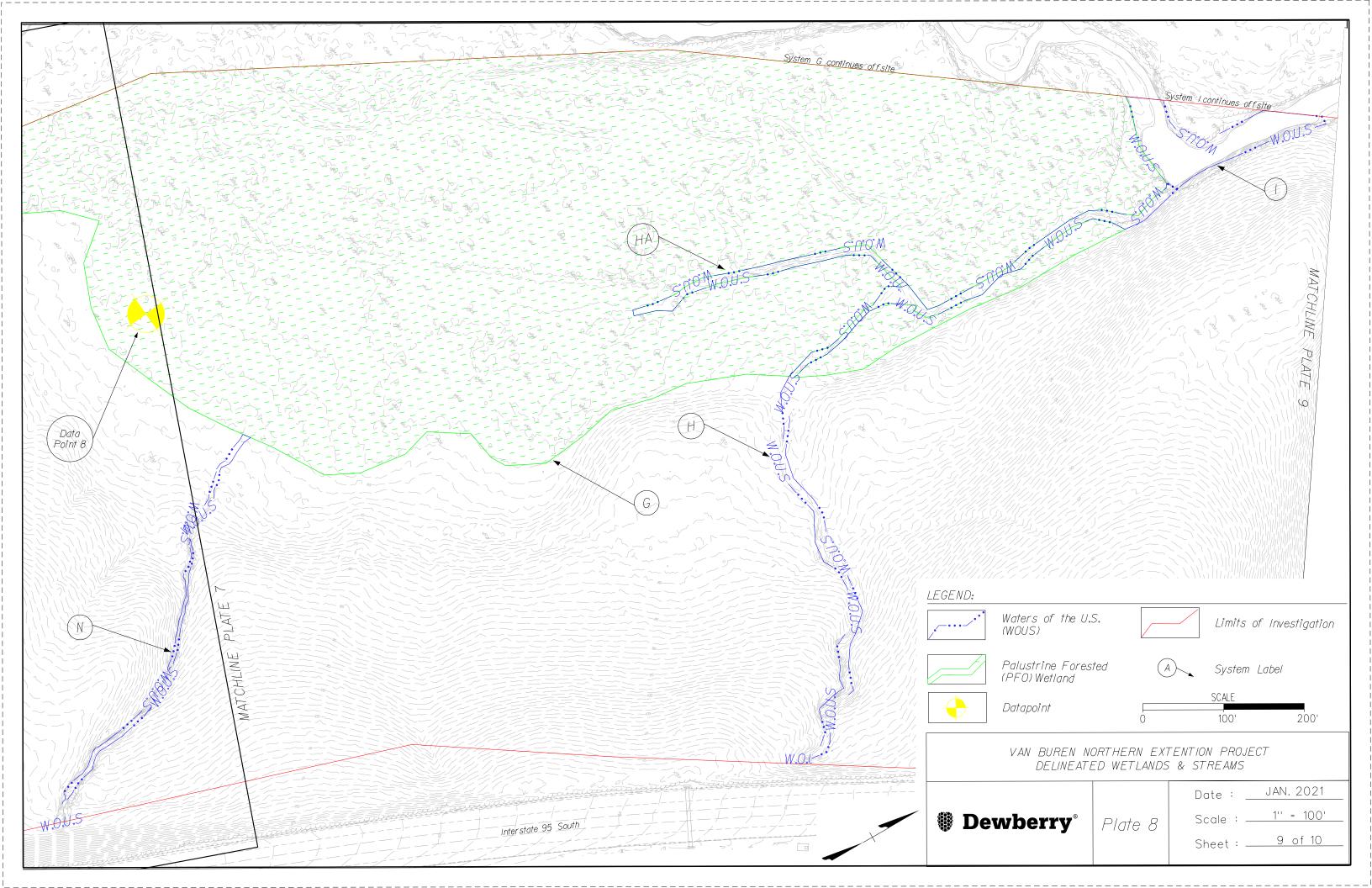


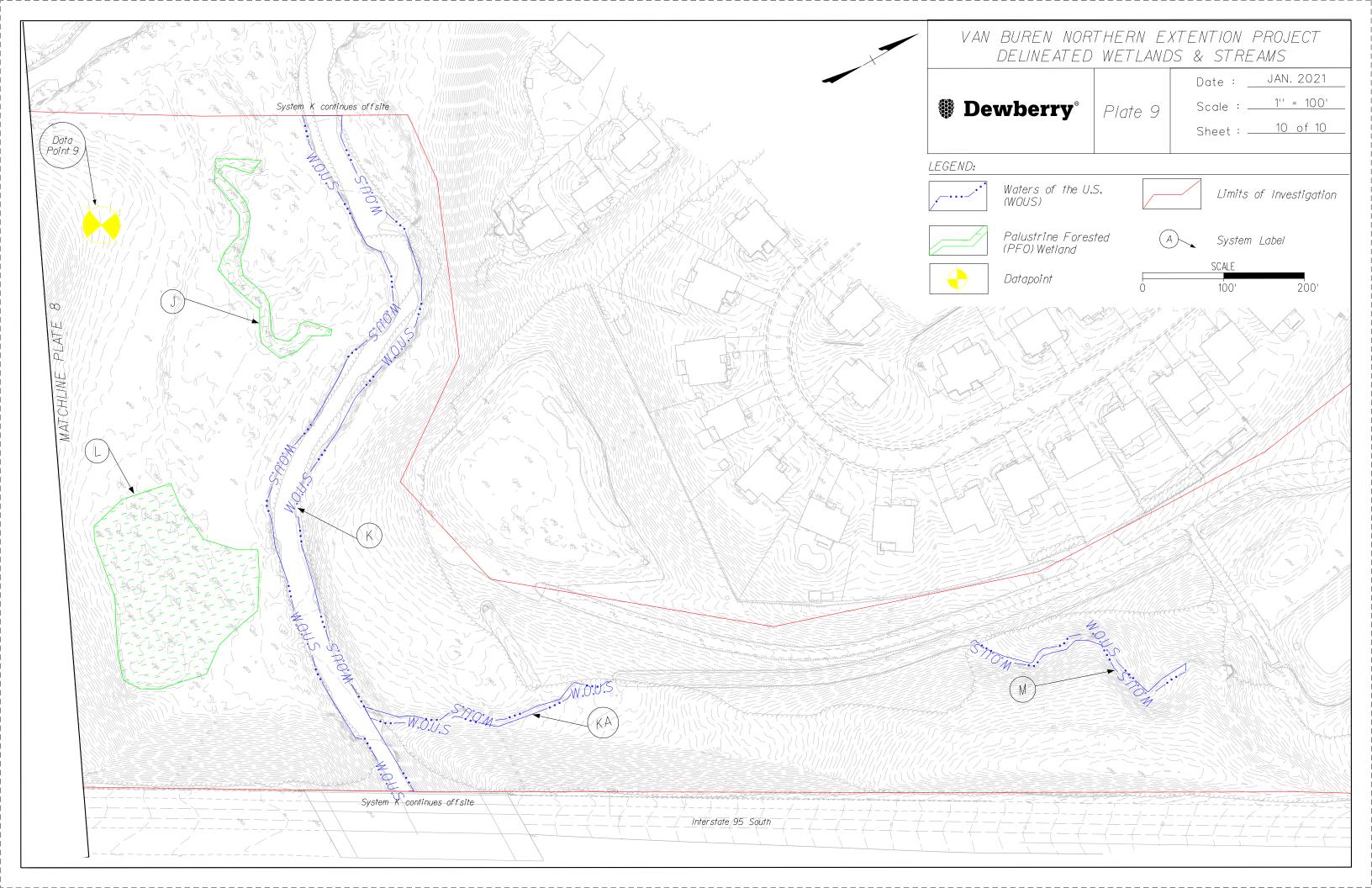












APPENDIX B PHOTOGRAPHIC LOG





Photo #1: Representative Photo of system A (R3) looking upstream. **Date:** December 9, 2020



Photo #2: Representative Photo of system A (R3) looking downstream. **Date:** December 9, 2020



Photo #3: Representative Photo of system AA (PFO). **Date:** December 9, 2020



Photo #4: Representative Photo of system AA (PFO). **Date:** December 9, 2020





Photo #5: Representative Photo of system AB (PFO). **Date:** December 9, 2020



Photo #6: Representative Photo of system AB (PFO). **Date:** December 9, 2020



Photo #7: Representative Photo of system AC (R4) looking downstream. **Date:** December 9, 2020



Photo #8: Representative Photo of system AC (R4) looking upstream. **Date:** December 9, 2020





Photo #9: Representative Photo of system AD (R4). **Date:** December 9, 2020



Photo #10: Representative Photo of system AD (R4). **Date:** December 9, 2020



Photo #11: Representative Photo of system B (PFO). **Date:** December 9, 2020



Photo #12: Representative Photo of system B (PFO). **Date:** December 9, 2020





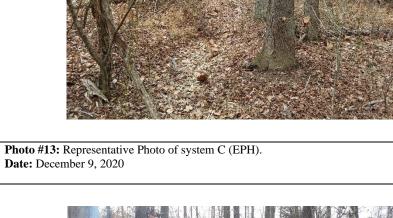




Photo #14: Representative Photo of system C (EPH) looking downstream as it connects to system A. **Date:** December 9, 2020



Photo #15: Representative Photo of system D (R4) looking upstream. Date: December 9, 2020



Photo #16: Representative Photo of system D (R4) looking upstream.



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Photo #17: Representative Photo of system DA (EPH) looking upstream. Date: December 9, 2020



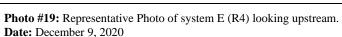




Photo #18: Representative Photo of system DA (EPH) looking upstream starting at a culvert that goes under Old Stage Road. **Date:** December 9, 2020



Photo #20: Representative Photo of system E (R4) looking downstream.



Photo #21: Representative Photo of system EA (R4) looking upstream. **Date:** December 9, 2020



Photo #23: Representative Photo of system EB (R4) looking downstream. **Date:** December 9, 2020



Photo #22: Representative Photo of system EA (R4) looking downstream. **Date:** December 9, 2020



Photo #24: Representative Photo of system EB (R4) looking upstream. **Date:** December 9, 2020





Photo #25: Representative Photo of system F (EPH) looking upstream starting at a pipe going under the sewerline easement access road.



Photo #26: Representative Photo of system F (EPH) looking downstream. **Date:** December 9, 2020



Photo #27: Representative Photo of system G (PFO).

Date: December 22, 2020



Photo #28: Representative Photo of system G (PFO).

Date: December 22, 2020





Photo #29: Representative Photo of system H (R4) looking upstream. **Date:** December 22, 2020



Photo #30: Representative Photo of system H (R4) looking downstream. **Date:** December 22, 2020



Photo #31: Representative Photo of system H (R4) looking upstream starting a culver that goes under I-95.



Photo #32: Representative Photo of system HA (EPH) looking downstream. Date: December 22, 2020





Photo #33: Representative Photo of system I (R3) looking downstream. **Date:** December 22, 2020



Photo #34: Representative Photo of system I (R3) looking upstream. **Date:** December 22, 2020



Photo #35: Representative Photo of system J (PFO).



Photo #36: Representative Photo of system J (PFO). **Date:** December 22, 2020





Photo #37: Representative Photo of system K (R3) looking downstream. **Date:** December 22, 2020



Photo #38: Representative Photo of system K (R3) looking downstream with the bridge over the stream being I-95. **Date:** December 22, 2020

Photo #39: Representative Photo of system KA (R4) looking upstream. **Date:** December 22, 2020



Photo #40: Representative Photo of system KA (R4) looking downstream. Date: December 22, 2020





Photo #41: Representative Photo of system L (PFO). **Date:** December 22, 2020



Photo #42: Representative Photo of system L (PFO). **Date:** December 22, 2020



Photo #43: Representative Photo of system M (R4) looking downstream. **Date:** December 22, 2020



Photo #44: Representative Photo of system M (R4) looking upstream. **Date:** December 22, 2020





Photo #45: Representative Photo of system N (R4) looking downstream. **Date:** December 22, 2020



Photo #46: Representative Photo of system N (R4) looking upstream. **Date:** December 22, 2020



Photo #47: Representative Photo of system O (PFO). **Date:** December 10, 2020



Photo #48: Representative Photo of system O (PFO). **Date:** December 10, 2020





Photo #49: Representative Photo of system P (R3) looking upstream. **Date:** December 9, 2020



Photo #50: Representative Photo of system P (R3) looking downstream. **Date:** December 9, 2020



Photo #51: Representative Photo of system PA (R4) looking downstream. **Date:** December 10, 2020



Photo #52: Representative Photo of system PA (R4) looking upstream. **Date:** December 10, 2020





Photo #53: Representative Photo of system PB (PFO). **Date:** December 10, 2020



Photo #54: Representative Photo of system PB (PFO). **Date:** December 10, 2020



Photo #55: Representative Photo of system PC (PFO). **Date:** December 10, 2020



Photo #56: Representative Photo of system PC (PFO). **Date:** December 10, 2020





Photo #57: Representative Photo of system PC (PFO). **Date:** December 10, 2020



Photo #58: Representative Photo of system PD (R4) looking downstream. **Date:** December 10, 2020



Photo #59: Representative Photo of system PE (PFO). **Date:** December 10, 2020



Photo #60: Representative Photo of system PE (PFO). **Date:** December 10, 2020





Photo #61: Representative Photo of system PF (PFO) looking upstream. **Date:** December 10, 2020



Photo #63: Representative Photo of system PG (R3) looking downstream. **Date:** December 10, 2020



Photo #62: Representative Photo of system PF (PFO) looking downstream. **Date:** December 10, 2020



Photo #64: Representative Photo of system PG (R3) looking upstream starting at a culvert under Four Seasons Drive. **Date:** December 10, 2020





Photo #65: Representative Photo of system PH (PFO).



Photo #66: Representative Photo of system PH (PFO).

Date: December 10, 2020



Photo #67: Representative Photo of system PI (R3) looking downstream. **Date:** December 10, 2020



Photo #68: Representative Photo of system PI (R3) looking upstream with the culvert going under I-95.

Date: December 10, 2020





Photo #69: Representative Photo of system Q (PFO).



Photo #70: Representative Photo of system Q (PFO).

Date: December 9, 2020



Photo #71: Representative Photo of system R (PFO).

Date: December 9, 2020



Photo #72: Representative Photo of system R (PFO).

Date: December 9, 2020



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Photo #73: Representative Photo of system T (R4) looking downstream. **Date:** December 9, 2020



Photo #74: Representative Photo of system T (R4) looking upstream. **Date:** December 9, 2020



Photo #75: Representative Photo of system U (PFO) looking upstream. **Date:** December 9, 2020



Photo #76: Representative Photo of system U (PFO) looking downstream. **Date:** December 9, 2020





Photo #77: Representative Photo of system V (R4) looking upstream. **Date:** December 9, 2020



Photo #78: Representative Photo of system V (R4) looking downstream where system V connects to system X. **Date:** December 9, 2020



Photo #79: Representative Photo of system W (R3) looking upstream with the culvert going under I-95.



Photo #80: Representative Photo of system W (R3) looking downstream. **Date:** December 9, 2020





Photo #81: Representative Photo of system X (R3) looking upstream. **Date:** December 9, 2020



Photo #82: Representative Photo of system X (R3) looking downstream. **Date:** December 9, 2020



Photo #83: Representative Photo of system Y (EPH) looking upstream. **Date:** December 9, 2020



Photo #84: Representative Photo of system Y (EPH) looking downstream. **Date:** December 9, 2020



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Photo #85: Representative Photo of system Z (EPH) looking downstream. **Date:** December 9, 2020



Photo #86: Representative Photo of system Z (EPH) looking upstream. **Date:** December 9, 2020



APPENDIX C USACE WETLAND DATA FORMS



Project/Site:	Van Buren Northern Extension Project City/County:		City/County:	Prince William County	Date:	12/9/2020		
Applicant/Owner:	Prince William County		State: VA	Sampli	ng Point:	1		
Investigator(s):	K.Donovan, R.Hayler, E.P	runchak, A.Dietrich	Section, Township, Range:					
Landform (hillslope, terrace, etc.):	Plain		Local relief (concave, convex, none):	Concave		Slope (%):	0-1%	
Subregion (LRR or MLRA):	136 - Southern Piedmont	:	Lat:	38.583507 Long:	-77.322462	Datum:		
Soil Map Unit Name:	27A - Hatboro-Codorus c	omplex			NWI Classification	on:	PFO	
Are climate/hydrologic conditions or	n the site typical for this tim	ne of the year?		Yes X	No(If no	, explain ir	Remarks)	
Are vegetation	n , soil , or hy	drology significa	antly disturbed?	Are "Normal Circumst	<u> </u>	Yes X		
	n , soil , or hy			(If needed, explain an	y answers in Remarks.)			
Summary of Findings - Attac	h site map showing s	sampling point loca	ations, transects, i	mportant features	, etc			
Hydrophytic Vegetation present?	Yes X	No	_					
Hydric Soil present?	Yes X	No	_	Is the Sampled Area v	vithin a Wetland?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	_					
Remarks:								
Hadaala								
Hydrology Wetland Hydrology Indicators	·							
Primary Indicators (minimum of one		apply)		Second	ary Indicators (minimum of	two requir	·ed)	
X Surface Water (A1)		Aquatic Fauna	(B13)	s	urface Soil Cracks (B6)			
High Water Table (A2)		Marl Deposits (B15) (LRR U)	s	parsely Vegetated Concave	Surface (B8	8)	
X Saturation (A3)		Hydrogen Sulfi	de Odor (C1)		Prainage Patterns (B10)			
X Water Marks (B1)	•	Oxidized Rhizo	spheres on Living Roots					
Sediment Deposits (B2)		X Presence of Re		· · · · · · · · · · · · · · · · · · ·	ry-Season Water Table (C2)			
Drift Deposits (B3)	•	Recent Iron Re	duction in Tilled Soils (C	C8) C	rayfish Burrows (C8)			
Algal Mat or Crust (B4)		Thin Muck Surf	ace (C7)		aturation Visible on Aerial Ir	magery (C9	1)	
Iron Deposits (B5)		Other (Explain	in Remarks)	s	tunted or Stressed Plants (D	1)		
Inundation Visible on Aerial In	nagery (B7)			G	Geomorphic Position (D2)			
X Water-Stained Leaves (B9)				s	hallow Aquitard (D3)			
					AC-Neutral Test (D5)			
				s	phagnum moss (D8) (LRR T,	U)		
Field Observations:								
Surface Water Present?	Yes X No	Depth	(Inches): 5	_				
Water Table Present?	Yes No	X Depth	(Inches):	_ v	Vetland Hydrology Present?	?		
Saturation Present?	Yes X No	Depth	(Inches): 4	_		Yes X	No	
Describe Recorded Data (stream gau	ge, monitoring well, aerial	photos, previous inspec	tions), if available:					
Remarks:								
Mishin quatons AA								
Within system AA								

VEGETATION	- Use scientific names	of plants

VEGETATION - Use scientific names of plants.					Sampling Point:		1
				Dominance Test Wo	rksheet:		
	Absolute	Dominant	Indicator	Number of Dominan	t Species that Are OBL,		
Tree Stratum (Plot Size: 30 ft.)	% Cover	Species?	Status	FACW, or FAC:	t species that Are Obt,	3	(A)
1 Liquidambar styraciflua	70	Y	FAC	TACW, OF TAC.			_ (^)
2 Carpinus caroliniana	25	Y		T			
	25	· <u> </u>	FAC		minant Species Across		(5)
3				All Strata:		4	_ ^(B)
4							
5				Percent of Dominant	Species that are OBL,		
6				FACW, or FAC:		75%	_ (A/B)
7							
	95	=Total Cover		Prevalence Index Wo	orksheet:		
				Total % Cover of:			
Sapling Statum (Plot Size: 15 ft.)				OBL Species	0 x1=	0	
1 Carpinus caroliniana	25	Υ	FAC	FACW Species	0 x2=		_
2		·		FAC Species	120 x3=	360	_
2				FACU Species	0 x4=	0	_
							_
4				UPL Species	0 x5=	0	_
5							
6				Column Totals:	120(A)	360	_ (B)
7							
	25	=Total Cover		Pr	evalence Index = B/A =	3.00	
							_
Shrub Stratum (Plot Size: 15 ft.)				Hydrophytic Vegetat	tion Indicators:		
,				1	lydrophytic Vegetation		
				— '			
2				X Dominance Test is > 50%			
3				X Prevalence Index is ≤3.0¹			
4				Problematic Hydrophytic Vegetation ¹ (Explain)			
5				_ Indicators of hydric soil and wetland hydrology must be present			be present,
6				unless disturbed or p	problematic		
7							
	0	=Total Cover		Definitions of Veget	ation Strata:		
Herb Stratum (Plot Size: 5 ft.)							
1 Carax Sp.	5	Y		Troe Woody plants	, excluding woody vines	annrovin	aatoly 20 ft
					ht and 3 in. (7.6cm) or I		
2				breast height (DBH).		arger iii ai	ameter at
				breast neight (DDH).			
4							
5							
6							
7				Sapling - Woody plan	nts, excluding woody vir	nes, appro	ximately 20
8				ft (6m) or more in he	eight and less than 3 in.	(7.6cm) D	BH.
9							
10							
11		. _					
12				Shrub - Woody plant	s, excluding woody vine	es, approx	imately 3 to
	5	=Total Cover		20 ft (1 to 6m) in hei		., ., p. ox	, 0 10
Woody Vine Stratum (Plot Size: 30 ft.)							
1		·			s (non-woody) plants, ii	-	
2				-	ize. Includes woody pla		ot woody
3		·		vines, less than appr	oximately 3 ft (1m) in h	eight.	
4							
5		. <u></u> _		Hydrophytic	Yes X	_ N	o
	0	=Total Cover		Vegetation Present	t.f		
2 1 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_		-				
Remarks : (If observed, list morphological adaptations below.)							

SOIL Sampling Point: 1

Profile Description	n: (Describe to the depth needed	to documen	t the indicator or confirm	the abser	ce of indi	cators.)					
Matrix Redox Features											
Depth (Inches)	Color (moist)	% Color (Moist) % Type¹ Loc					Texture	Remarks			
1-12	7.5YR 8/2	80%	2.5YR 4/8	20%			Sandy Loam				
1-12	7.518 8/2	80%	2.518 4/8		D	M	Sandy Loam				
¹ Type: C=Concen	tration, D=Depletion, RM=Reduc	ed Matrix, C	S=Covered or Coated San	d Grains.			² Location: PL=Pore Lir	ning, M=Matrix			
Hydric Soil Indica	tors:						Indicators for Problem	natic Hydric Soils³:			
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U)						1 cm Much (A9)	(LRR 0)				
Histic Epip			in Dark Surface (S9) (LRR				2 cm Muck (A10) (LRR S)				
Black Histi			amy Mucky Mineral (F1)	(LRR O)				(F18) (outside MLRA 150A, B)			
Stratified L	Sulfide (A4)		amy Gleyed Matrix (F2) epleted Matrix (F3)					Iplain Soils (F19) (LRR P, S, T) Int Loamy Soils (F20) (MLRA 153B)			
	odies (A6) (LRR P. T, U)		dox Dark Surface (F6)				Red Parent Material (TF2)				
5 cm Muck	xy Mineral (A7) (LRR P, T, U)	De	pleted Dark Surface (F7)				Very Shallow Dark Surface (TF12)				
	ence (A8) (LRR U)		dox Depressions (F8)				Other (Explain i	n Remarks)			
	((A9) (LRR P, T) Below Dark Surface (A11)		arl (F10) (LRR U) pleted Ochric (F11) (MLR	οΛ 1 Ε 1\							
	Surface (A12)		on-Manganese Masses (F	-	P, T)						
	rie Redox (A16) (MLRA 150A)		mbric Surface (F13) (LRR F				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
	cky Mineral (S1) (LRR O, S)		elta Orhic (F17) (MLRA 15	-							
	/ed Matrix (S4)		duced Vertic (F18) (MLRA		-						
Sandy Red Stripped M			edmont Floodplain Soils (Iomalous Bright Loamy So			A. 153C.	153D)				
	ce (S7) (LRR P, S, T, U)		,	(- =-, (-		.,,	,				
							T				
Restrictive Layer ((if observed:)										
Type:						_	Hydric Soil Present?	Yes X No			
Depth (inc	hes):					_					
Remarks:							•				

Project/Site:	Van Buren Northern Extension Proje	ect	City/County:	Prince William Cou	Date:	1	2/9/2020	
Applicant/Owner:	Prince William County Sta		State: VA	Sampling Point:		2		
Investigator(s):	K.Donovan, R.Hayler, E.Prunchak, A.	.Dietrich	Section, Township, Range:					
Landform (hillslope, terrace, etc.):	Hillslope		Local relief (concave, convex, none):	convex		Slope (%):	5-10%	
Subregion (LRR or MLRA):	136 - Southern Piedmont		Lat:	38.597881 Long:	-77.317085	Datum:		
Soil Map Unit Name:	18C - Dumfries sandy loam		Lat.	38.337881 LONG.	NWI Classifica		UPL	
	the site typical for this time of the ye	nar2		Yes X		no, explain i		
. , -	.,		2 ام م ماس بغم الم يباغ.					
	, soil, or hydrology			Are "Normal Circum	•	Yes X	-	No
Are vegetation	, soil, or hydrology	naturally	problematic?	(If needed, explain	any answers in Remarks.)			
Summary of Findings - Attack	h site map showing sampling	point loca	tions, transects, i	mportant featur	es, etc			
Hydrophytic Vegetation present?	Yes	No X		1		,		
Hydric Soil present?	Yes	No X		Is the Sampled Are	a within a Wetland?	Yes		No X
Wetland Hydrology Present?	Yes	No X		,			-	
Remarks:								
Hydrology Wetland Hydrology Indicators Primary Indicators (minimum of one				Seco	ndary Indicators (minimum	of two requi	red)	
Surface Water (A1)		quatic Fauna (E	313)		Surface Soil Cracks (B6)			
High Water Table (A2)	 Ma	arl Deposits (B	15) (LRR U)		- Sparsely Vegetated Conca	ve Surface (B	8)	
Saturation (A3)		drogen Sulfid		Drainage Patterns (B10)				
Water Marks (B1)			oheres on Living Roots					
Sediment Deposits (B2)		esence of Red		ts (C3) Moss Trim Lines (B16) Dry-Season Water Table (C2)				
Drift Deposits (B3)			uction in Tilled Soils (C		Crayfish Burrows (C8)	,		
Algal Mat or Crust (B4)		in Muck Surfa			Saturation Visible on Aeria	ıl Imagery (C	9)	
Iron Deposits (B5)		her (Explain ir			- Stunted or Stressed Plants		•	
Inundation Visible on Aerial Im	nagery (B7)			_	Geomorphic Position (D2)			
Water-Stained Leaves (B9)					Shallow Aquitard (D3)			
					FAC-Neutral Test (D5)			
					_ Sphagnum moss (D8) (LRR	T, U)		
Field Observations:								
Surface Water Present?	Yes No X	Depth (nches):					
Water Table Present?	Yes No X	Depth (nches):	_	Wetland Hydrology Prese	nt?		
Saturation Present?	Yes No X	Depth (nches):	_		Yes	_	No X
Surface Water Present? Water Table Present? Saturation Present?	Yes No X	Depth (I	nches):	-	Wetland Hydrology Prese		-	No _

VEGETATION -	Use scientific nam	es of plants.

Sampling Point:	2
e Test Worksheet:	
f Dominant Species that Are OBL,	
FAC:	2 (A)
-	
ber of Dominant Species Across	
ber of Bornmant Species / 101033	5 (B)
-	(-/
Dominant Species that are ODI	
Dominant Species that are OBL, FAC:	40 % (A/B)
-AC.	40 % (A/B)
a landari Marahaha ati	
e Index Worksheet:	
ver of:	•
es <u>0</u> x1= -	0
cies <u>0</u> x2=	0
es <u>90</u> x3=	270
cies <u>65</u> x4=	260
es <u> </u>	0
otals: 155 (A)	530 (B)
Prevalence Index = B/A =	3.42
tic Vegetation Indicators:	
Test for Hydrophytic Vegetation	
inance Test is > 50%	
alence Index is ≤3.0¹	
ematic Hydrophytic Vegetation ¹ (E	xplain)
s of hydric soil and wetland hydrolo	
curbed or problematic	ogy must be preser
arbea or problematic	
s of Vegetation Strata:	
701 Vegetation Strata.	
ody plants, excluding woody vines,	
ore in height and 3 in. (7.6cm) or la ght (DBH).	irger in diameter at
giit (DBH).	
Voody plants, excluding woody vin	
more in height and less than 3 in. (7.6cm) DBH.
oody plants, excluding woody vines	s, approximately 3
6m) in height.	
herbaceous (non-woody) plants, in	cluding herbaceous
ardless of size. Includes woody plan	
than approximately 3 ft (1m) in he	
ophytic Yes	No X
on Present?	<u></u>

SOIL Sampling Point: 2

Profile Description	: (Describe to the depth needed	d to documen	t the indicator or confirm	m the abser	ce of indi	icators.)					
	Matrix		Redox	x Features							
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-12	10YR 5/3	100%					Silty Loam				
12-18	10YR 5/3	85%	10YR 5/6	 15%		PL	Silty Loam				
12-10	1011 3/3		101K 3/0	13%			Sifty Loain				
		· ·									
¹ Type: C=Concent	ration, D=Depletion, RM=Redu	 ced Matrix, C	S=Covered or Coated Sai	— ——— nd Grains.			² Location: PL=Pore L	ining, M=Matrix			
Hydric Soil Indicate	ors:						Indicators for Proble	matic Hydric Soils ³ :			
Histosol (A1		De	dwyalue Below Surface /9	58) (IPD C T	. 11)		1 cm Much (A	·			
	Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)						2 cm Muck (A				
Black Histic			amy Mucky Mineral (F1)					ic (F18) (outside MLRA 150A, B)			
Hydrogen S	ulfide (A4)		amy Gleyed Matrix (F2)					odplain Soils (F19) (LRR P, S, T)			
Stratified La	ayers (A5)	De	pleted Matrix (F3)				Anomalous Br	right Loamy Soils (F20) (MLRA 153B)			
Organic Boo	dies (A6) (LRR P. T, U)	Re	dox Dark Surface (F6)				Red Parent Material (TF2)				
5 cm Mucky	/ Mineral (A7) (LRR P, T, U)		pleted Dark Surface (F7))				Dark Surface (TF12)			
	nce (A8) (LRR U)		dox Depressions (F8)				Other (Explain	n in Remarks)			
	(A9) (LRR P, T)		arl (F10) (LRR U)								
	elow Dark Surface (A11)		pleted Ochric (F11) (ML	•							
	Surface (A12)		on-Manganese Masses (F		P, T)						
	e Redox (A16) (MLRA 150A)		mbric Surface (F13) (LRR				³ Indicators of hydrophytic vegetation and wetland				
	ky Mineral (S1) (LRR O, S)		elta Orhic (F17) (MLRA 1		OD)		hydrology must be present, unless disturbed or problematic.				
Sandy Redo	ed Matrix (S4)		duced Vertic (F18) (MLF edmont Floodplain Soils		-						
			iomalous Bright Loamy S		-	N 152C	1530)				
Stripped Ma		AI	iornalous Bright Loamy s	5011S (F2U) (I	VILKA 145	A, 153C,	1530)				
Dark Surfac	e (S7) (LRR P, S, T, U)										
Restrictive Layer (i	f observed:)										
Type:						_	Hydric Soil Present? Yes NoX				
Depth (inch	es):					_					
Remarks:											

Applicant/Owner: Prince William Investigator(s): K.Donovan, R. Landform (hillslope, terrace, etc.): Plain Subregion (LRR or MLRA): 136 - Southerr Soil Map Unit Name: 47B - Quantico Are climate/hydrologic conditions on the site typical Are vegetation, soil Are vegetation, soil Are vegetation, soil Are vegetation, soil	Piedmont sandy loa	m ne of the year?	State: VA Section, Townsl Range: Local relief (conconvex, none): Lat:			Slope (%):			
Landform (hillslope, terrace, etc.): Plain Subregion (LRR or MLRA): 136 - Southern Soil Map Unit Name: 47B - Quantico Are climate/hydrologic conditions on the site typical Are vegetation, soil	Piedmont sandy loa for this tin	m ne of the year?	Range: Local relief (conc convex, none):	ave, concave					
Landform (hillslope, terrace, etc.): Plain Subregion (LRR or MLRA): 136 - Southern Soil Map Unit Name: 47B - Quantico Are climate/hydrologic conditions on the site typical Are vegetation, soil	Piedmont sandy loa for this tin	m ne of the year?	Local relief (conc	concave					
Subregion (LRR or MLRA): 136 - Southern Soil Map Unit Name: 47B - Quantico Are climate/hydrologic conditions on the site typical Are vegetation, soil	sandy loa	m ne of the year?	ii						
Soil Map Unit Name: 47B - Quantico Are climate/hydrologic conditions on the site typical Are vegetation, soil	sandy loa	m ne of the year?	Lat:	38.589595 Lo		D-4			
Are climate/hydrologic conditions on the site typical Are vegetation, soil	for this tin	ne of the year?				Datum:	NAD 83		
Are vegetation, soil		,			NWI Classifica	tion:	PFO		
	, or hy	drology significa		Yes	No (If	no, explain in	Remarks)		
Are vegetation, soil		arology significa	antly disturbed?	Are "Normal (Circumstances present?)	Yes X	No		
	, or hy	drology naturall	y problematic?	(If needed, ex	plain any answers in Remarks.)				
Summary of Findings - Attach site map sl	nowing	sampling point loca	ations, transe	cts, important fe	atures, etc				
Hydrophytic Vegetation present?	es X	No	_						
Hydric Soil present?	es X	No	_	Is the Sampled Area within a Wetland? Yes		Yes X	No		
Wetland Hydrology Present?	es <u>X</u>	No	_						
Remarks:				I			-		
Hydrology									
Wetland Hydrology Indicators:	. عمطه الميا				Connedous Indiantous (minimum	a f 4 a uaaiu	a d\		
Primary Indicators (minimum of one is required; check X Surface Water (A1)	K all that a	Aquatic Fauna	(B13)		Secondary Indicators (minimum Surface Soil Cracks (B6)	or two requir	ea)		
X High Water Table (A2)		Marl Deposits (Sparsely Vegetated Concave Surface (B8)				
X Saturation (A3)		Hydrogen Sulfic			Drainage Patterns (B10)				
				2 (62)					
X Water Marks (B1) Sediment Deposits (B2)		X Presence of Re	spheres on Living	ROOLS (C3)	Moss Trim Lines (B16) Dry-Season Water Table (0	~2)			
Drift Deposits (B3)			duction in Tilled So	oile (C9)	Crayfish Burrows (C8)	-2)			
Algal Mat or Crust (B4)		Thin Muck Surf		ons (co)	Saturation Visible on Aeria	ıl Imagery (C9)		
Iron Deposits (B5)		Other (Explain			Stunted or Stressed Plants		•		
Inundation Visible on Aerial Imagery (B7)					Geomorphic Position (D2)				
X Water-Stained Leaves (B9)					Shallow Aquitard (D3)				
					FAC-Neutral Test (D5)				
					Sphagnum moss (D8) (LRR	1, 0)			
Field Observations:									
Surface Water Present? Yes	No	Depth	(Inches): 2						
Water Table Present? Yes	_	Depth	(Inches): 12	! <u> </u>	Wetland Hydrology Prese	nt?			
Saturation Present? Yes	No	Depth	(Inches): 2			Yes X	No		

VEGETATION -	Use scientific nam	es of plants.

VEGETATION -	Use scientific names of plants.				Sampling Point: 3			
					Dominance Test Worksheet:			
		Absolute	Dominant	Indicator	Number of Dominant Species that Are OBL,			
ree Stratum 1 <i>Acer rubrum</i>	(Plot Size: <u>30 ft.</u>)	% Cover 50	Species?	Status FAC	FACW, or FAC:3(A)			
2					Total Number of Dominant Species Across			
2					All Strata: 3 (B)			
4								
					Percent of Dominant Species that are OBL,			
6					FACW, or FAC:(A/B)			
<u> </u>		50	=Total Cover		Prevalence Index Worksheet:			
					Total % Cover of:			
apling Statum	(Plot Size: 15 ft.)				OBL Species 20 x1= 20			
1 Acer rubrum	<u> </u>	25	Y	FAC	FACW Species 0 x2= 0			
2					FAC Species 75 x3=25			
3					FACU Species 0 x4= 0			
4					UPL Species 0 x5= 0			
_					Column Totals: 95 (A) 245 (B)			
7		25	=Total Cover		Prevalence Index = B/A = 2.58			
			- rotal cover		Trevalence mack = b/N =			
Shrub Stratum	(Plot Size: <u>15 ft.</u>)				Hydrophytic Vegetation Indicators:			
1 N/A					Rapid Test for Hydrophytic Vegetation			
2					X Dominance Test is > 50%			
3					X Prevalence Index is ≤3.0¹			
4					Problematic Hydrophytic Vegetation ¹ (Explain)			
5					_ 1 Indicators of hydric soil and wetland hydrology must be prese			
6					unless disturbed or problematic			
<u> </u>		0	=Total Cover		Definitions of Vegetation Strata:			
Herb Stratum	(Plot Size: <u>5 ft.</u>)	20		OBL				
1 <u>Carex pedunculata</u> 2		20	<u> </u>	OBL	Tree - Woody plants, excluding woody vines, approximately 20 f			
3			· 		(6m) or more in height and 3 in. (7.6cm) or larger in diameter at breast height (DBH).			
1					breast neight (DBH).			
5								
6								
7					Sapling - Woody plants, excluding woody vines, approximately 2			
8					ft (6m) or more in height and less than 3 in. (7.6cm) DBH.			
9		-						
10								
11								
12		20	=Total Cover		Shrub - Woody plants, excluding woody vines, approximately 3 t 20 ft (1 to 6m) in height.			
			-Total Cover		20 ft (1 to off) if fieight.			
Woody Vine Stratum	(Plot Size: <u>30 ft.</u>)							
1 <u>N/A</u>					Herb - All herbaceous (non-woody) plants, including herbaceous			
2					vines, regardless of size. Includes woody plants, except woody			
3					vines, less than approximately 3 ft (1m) in height.			
5					Hydrophytic Yes X No			
		0	=Total Cover		Vegetation Present?			
Pomarks: (If observed	list morphological adaptations below.)							
vernarks. (ii observed,	nst morphological adaptations below.)							

SOIL Sampling Point: 3

Profile Description	n: (Describe to the depth needed	to documen	t the indicator or confirm	the abser	ce of indi	cators.)					
	Matrix		Redox	Features							
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc²	Texture Remarks				
0-12	7.5YR 4/2	70%	5YR 5/8	30%		PL	Sandy Clay Loam				
<u> </u>	7.5111 1/2		31.1.3/0		<u> </u>		Sanay Siay Esam				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix											
Hydric Soil Indica	tors:						Indicators for Problen	natic Hydric Soils ³ :			
Histosol (A	1)	Po	olyvalue Below Surface (S8) (LRR S. T	. U)		1 cm Much (A9) (LRR 0)			
Histic Epip	•		in Dark Surface (S9) (LRR		, -,		2 cm Muck (A1				
Black Histi	c (A3)	Lo	amy Mucky Mineral (F1) (LRR O)			Reduced Vertic	(F18) (outside MLRA 150A, B)			
Hydrogen	Sulfide (A4)	Lo	amy Gleyed Matrix (F2)				Piedmont Floor	dplain Soils (F19) (LRR P, S, T)			
Stratified L	, , ,		epleted Matrix (F3)					ght Loamy Soils (F20) (MLRA 153B)			
	odies (A6) (LRR P. T, U)		edox Dark Surface (F6)				Red Parent Material (TF2)				
	ky Mineral (A7) (LRR P, T, U)		epleted Dark Surface (F7)					ark Surface (TF12)			
	Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) X Redox Depressions (F8) Marl (F10) (LRR U)					Other (Explain	in Remarks)				
	Below Dark Surface (A11)		arl (F10) (LRR U) epleted Ochric (F11) (MLR	Λ 1E1\							
	Surface (A12)		on-Manganese Masses (F1		p T\						
	rie Redox (A16) (MLRA 150A)		mbric Surface (F13) (LRR P		.,.,		³ Indicators of hydrophytic vegetation and wetland				
	cky Mineral (S1) (LRR O, S)		elta Orhic (F17) (MLRA 15:				hydrology must be present, unless disturbed or problematic.				
Sandy Gley	/ed Matrix (S4)		educed Vertic (F18) (MLRA		0B)		nyarology mast be present, amess distanced or problemation				
Sandy Red	ox (S5)	Pie	edmont Floodplain Soils (F	19) (MLR	A 149A)						
Stripped N	latrix (S6)	Ar	nomalous Bright Loamy So	ils (F20) (F	ИLRA 149	A, 153C,	153D)				
Dark Surfa	ce (S7) (LRR P, S, T, U)										
Restrictive Layer ((if observed:)										
· ·	ii observed.)						Hadda Call Duranuta	V V N-			
Type:						_	Hydric Soil Present?	YesX No			
Depth (inc	nes):					_					
Remarks:											

Project/Site:	Van Buren Northern Extension Project		City/County:	Prince William County		Date:	12/10/2020
Applicant/Owner:	Prince William County		State: VA	Sampling Point:		4	
Investigator(s):	K.Donovan, R.Hayler, E.Prunchak, A.Dietrich		Section, Township, Range:				
Landform (hillslope, terrace, etc.):	hillslop		Local relief (concave, convex, none):	convex		Slope (%):	5-10%
Subregion (LRR or MLRA):	136 - Southern Piedmont		Lat:	38.589080 Long:	-77.322374	Datum:	
Soil Map Unit Name:	47B - Quantico sandy loam				NWI Classificati	on:	UPL
Are climate/hydrologic conditions on the site typical for this time of the year?				Yes X No (If no, explain in Remarks)			
	antly disturbed?	Are "Normal Circumst		Yes X			
			y answers in Remarks.)				
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 X	_				
Hydric Soil present?	Yes X	No	_	Is the Sampled Area	within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes	No X	_				
Remarks:	· · · · · · · · · · · · · · · · · · ·			<u> </u>			
Hydrology							
Wetland Hydrology Indicators Primary Indicators (minimum of one		lv)		Socond	dary Indicators (minimum of	f two roquir	od)
Surface Water (A1)	is required, check all that app	Aquatic Fauna	(R13)		Surface Soil Cracks (B6)	r two requir	euj
High Water Table (A2)	_	Marl Deposits (parsely Vegetated Concave	Surface (R)	5)
	_				Orainage Patterns (B10)	Surface (De	'/
Saturation (A3) Hydrogen Sulfic							
			spheres on Living Roots	.s (C3) Moss Trim Lines (B16) Dry-Season Water Table (C2)			
Sediment Deposits (B2) Presence of Recommendation Deposits (B2)							
Drift Deposits (B3) Algal Mat or Crust (B4)	_	Thin Muck Surf	duction in Tilled Soils (C	<u> </u>	Crayfish Burrows (C8) Saturation Visible on Aerial I	Imageny (CQ	1
Iron Deposits (B5) Other (Explain i					Stunted or Stressed Plants (I		,
Inundation Visible on Aerial Imagery (B7)			,		Geomorphic Position (D2)	,	
Water-Stained Leaves (B9)					hallow Aquitard (D3)		
					AC-Neutral Test (D5)		
				s	Sphagnum moss (D8) (LRR T	, U)	
Field Observations:							
Surface Water Present?	Yes No	X Depth	(Inches):				
Water Table Present?			(Inches):	v	Wetland Hydrology Present	t ?	
Saturation Present?	Yes No	X Depth	(Inches):			Yes	No X
Describe Recorded Data (stream gau	ge, monitoring well, aerial pho	otos, previous inspec	tions), if available:				
Remarks:							
Nemarks.							
Representative upland point							
nepresentative upiditu politi							

VEGETATION -	Use scientific nam	es of plants.

VEGETATION -	Use scientific names of plants.				Sampling Point: 4
					Dominance Test Worksheet:
		Absolute	Dominant	Indicator	Number of Dominant Species that Are OBL,
ree Stratum	(Plot Size: 30 ft.)	% Cover	Species?	Status	FACW, or FAC: 3 (A)
1 Acer rubrum	(40		FAC	(,,
2 Fagus grandifolia		20	Y	FACU	Total Number of Danisant Consider Associ
		15	N		Total Number of Dominant Species Across
Quercus alba			N	FACU	All Strata: 7 (B)
1					
5					Percent of Dominant Species that are OBL,
5					FACW, or FAC: 43% (A/B)
7					
		75	=Total Cover		Prevalence Index Worksheet:
					Total % Cover of:
pling Statum	(Plot Size: 15 ft.)				OBL Species 0 x1= 0
L Acer rubrum	(*************************************	30	Υ	FAC	FACW Species 0 x2= 0
		15	<u> </u>		
2 Fagus grandifolia				FACU	FAC Species 80 x3= 240
Quercus alba		10	N	FACU	FACU Species 110 x4= 440
4	,				UPL Species 0 x5= 0
5					
5					Column Totals: 190 (A) 680 (B)
7					
		55	=Total Cover		Prevalence Index = B/A = 3.58
rub Stratum	(Diet Size) 1E ft				Hudrophytic Vocatation Indicators
	(Plot Size: 15 ft.)	40	.,	540	Hydrophytic Vegetation Indicators:
l llex opaca Aiton		10	Y	FAC	Rapid Test for Hydrophytic Vegetation
<u> </u>					Dominance Test is > 50%
3					Prevalence Index is ≤3.0¹
1					Problematic Hydrophytic Vegetation ¹ (Explain)
5					¹ Indicators of hydric soil and wetland hydrology must be prese
6					unless disturbed or problematic
7			· 		amess distarbed of problematic
<u> </u>		10	Total Cause		Definitions of Venetation Chartes
			=Total Cover		Definitions of Vegetation Strata:
erb Stratum	(Plot Size: <u>5 ft.</u>)				
1 Smilax sp.		30	Υ		Tree - Woody plants, excluding woody vines, approximately 20
2 Pteridium aquilinum	n	50	ΥΥ	FACU	(6m) or more in height and 3 in. (7.6cm) or larger in diameter a
3					breast height (DBH).
4					
·					
5					
7					Sapling - Woody plants, excluding woody vines, approximately
3					ft (6m) or more in height and less than 3 in. (7.6cm) DBH.
9					
1					
					Charle West and a selection of the second of
					Shrub - Woody plants, excluding woody vines, approximately 3
		80	=Total Cover		20 ft (1 to 6m) in height.
oody Vine Stratum	(Plot Size: 30 ft.)				
1 <i>N/A</i>					Herb - All herbaceous (non-woody) plants, including herbaceou
2					vines, regardless of size. Includes woody plants, except woody
3			· 		vines, less than approximately 3 ft (1m) in height.
4			· 		,
					Hydrophytic Ves No X
5					Vegetation Present?
		0	=Total Cover		
omarks: (If absonced	list marphological adaptations below \				1
emarks: (ii observed,	list morphological adaptations below.)				

Profile Descriptio	n: (Describe to the depth needed	to docume	nt the indicator or confirm t	he absen	ce of indi	cators.)			
Matrix Redox Features									
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc²	Texture	Remarks	
0-18	705YR 4/2	80%	5YR 5/8	20%			Sandy Clay Loam		
,									
		-							
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix									
Hydric Soil Indica	ators:						Indicators for Problem	atic Hydric Soils³:	
Histosol (A	A1)	P	olyvalue Below Surface (S8)	(LRR S, T	, U)		1 cm Much (A9)	(LRR 0)	
	pedon (A2)		hin Dark Surface (S9) (LRR S				2 cm Muck (A10		
Black Histi			oamy Mucky Mineral (F1) (L	RR O)				(F18) (outside MLRA 150A, B)	
	Sulfide (A4) Layers (A5)		oamy Gleyed Matrix (F2) Depleted Matrix (F3)					plain Soils (F19) (LRR P, S, T) ht Loamy Soils (F20) (MLRA 153B)	
	odies (A6) (LRR P. T, U)	Redox Dark Surface (F6)					Red Parent Material (TF2)		
5 cm Muc	ky Mineral (A7) (LRR P, T, U)		epleted Dark Surface (F7)				Very Shallow Dark Surface (TF12)		
	sence (A8) (LRR U)		edox Depressions (F8)				Other (Explain in Remarks)		
1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)									
	Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T)								
	rie Redox (A16) (MLRA 150A)		Imbric Surface (F13) (LRR P,		.,.,		³ Indicators of hydrophytic vegetation and wetland		
Sandy Mu	cky Mineral (S1) (LRR O, S)		Pelta Orhic (F17) (MLRA 151)			hydrology must be present, unless disturbed or problematic.		
<u> </u>	yed Matrix (S4)		educed Vertic (F18) (MLRA		-				
Sandy Red	lox (S5) Matrix (S6)		riedmont Floodplain Soils (F: Inomalous Bright Loamy Soi			A 153C	1530)		
	ace (S7) (LRR P, S, T, U)		inomalous Bright Loamy Sor	15 (F2U) (I	ILNA 143	А, 155С,	1550)		
Dark Surie	ice (37) (ERR F, 3, 1, 0)								
Restrictive Layer	(if observed:)								
Type:	-	-				_	Hydric Soil Present?	YesX No	
Depth (inc	:hes):								
Remarks:									

Applicant/Owner: Prince Investigator(s): K.Dor Landform (hillslope, terrace, etc.): Plain	Buren Northern Extension Project e William County	City/County:	Prince William Coun	ITV	Date:	12/10/2020
Investigator(s): K.Dor Landform (hillslope, terrace, etc.): Plain	<u> </u>	State: VA		ling Point:	5	,,
	novan, R.Hayler, E.Prunchak, A.Dietrich	Section, Township, Range:	•			
		Local relief (concave,			al (a)	0.1.0/
Subregion (LRR or MLRA): 136 -		convex, none):	concave		Slope (%):	
	Southern Piedmont	Lat:	38.590993 Long:	-77.32263	Datum:	
	Quantico sandy loam	,		NWI Classifica		PFO
Are climate/hydrologic conditions on the sit			Yes X		no, explain in	
	, soil , or hydrology signific		Are "Normal Circum	stances present?)	Yes X	No
Are vegetation	, soil , or hydrology natura	ally problematic?	(If needed, explain a	any answers in Remarks.)		
Summary of Findings - Attach site	map showing sampling point lo	cations, transects, i	mportant feature	es, etc		
Hydrophytic Vegetation present?	YesX No					
Hydric Soil present?	YesX No		Is the Sampled Area	within a Wetland?	Yes X	No
Wetland Hydrology Present?	Yes X No				_	
Remarks:		_				
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of one is requi	ired; check all that apply)Aquatic Fauna	a (B13)		ndary Indicators (minimum Surface Soil Cracks (B6)	of two require	ed)
X High Water Table (A2)	Marl Deposits	s (B15) (LRR U)	X	Sparsely Vegetated Concav	ve Surface (B8))
X Saturation (A3)	———— Hydrogen Suli	fide Odor (C1)	Drainage Patterns (B10)			
X Water Marks (B1)	Oxidized Rhiz	ospheres on Living Roots	(C3)	Moss Trim Lines (B16)		
Sediment Deposits (B2)		leduced Iron (C4)		Dry-Season Water Table (C	(2)	
Drift Deposits (B3)		eduction in Tilled Soils (C	8)	Crayfish Burrows (C8)		
Algal Mat or Crust (B4)	Thin Muck Su			Saturation Visible on Aeria	l Imagery (C9)	
Iron Deposits (B5)	Other (Explain	n in Remarks)		Stunted or Stressed Plants	(D1)	
Inundation Visible on Aerial Imagery ((B7)			Geomorphic Position (D2)		
X Water-Stained Leaves (B9)				Shallow Aquitard (D3)		
				FAC-Neutral Test (D5)	T\	
				Sphagnum moss (D8) (LRR	1, 0)	
Field Observations:	-					
Surface Water Present?	Yes X No Depti	h (Inches): 2	_			
Water Table Present?	Yes X No Depti	h (Inches): 6	_	Wetland Hydrology Preser	nt?	
Saturation Present?	Yes X No Depti	h (Inches): 2	_		Yes X	No

VEGETATION -	Use scientific nam	es of plants.

VEGETATION -	Use scientific names of plants. $ \\$				Sampling Point: 5		
					Dominance Test Worksheet:		
		Absolute	Dominant	Indicator	Number of Dominant Species that Are OBL,		
ree Stratum	(Plot Size: 30 ft.)	% Cover	Species?	Status	FACW, or FAC:4(A)		
1 Acer rubrum		40	Υ	FAC			
2					Total Number of Dominant Species Across		
3					All Strata: 4 (B)		
4							
					Percent of Dominant Species that are OBL,		
6					FACW, or FAC:(A/B)		
7							
		40	=Total Cover		Prevalence Index Worksheet:		
anling Statum	(Diet Size) 15 ft				Total % Cover of: OBL Species 30 x1= 30		
apling Statum 1 Acer rubrum	(Plot Size: 15 ft.)	25	Υ	FAC	OBL Species 30 x1= 30 FACW Species 0 x2= 0		
2 Ilex opaca Aiton		10	Y	FAC	FAC Species 75 x3= 225		
			· — ·		FACU Species 0 x4= 0		
4					UPL Species 0 x5= 0		
5					<u> </u>		
_					Column Totals: 105 (A) 255 (B)		
7							
		35	=Total Cover		Prevalence Index = B/A = 2.43		
Shrub Stratum	(Plot Size: 15 ft.)				Hydrophytic Vegetation Indicators:		
1 <u>N/A</u>					Rapid Test for Hydrophytic Vegetation		
2					X Dominance Test is > 50%		
3					X Prevalence Index is ≤3.0¹		
			· 		Problematic Hydrophytic Vegetation ¹ (Explain)		
_			· 		¹ Indicators of hydric soil and wetland hydrology must be prese		
6			· 		unless disturbed or problematic		
/			=Total Cover		Definitions of Vegetation Strata:		
			- Total cover		Definitions of Vegetation strata.		
Herb Stratum	(Plot Size: 5 ft.)						
1 Carex pedunculata		30	Υ	OBL	Tree - Woody plants, excluding woody vines, approximately 20		
2			·		(6m) or more in height and 3 in. (7.6cm) or larger in diameter a		
3					breast height (DBH).		
4			·				
5			·				
6							
7			·		Sapling - Woody plants, excluding woody vines, approximately		
8			· 		ft (6m) or more in height and less than 3 in. (7.6cm) DBH.		
9							
10			· 				
11 12					Charles Weed about a real allowance desired and a second s		
		30	=Total Cover		Shrub - Woody plants, excluding woody vines, approximately 3 20 ft (1 to 6m) in height.		
			- Total cover		25 ft (1 to 5m) in neight.		
Woody Vine Stratum	(Plot Size: 30 ft.)						
1 N/A	<u></u> ,				Herb - All herbaceous (non-woody) plants, including herbaceous		
2					vines, regardless of size. Includes woody plants, except woody		
3					vines, less than approximately 3 ft (1m) in height.		
4							
5					Hydrophytic Yes X No		
		0	=Total Cover		Vegetation Present?		
Remarks: (If observed,	list morphological adaptations below.)						

Matrix Redox Features									
epth (Inches)					Loc ²	Texture	Remarks		
0-12	7.5YR 4/2	80%					Sandy Clay Loam		
0-12	7.51K 4/2	80%	5YR 5/8		D	M	Sandy Clay Loam		
Type: C=Concer	ntration, D=Depletion, RM=Reduc	ed Matrix, C	S=Covered or Coated Sa	nd Grains.			² Location: PL=Pore Li	ning, M=Matrix	
lydric Soil Indica	itors:					-	Indicators for Probler	natic Hydric Soils³:	
Histosol (A	A1)	Po	olyvalue Below Surface (S8) (LRR S. 1	r. U)		1 cm Much (A9) (LRR 0)	
Histic Epip	•		in Dark Surface (S9) (LR		, -,		2 cm Muck (A1		
Black Histi	• •		amy Mucky Mineral (F1					(F18) (outside MLRA 150A, B)	
	Sulfide (A4)		amy Gleyed Matrix (F2)				Piedmont Floodplain Soils (F19) (LRR P, S, T)		
	Layers (A5) odies (A6) (LRR P. T, U)		epleted Matrix (F3) edox Dark Surface (F6)				Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2)		
	ky Mineral (A7) (LRR P, T, U)		epleted Dark Surface (F7)			Very Shallow Dark Surface (TF12)		
	sence (A8) (LRR U)		dox Depressions (F8)	,			Other (Explain		
1 cm Mucl	k (A9) (LRR P, T)	M	arl (F10) (LRR U)						
	Below Dark Surface (A11)		Depleted Ochric (F11) (MLRA 151)						
	Surface (A12)		on-Manganese Masses (, P, T)				
	rie Redox (A16) (MLRA 150A)		mbric Surface (F13) (LRR elta Orhic (F17) (MLRA 1				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
	cky Mineral (S1) (LRR O, S) yed Matrix (S4)		educed Vertic (F18) (MLI	-	OR)				
Sandy Red			edmont Floodplain Soils		-				
Stripped N			nomalous Bright Loamy :		-	A, 153C,	153D)		
Dark Surfa	ice (S7) (LRR P, S, T, U)								
estrictive Layer	(if observed:)								
Type:						_	Hydric Soil Present? Yes X No		
Depth (inc	thes):					_			
temarks:									

Project/Site:	Van Buren Northern Extension Pr	oiect	City/County:	Prince William Co	untv	Date:	12/9/2020
Applicant/Owner:	Prince William County	0,000	State: VA		mpling Point:	6	12,3,2020
- Application of the control of the	Time vimani ecunty		Section, Township,				
Investigator(s):	K.Donovan, R.Hayler, E.Prunchak,	. A.Dietrich	Range:				
Landform (hillslope, terrace, etc.):	Plain		Local relief (concave, convex, none):	concave		Slope (%):	0-1
Subregion (LRR or MLRA):	136 - Southern Piedmont		Lat:	38.593037 Long:	-77.318666	Datum:	
Soil Map Unit Name:	16A - Delanco find sandy loam				NWI Classifica		PFO
Are climate/hydrologic conditions or	· · · · · · · · · · · · · · · · · · ·	vear?		Yes X		no, explain in	
	n , soil , or hydrology		ntly disturbed?		ımstances present?)	Yes X	
	, soil , or hydrology				n any answers in Remarks.)	···-	NO
Ale vegetation	, or rivarology		y problematic:	(II fieeded, explain	il ally allowers ill Remarks.		
Summary of Findings - Attac	h site map showing sampli	ng point loca	ntions, transects, i	mportant featu	ires, etc		
Hydrophytic Vegetation present?	Yes X	No		1			
Hydric Soil present?	Yes X	No	_	Is the Sampled A	ea within a Wetland?	Yes X	No
Wetland Hydrology Present?	Yes X	No					
			=				
Remarks:							
Hydrology							
Wetland Hydrology Indicators	s:						
Primary Indicators (minimum of one				Sec	ondary Indicators (minimum	of two require	ed)
X Surface Water (A1)		Aquatic Fauna	(B13)		Surface Soil Cracks (B6)		
X High Water Table (A2)		Marl Deposits (B15) (LRR U)		 Sparsely Vegetated Concav 	ve Surface (B8	3)
X Saturation (A3)		Hydrogen Sulfic	de Odor (C1)	Drainage Patterns (B10)			
Water Marks (B1)			pheres on Living Roots				
Sediment Deposits (B2)		Presence of Re			Dry-Season Water Table (C	:2)	
Drift Deposits (B3)			duction in Tilled Soils (C	.8)	Crayfish Burrows (C8)	-/	
Algal Mat or Crust (B4)		Thin Muck Surf			Saturation Visible on Aeria	I Imagery (C9))
Iron Deposits (B5)		Other (Explain			Stunted or Stressed Plants		,
Inundation Visible on Aerial In			,		Geomorphic Position (D2)	,	
X Water-Stained Leaves (B9)	-5-7()				Shallow Aquitard (D3)		
					FAC-Neutral Test (D5)		
				_	Sphagnum moss (D8) (LRR	T, U)	
Field Observations:							
Surface Water Present?	YesX No	•	(Inches): 2	_			
Water Table Present?	YesX No		(Inches): 2	_	Wetland Hydrology Preser		
Saturation Present?	Yes <u>X</u> No	Depth	(Inches): 2	_		Yes X	No
Describe Recorded Data (stream gau	ge, monitoring well, aerial photos,	previous inspec	tions), if available:				
					,		
Remarks:							
Within system R							

VEGETATION -	Use scientific nam	es of plants.

Sampling Point: **Dominance Test Worksheet:** Absolute Dominant Indicator Number of Dominant Species that Are OBL, Species? % Cover Status Tree Stratum (Plot Size: 30 ft.) FACW, or FAC: (A) 1 Acer rubrum FAC Total Number of Dominant Species Across (B) Percent of Dominant Species that are OBL, **80%** (A/B) =Total Cover Prevalence Index Worksheet: Total % Cover of: Sapling Statum (Plot Size: 15 ft.) OBL Species 1 Ilex opaca Aiton FAC **FACW Species** 0 2 Acer rubrum FAC Species 110 x3= 330 FACU Species x4= UPL Species Column Totals: 130 350 (B) =Total Cover Prevalence Index = B/A = **2.69** Shrub Stratum **Hydrophytic Vegetation Indicators:** (Plot Size: 15 ft. Rapid Test for Hydrophytic Vegetation 1 N/A **X** Dominance Test is > 50% X Prevalence Index is ≤3.01 Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic =Total Cover **Definitions of Vegetation Strata:** Herb Stratum (Plot Size: 5 ft.) 1 Smilax sp. Tree - Woody plants, excluding woody vines, approximately 20 ft 2 Carex pedunculata OBL (6m) or more in height and 3 in. (7.6cm) or larger in diameter at breast height (DBH). 3 Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6cm) DBH. 10 11 12 Shrub - Woody plants, excluding woody vines, approximately 3 to 30 20 ft (1 to 6m) in height. =Total Cover Woody Vine Stratum (Plot Size: <u>30 ft.</u>) 1 N/A Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1m) in height. Hydrophytic Yes X No **Vegetation Present?** 0 =Total Cover **Remarks**: (If observed, list morphological adaptations below.)

Profile Description	on: (Describe to the depth needed	to docume	nt the indicator or confirn	n the absen	ce of indi	cators.)				
	Matrix		Redox	Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc²	Texture	Remarks		
0-12	10YR 4/2	95%	2.5YR 4/5	5%	<u>C</u>	PL_	Sandy Loam	-		
¹ Type: C=Conce	ntration, D=Depletion, RM=Reduc	ed Matrix, C	CS=Covered or Coated San	d Grains.			² Location: PL=Pore Li	ning, M=Matrix		
Hydric Soil Indica	ators:						Indicators for Problem	matic Hydric Soils³:		
'			alanahaa Balana Guafaaa /G	0) /LDD C T				•		
Histosol (/	A1) pedon (A2)		olyvalue Below Surface (S hin Dark Surface (S9) (LRR		, 0)		1 cm Much (A9 2 cm Muck (A1			
Black Hist			pamy Mucky Mineral (F1)					c (F18) (outside MLRA 150A, B)		
Hydrogen	Sulfide (A4)	Lo	oamy Gleyed Matrix (F2)				Piedmont Floo	dplain Soils (F19) (LRR P, S, T)		
	Layers (A5)		epleted Matrix (F3)				Anomalous Bright Loamy Soils (F20) (MLRA 153B)			
	odies (A6) (LRR P. T, U)		edox Dark Surface (F6)				Red Parent Material (TF2)			
	ky Mineral (A7) (LRR P, T, U) sence (A8) (LRR U)		epleted Dark Surface (F7) edox Depressions (F8)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
	:k (A9) (LRR P, T)		farl (F10) (LRR U)				one (explain in terms)			
	Below Dark Surface (A11)		epleted Ochric (F11) (MLI	RA 151)						
	k Surface (A12)		on-Manganese Masses (F		P, T)					
	irie Redox (A16) (MLRA 150A)		mbric Surface (F13) (LRR				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
	icky Mineral (S1) (LRR O, S) eyed Matrix (S4)		elta Orhic (F17) (MLRA 15 educed Vertic (F18) (MLR		OB)					
Sandy Red			iedmont Floodplain Soils (-					
	Matrix (S6)		nomalous Bright Loamy S			A, 153C,	153D)			
Dark Surfa	ace (S7) (LRR P, S, T, U)									
Restrictive Layer	(if observed:)									
Type:							Hydric Soil Present? Yes X No			
Depth (inc	rhes):					_				
Deptii (iii										
Remarks:										

Project/Site:	Van Buren Northern Extensio	on Project	City/County:	Prince William County	у	Date:	12/10/2020
Applicant/Owner:	Prince William County		State: VA	Sampli	ing Point:	7	
Investigator(s):	K.Donovan, R.Hayler, E.Prund	chak, A.Dietrich	Section, Township, Range:				
Landform (hillslope, terrace, etc.):	hillslop		Local relief (concave, convex, none):	convex		Slope (%):	5-10%
Subregion (LRR or MLRA):	136 - Southern Piedmont		Lat:	38.584410 Long:	-77.326511	Datum:	
Soil Map Unit Name:	47B - Quantico sandy loam				NWI Classificati	ion:	UPL
Are climate/hydrologic conditions or	n the site typical for this time of	f the year?		Yes X	No(If n	o, explain ir	Remarks)
	n , soil , or hydrol		antly disturbed?	Are "Normal Circums	· · · · · · · · · · · · · · · · · · ·	Yes X	
	n , soil , or hydrol				ny answers in Remarks.)		
· ·		·		. , ,			
Summary of Findings - Attac	h site map showing sam	pling point loca	ations, transects, i	important features	s, etc		
Hydrophytic Vegetation present?	Yes	No X	_				
Hydric Soil present?	Yes X	No	_	Is the Sampled Area	within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes	No X	_				
Remarks:				1			
Hydrology							
Wetland Hydrology Indicators Primary Indicators (minimum of one		w)		Socond	dary Indicators (minimum o	f two roquir	od)
Surface Water (A1)	is required, check all that apply	Aquatic Fauna	(B13)		Surface Soil Cracks (B6)	r two requir	euj
High Water Table (A2)		Marl Deposits (Sparsely Vegetated Concave	Surface (B)	3)
Saturation (A3)		Hydrogen Sulfi		Drainage Patterns (B10)			7
Water Marks (B1)			spheres on Living Roots				
Sediment Deposits (B2)	_		duced Iron (C4)	Dry-Season Water Table (C2)			
Drift Deposits (B3)			duction in Tilled Soils (C				
Algal Mat or Crust (B4)		Thin Muck Surf	· ·	Saturation Visible on Aerial Imagery (C9))
Iron Deposits (B5)		Other (Explain		Stunted or Stressed Plants (D1)			
Inundation Visible on Aerial In	nagery (B7)				Geomorphic Position (D2)		
Water-Stained Leaves (B9)				s	Shallow Aquitard (D3)		
					FAC-Neutral Test (D5)		
				s	Sphagnum moss (D8) (LRR T	, U)	
Field Observations:						-	
Surface Water Present?	Yes No>	C Depth	(Inches):	_			
Water Table Present?	Yes No>	C Depth	(Inches):	_ v	Wetland Hydrology Present	t?	
Saturation Present?	Yes No>	C Depth	(Inches):	_		Yes	No X
Describe Recorded Data (stream gau	ge, monitoring well, aerial pho	tos, previous inspec	tions), if available:				
Remarks:							
Representative upland point							

VEGETATION -	Use scientific nam	es of plants.

Dominance Test Worksheet: 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 0 x1= 0 FACW Species 0 x2= 0
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 0 x1= 0
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 0 x1= 0
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 0 x1= 0
All Strata: 7 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 43% (A/B) Prevalence Index Worksheet: Total % Cover of: OBL Species 0 x1= 0
All Strata: 7 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 43% (A/B) Prevalence Index Worksheet: Total % Cover of: OBL Species 0 x1= 0
Percent of Dominant Species that are OBL, FACW, or FAC: Prevalence Index Worksheet: Total % Cover of: OBL Species 0 x1= 0
Prevalence Index Worksheet: 43% (A/B) Total % Cover of: 0 x1= 0
FACW, or FAC: 43% (A/B) Prevalence Index Worksheet: Total % Cover of: OBL Species 0 x1= 0
Prevalence Index Worksheet: Total % Cover of: OBL Species 0 x1= 0
Total % Cover of: OBL Species 0 x1= 0
Total % Cover of: OBL Species 0 x1= 0
OBL Species 0 x1= 0
FAC Species 85 x3= 255
FACU Species 125 x4= 500
UPL Species 0 x5= 0
Column Totals: <u>210</u> (A) <u>755</u> (B)
Prevalence Index = B/A = 3.60
Hydrophytic Vegetation Indicators:
Rapid Test for Hydrophytic Vegetation
Dominance Test is > 50%
Prevalence Index is ≤3.0¹
Problematic Hydrophytic Vegetation ¹ (Explain)
¹ Indicators of hydric soil and wetland hydrology must be preser
unless disturbed or problematic
Definitions of Vegetation Strata:
Tree - Woody plants, excluding woody vines, approximately 20
(6m) or more in height and 3 in. (7.6cm) or larger in diameter at
breast height (DBH).
Sapling - Woody plants, excluding woody vines, approximately
ft (6m) or more in height and less than 3 in. (7.6cm) DBH.
Shrub - Woody plants, excluding woody vines, approximately 3
20 ft (1 to 6m) in height.
. , ,
Herb - All herbaceous (non-woody) plants, including herbaceou
vines, regardless of size. Includes woody plants, except woody
vines, less than approximately 3 ft (1m) in height.
Hadronk, die
Hydrophytic Yes No X
Vegetation Present?

Profile Description	on: (Describe to the depth needed	to docume	nt the indicator or confirm	the absen	ce of indi	cators.)		
	Matrix		Redox F	eatures				
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc²	Texture	Remarks
0-18	705YR 4/2	90%	5YR 5/8	10%			Sandy Clay Loam	
	,							
¹ Type: C=Conce	ntration, D=Depletion, RM=Reduc	ed Matrix, (CS=Covered or Coated Sand	Grains.			² Location: PL=Pore Lin	ning, M=Matrix
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U) Black Histic (A3) Loamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) X Depleted Matrix (F3) Organic Bodies (A6) (LRR P. T, U) Redox Dark Surface (F6) 5 cm Mucky Mineral (A7) (LRR P, T, U) Pepleted Dark Surface (F7) Muck Presence (A8) (LRR U) Redox Depressions (F8) 1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U) Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151) Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P, T) Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U) Sandy Mucky Mineral (S1) (LRR O, S) Piedmont Floodplain Soils (F19) (MLRA 149A) Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C)				A, 153C,	Indicators for Problematic Hydric Soils ³ : 1 cm Much (A9) (LRR 0) 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) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer Type: Depth (inc	<u> </u>						Hydric Soil Present?	Yes <u>X</u> No
Remarks:							1	

Project/Site:	Van Buren Northern Extension	Project	City/County:	Prince William Coun	ty	Date:	12/22/2020
Applicant/Owner:	Prince William County		State: VA	Samp	ling Point:	8	
Investigator(s):	K.Donovan, R.Hayler, E.Prunch	nak, A.Dietrich	Section, Township, Range:				
Landform (hillslope, terrace, etc.):	Plain		Local relief (concave, convex, none):	concave	!	Slope (%):	0-1
Subregion (LRR or MLRA):	136 - Southern Piedmont		Lat:	38.603582 Long:	-77.314725	Datum:	NAD 83
Soil Map Unit Name:	15A - Comus Ioam				NWI Classificatio		PFO
Are climate/hydrologic conditions or	n the site typical for this time of	the year?		Yes X	No (If no	, explain in	Remarks)
Are vegetation	n , soil , or hydrolo	gy significa	antly disturbed?	Are "Normal Circum	<u></u>	Yes X	
	n , soil , or hydrolo			(If needed, explain a	ny answers in Remarks.)		
Summary of Findings - Attac	h site man showing sam	aling point loc	ations transects i	mnortant feature	es etc		
Hydrophytic Vegetation present?	Yes X	No			, etc		
Hydric Soil present?	Yes X	No	_	Is the Sampled Area	within a Wetland?	Yes X	No
Wetland Hydrology Present?		-		is the sampled Area	within a wetland:	163 <u>X</u>	
Remarks:	Yes	No	_				
Hydrology							
Wetland Hydrology Indicators	s:				,		
Primary Indicators (minimum of one	is required; check all that apply	<u> </u>		Secon	dary Indicators (minimum of	two requir	ed)
X Surface Water (A1)		Aquatic Fauna	(B13)		Surface Soil Cracks (B6)		
High Water Table (A2)		Marl Deposits	(B15) (LRR U)		Sparsely Vegetated Concave S	Surface (B8	3)
X Saturation (A3)		Hydrogen Sulfi	de Odor (C1)	X	Drainage Patterns (B10)		
Water Marks (B1)		Oxidized Rhizo	spheres on Living Roots	(C3)	Moss Trim Lines (B16)		
Sediment Deposits (B2)		Presence of Re	duced Iron (C4)		Dry-Season Water Table (C2)		
Drift Deposits (B3)			duction in Tilled Soils (C		Crayfish Burrows (C8)		
Algal Mat or Crust (B4)		Thin Muck Surf			Saturation Visible on Aerial In)
Iron Deposits (B5)		Other (Explain	in Remarks)		Stunted or Stressed Plants (D	1)	
Inundation Visible on Aerial In X Water-Stained Leaves (B9)	lagery (b/)				Geomorphic Position (D2) Shallow Aquitard (D3)		
Water Stanica Ecaves (85)					FAC-Neutral Test (D5)		
					Sphagnum moss (D8) (LRR T,	U)	
Field Observations:		,					
Surface Water Present?	Yes X No	Depth	(Inches): 2				
Water Table Present?	Yes No X		(Inches):	_	Wetland Hydrology Present?	,	
Saturation Present?	Yes X No		(Inches): 2			Yes X	No
Describe Recorded Data (stream gau	ige, monitoring well, aerial phot	os, previous inspec	ctions), if available:				
Remarks:							
Within system G							

VEGETATION - Use scientific names of pl	ılants.
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Sampling Point: **Dominance Test Worksheet:** Absolute Dominant Indicator Number of Dominant Species that Are OBL, % Cover Status Tree Stratum (Plot Size: 30 ft.) Species? FACW, or FAC: 5___(A) FAC 1 Acer rubrum 60 FACW 2 Betula nigra 25 **Total Number of Dominant Species Across** 3 Platanus occidentalis Ν FACW (B) Percent of Dominant Species that are OBL, FACW, or FAC: **100%** (A/B) =Total Cover Prevalence Index Worksheet: Total % Cover of: Sapling Statum (Plot Size: 15 ft.) OBL Species 1 Acer rubrum FAC **FACW Species** 60 120 2 Platanus occidentalis **FACW** FAC Species 170 x3= 510 FACU Species x4= UPL Species Column Totals: 235 650 (B) =Total Cover Prevalence Index = B/A = 2.77 Shrub Stratum **Hydrophytic Vegetation Indicators:** (Plot Size: 15 ft. Rapid Test for Hydrophytic Vegetation 1 N/A X Dominance Test is > 50% X Prevalence Index is ≤3.01 Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic =Total Cover **Definitions of Vegetation Strata:** (Plot Size: 5 ft.) Herb Stratum 1 Microstegium vimineum FAC Tree - Woody plants, excluding woody vines, approximately 20 ft FACW 2 Lysimachia nummularia (6m) or more in height and 3 in. (7.6cm) or larger in diameter at 3 Smilax sp. breast height (DBH). 4 Lonicera japonica N FACU Sapling - Woody plants, excluding woody vines, approximately 20 ft (6m) or more in height and less than 3 in. (7.6cm) DBH. 10 11 12 Shrub - Woody plants, excluding woody vines, approximately 3 to 100 20 ft (1 to 6m) in height. =Total Cover Woody Vine Stratum (Plot Size: <u>30 ft.</u>) 1 N/A Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1m) in height. Hydrophytic Yes X No ____ **Vegetation Present?** 0 =Total Cover **Remarks**: (If observed, list morphological adaptations below.)

Profile Description	on: (Describe to the depth needed	I to documer	nt the indicator or confirm	the abser	ice of indi	cators.)			
	Matrix		Redox	Features					
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc²	Texture	Remarks	
					D			Remarks	
0-3	10YR 4/2	75%	5YR 5/8	25%		M	Sandy Loam		
3-12	10YR 6/2	50%	5YR 5/8	50%	D	M_	Sandy Loam	,	
¹ Type: C=Concer	ntration, D=Depletion, RM=Reduc	ced Matrix, C	S=Covered or Coated Sand	l Grains.			² Location: PL=Pore Lin	ning, M=Matrix	
Hydric Soil Indica	ators:						Indicators for Problem	natic Hydric Soils³:	
Histosol (A	A1)	Po	olyvalue Below Surface (S8) (LRR S, T	', U)		1 cm Much (A9) (LRR 0)	
	pedon (A2)		nin Dark Surface (S9) (LRR				2 cm Muck (A1		
Black Hist			oamy Mucky Mineral (F1) (LRR O)				(F18) (outside MLRA 150A, B)	
	Sulfide (A4) Layers (A5)		pamy Gleyed Matrix (F2) epleted Matrix (F3)					dplain Soils (F19) (LRR P, S, T)	
	odies (A6) (LRR P. T, U)		edox Dark Surface (F6)				Anomalous Bright Loamy Soils (F20) (MLRA 153B) Red Parent Material (TF2)		
	ky Mineral (A7) (LRR P, T, U)		epleted Dark Surface (F7)			Very Shallow Dark Surface (TF12)			
	sence (A8) (LRR U)		edox Depressions (F8)			Other (Explain in Remarks)			
1 cm Muc	k (A9) (LRR P, T)	M	larl (F10) (LRR U)					·	
Depleted	Below Dark Surface (A11)	D	epleted Ochric (F11) (MLR	A 151)					
	k Surface (A12)		on-Manganese Masses (F1		, P, T)				
	irie Redox (A16) (MLRA 150A)		mbric Surface (F13) (LRR P			³ Indicators of hydrophytic vegetation and wetland			
	icky Mineral (S1) (LRR O, S)		elta Orhic (F17) (MLRA 151				hydrology must be present, unless disturbed or problematic.		
	yed Matrix (S4)		educed Vertic (F18) (MLRA		-				
Sandy Red	Matrix (S6)		edmont Floodplain Soils (F nomalous Bright Loamy So			Λ 153C	153D)		
	ace (S7) (LRR P, S, T, U)		nomalous Bright Loamy 30	113 (1 20) (1	VILNA 143	м, 133с,	1330)		
Dark Suria	ace (37) (LRR P, 3, 1, 0)								
Restrictive Layer	(if observed:)								
Type:						_	Hydric Soil Present?	Yes X No	
Depth (inc	ches):					_			
Remarks:									

Van Buren Northern Exter	nsion Project	City/County:	Prince William County		Date:	12/22/2020
Prince William County		State: VA		Point:	9	
K.Donovan, R.Hayler, E.Pri	unchak, A.Dietrich	Section, Township, Range:				
Hillslope			convex		Slope (%):	5-10%
· · · · · · · · · · · · · · · · · · ·				-77 312472		
			20.003 13 1 20.16.			UPL
			Yes X		,	
••	•	antly disturbed?				
			mportant features, e	τς		
		_		13	.,	
		_	Is the Sampled Area with	in a Wetland?	Yes	NoX_
Yes	NoX					
: is required; check all that ap			Secondary	Indicators (minimum	of two requir	red)
		(B13)				
_					ve Surface (B	8)
_			 -			
_						
_					(2)	
_					,	
_					I Imagery (C9	9)
_	Other (Explain i	in Remarks)	Stun	ted or Stressed Plants	(D1)	
nagery (B7)			Geor	morphic Position (D2)		
			Shall	ow Aquitard (D3)		
				, ,	T 111	
			Spna	gnum moss (D8) (LKK	1, 0)	
					,	
Yes No _	X Depth	(Inches):	_			
Yes No _	X Depth	(Inches):	_ Wetl	and Hydrology Preser	nt?	
Yes No _	X Depth	(Inches):	_		Yes	No X
<u> </u>	R.Donovan, R.Hayler, E.Pro Hillslope 136 - Southern Piedmont 55E - Watt channery silt lo the site typical for this time, soil, or hydi, soil, or hydi	K.Donovan, R.Hayler, E.Prunchak, A.Dietrich Hillslope 136 - Southern Piedmont 55E - Watt channery silt loam the site typical for this time of the year? , soil, or hydrology significate, soil, or hydrology naturall n site map showing sampling point locate Yes NoX Yes NoX Yes NoX Yes NoX Hydrogen Sulfice Oxidized Rhizos Presence of Recent Iron Recent Ir	State: VA Section, Township, Range: Local relief (concave, convex, none):	Prince William County State: VA Section, Township, K.Donovan, R.Hayler, E.Prunchak, A.Dietrich Ringe: Coal relief (concave, convex, none):	Prince William County State: VA Sampling Point:	State: VA Sampling Point: 9

VEGETATION -	Use scientific name	es of plants.

Absolute % Cover 10 50 10 10 10 15 40 10 65	Dominant Species? N Y N =Total Cover	FACU FACU	Dominance Test Worksheet: Number of Dominant Species that Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across 4 (B) Percent of Dominant Species that are OBL, 25% (A/B) Prevalence Index Worksheet: Total % Cover of: OBL Species 0 x1= 0 FACW Species 0 x2= 0 FAC Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B) Prevalence Index = B/A = 3.83
70 15 40 10 65	Species? N Y N =Total Cover	FAC FACU FACU FACU FACU	FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 25% (A/B) Prevalence Index Worksheet: Total % Cover of: 0 x1= 0 OBL Species 0 x2= 0 FACW Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
10 50 10 70 15 40 10	N Y N = Total Cover	FACU FACU FACU FACU FACU FACU	FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species that are OBL, FACW, or FAC: 25% (A/B) Prevalence Index Worksheet: Total % Cover of: 0 x1= 0 OBL Species 0 x2= 0 FACW Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
70 15 40 10	=Total Cover	FACU FACU FACU FACU FACU	Total Number of Dominant Species Across All Strata:
70 15 40 10	=Total Cover	FACU FACU FACU FACU FACU	All Strata:
70 15 40 10	=Total Cover	FACU FACU FACU	All Strata:
70 15 40 10 65	=Total Cover	FAC FACU FACU	Percent of Dominant Species that are OBL, FACW, or FAC: Prevalence Index Worksheet: Total % Cover of: OBL Species FACW Species FACW Species 120 FAC Species 120 V4= 480 UPL Species 0 Column Totals: 145 (A) 555 (B)
70 15 40 10 65	=Total Cover	FACU FACU	FACW, or FAC: 25% (A/B) Prevalence Index Worksheet: Total % Cover of: OBL Species OBL Species 0 x1= 0 FACW Species 0 x2= 0 FAC Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
70 15 40 10 65	=Total Cover	FACU FACU	FACW, or FAC: 25% (A/B) Prevalence Index Worksheet: Total % Cover of: OBL Species OBL Species 0 x1= 0 FACW Species 0 x2= 0 FAC Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
	Y Y N	FACU FACU	Prevalence Index Worksheet: Total % Cover of: 0 x1= 0 OBL Species 0 x2= 0 FACW Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
15 40 10 65	Y Y N	FACU FACU	Total % Cover of: 0 x1= 0 OBL Species 0 x2= 0 FACW Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
15 40 10 65	Y Y N	FACU FACU	Total % Cover of: 0 x1= 0 OBL Species 0 x2= 0 FACW Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
40 10 65	Y N	FACU FACU	OBL Species 0 x1= 0 FACW Species 0 x2= 0 FAC Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
40 10 65	Y N	FACU FACU	FACW Species 0 x2= 0 FAC Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
40 10 65	Y N	FACU FACU	FAC Species 25 x3= 75 FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
65	N	FACU	FACU Species 120 x4= 480 UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
65			UPL Species 0 x5= 0 Column Totals: 145 (A) 555 (B)
65	=Total Cover		Column Totals: 145 (A) 555 (B)
65	=Total Cover		
	=Total Cover		
	=Total Cover		Prevalence Index = B/A =
	=Total Cover		Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			Rapid Test for Hydrophytic Vegetation
			Dominance Test is > 50%
			Prevalence Index is ≤3.0¹
			Problematic Hydrophytic Vegetation¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must be preser unless disturbed or problematic
			unless disturbed of problematic
	-Total Cover		Definitions of Vegetation Strata:
	-Total Cover		Definitions of Vegetation Strata.
40	v	FACIL	
	Y	FACU	Tree - Woody plants, excluding woody vines, approximately 20
			(6m) or more in height and 3 in. (7.6cm) or larger in diameter at
			breast height (DBH).
			Sapling - Woody plants, excluding woody vines, approximately 2
			ft (6m) or more in height and less than 3 in. (7.6cm) DBH.
			Shrub - Woody plants, excluding woody vines, approximately 3
10	=Total Cover		20 ft (1 to 6m) in height.
			Hash All harbacous (non woods) aleate including back and
			Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody
			vines, less than approximately 3 ft (1m) in height.
			vines, less than approximately 5 ft (1111) in neight.
			Hydrophytic Ves No X
	T-1-1-0		Vegetation Present?
	=Total Cover		
			•
	10	0 =Total Cover	0 =Total Cover 10 Y FACU 10 =Total Cover

Frome Description.	(Describe to the depth neede	a to documen	it the mulcator or comm	ii tile auser	ice oi iilai	caturs.)				
_	Matrix		Redo	x Features						
Depth (Inches)	Color (moist)	%	Color (Moist)	%	Type ¹	Loc²	Texture	Remarks		
0-12	10YR 5/3	100%					Silty Loam			
12-18	10YR 5/3	80%	10YR 5/6	20%		PL	Silty Loam			
	·		· · · · · · · · · · · · · · · · · · ·				Silty Loam			
							Sitty Edulii			
¹ Type: C=Concentra	ation, D=Depletion, RM=Redu		S=Covered or Coated Sa	nd Grains.			² Location: PL=Pore Lir	ning, M=Matrix		
Hydric Soil Indicato	rs:						Indicators for Problem	natic Hydric Soils³:		
Histosol (A1)		Po	olyvalue Below Surface (S	88) (LRR S, T	, U)		1 cm Much (A9)	(LRR 0)		
Histic Epiped			in Dark Surface (S9) (LRI				2 cm Muck (A10			
Black Histic (•		amy Mucky Mineral (F1)	(LRR O)				(F18) (outside MLRA 150A, B)		
Hydrogen Su Stratified Lay			amy Gleyed Matrix (F2) epleted Matrix (F3)					Iplain Soils (F19) (LRR P, S, T) Int Loamy Soils (F20) (MLRA 153B)		
	es (A6) (LRR P. T, U)		edox Dark Surface (F6)				Red Parent Mat			
	Mineral (A7) (LRR P, T, U)		epleted Dark Surface (F7)			Very Shallow Dark Surface (TF12)			
Muck Presen	ce (A8) (LRR U)	Re	edox Depressions (F8)				Other (Explain in Remarks)			
	49) (LRR P, T)		arl (F10) (LRR U)							
	ow Dark Surface (A11)		epleted Ochric (F11) (ML	•	,					
Thick Dark Su	rrface (A12) Redox (A16) (MLRA 150A)		on-Manganese Masses (F		, P, T)		3. u . 6. u .			
	Mineral (S1) (LRR O, S)		mbric Surface (F13) (LRR elta Orhic (F17) (MLRA 1				³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Sandy Gleyed			educed Vertic (F18) (MLF		0B)		nyurology must be pre	sent, unless disturbed of problematic.		
Sandy Redox			edmont Floodplain Soils		-					
Stripped Mat	rix (S6)	Ar	nomalous Bright Loamy S	Soils (F20) (MLRA 149	A, 153C,	153D)			
Dark Surface	(S7) (LRR P, S, T, U)									
Restrictive Layer (if	observed:)									
Type:						_	Hydric Soil Present?	Yes NoX		
Depth (inche	s):					_				
Remarks:										

APPENDIX D JURISDICTIONAL DETERMINATION REQUEST FORM



JURISDICTIONAL DETERMINATION INFORMATION SUMMARY

Project Name: Van Buren Northern Extension Project

Locality: Prince William County, VA

USGS Quadrangle: Quantico (2019)

Size/Location: Approximately 278-acres (38.597301, -77.317977)

HUC Code: 02070011 Lower Potomac

Nearest Tributary(ies): Powells Creek

Applicant:

Prince William County Department of Transportation Attn: Ricardo Canizales 5 County Complex, Suite 290 Prince William, VA 22192

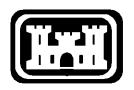
Agent:

Dewberry Engineers Inc. 8401 Arlington Blvd. Fairfax, VA 22031 Attn: Kelly Donovan Phone: 703-849-0175

Email: kdonovan@dewberry.com

WOUS/Wetlands within Limits of Investigation:

Based on the results of the investigation, Dewberry identified fifteen palustrine forested (PFO) wetlands, nine perennial (R3) stream channels, fourteen intermittent (R4) stream channels, and five ephemeral (EPH) stream channels within the project area.



NORFOLK DISTRICT REGULATORY OFFICE PRE-APPLICATION AND/OR JURISDICTIONAL WATERS DETERMINATION REQUEST FORM

This form is used when you want to determine if areas on your property fall under regulatory requirements of the U.S. Army Corps of Engineers (USACE). Please supply the following information and supporting documents described below. This form can be filled out online and/or printed and then mailed, faxed, or e-mailed to the Norfolk District. Submitting this request authorizes the US Army Corps of Engineers to field inspect the property site, if necessary, to help in the determination process. THIS FORM MUST BE SIGNED BY THE PROPERTY OWNER TO BE CONSIDERED A FORMAL REQUEST.

The printed form and supporting documents should be mailed to:

U.S. Army Corps of Engineers, Norfolk District Regulatory Branch 803 Front Street Norfolk, Virginia 23510-1096

Or faxed to (757) 201-7678

Or sent via e-mail to: CENAO.REG_ROD@usace.army.mil

Additional information on the Regulatory Program is available on our website at:

http://www.nao.usace.army.mil/

Please contact us at 757-201-7652 if you need any assistance with filling out this form.

Location and Information about Property to be subject to a Jurisdictional Determination:

1. Date of Request: 02/05/2021

2. Project Name: Van Buren Project

- 3. City or County where property located: Prince William County, Virginia
- 4. Address of property and directions (attach a map of the property location and a copy of the property plat):

As the parcel is a vacant property, it does not have an address. However, the project area is between the existing Van Buren Road beginning at VA-234 and the existing Van Buren Road south of Cardinal Drive.

Directions from Dumfries, VA: Take VA-234 West and turn right onto Van Buren Road, the current terminus of Van Buren Road is the beginning of the project area. Directions to the end of the project area are take VA-234 West and travel 1.6 miles and turn right onto Country Club Drive. Travel 0.2 miles and take a right onto Waterway Drive and travel 2 miles. Take a right onto Cardinal Drive and travel 2.3 miles and turn right onto Van Buren Road. Drive to the existing end of Van Buren Road and this is the other end of the project area.

Revised: November 2013

- 5. Coordinates of property (if known): 38.597301, -77.317977
- 6. Size of property in acres: approximately 278-acres
- 7. Tax Parcel Number / GPIN (if available): 8189-88-0942, 8189-88-4318, 8189-87-8293, 8189-98-1630, 8190-90-6518, 8290-01-1415, 8290-03-9812, 8290-24-0784, 8290-15-5458, 8290-26-1394, 8290-26-9009, 8290-39-6431
- 8. Name of Nearest Waterway: Powells Creek
- 9. Brief Description of Proposed Activity, Reason for Preapplication Request, and/or Reason for Jurisdictional Waters Determination Request:

The proposed activity is to connect the two termini of Van Buren Road in Prince William County, Virginia.

10	Has a wetland delineation/determination been completed by a consultant or the Corps on the property previously? YES NO WUNKNOWN
	If yes, please provide the name of the consultant and/or Corps staff and Corps permit number, if available:

Property Owner Contact Information:

Property Owner Name:

Mailing Address: City: State: Zip: Daytime Telephone: E-mail Address:

If the person requesting the Jurisdictional Determination is **NOT** the Property Owner, please also supply the Requestor's contact information here:

Requestor Name: Prince William County Department of Transportation

Mailing Address: 5 County Complex Court, Suite 290

City: State: Zip: Prince William, VA 22192

Daytime Telephone: (703) 792-5985 E-mail Address: rcanizales@pwcgov.org

Additionally, if you have any of the following information, please include it with your request: wetland delineation map, other relevant maps, drain tile survey, topographic survey, and/or site photographs.

CERTIFICATION: I am hereby requesting a preapplication consultation or jurisdictional waters and/or wetlands determination from the U.S. Army Corps of Engineers, for the property(ies) I have described herein. I agree to allow the duly authorized representatives of the Norfolk District Corps of Engineers and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as "no trespassing" this consent specifically supercedes and waives that prohibition and grants permission to enter the property despite such posting. I hereby certify that the information contained in the Request for a Jurisdictional Determination is accurate and complete:

Determination is accurate and complete:		
Property Owner's Signature	Date	