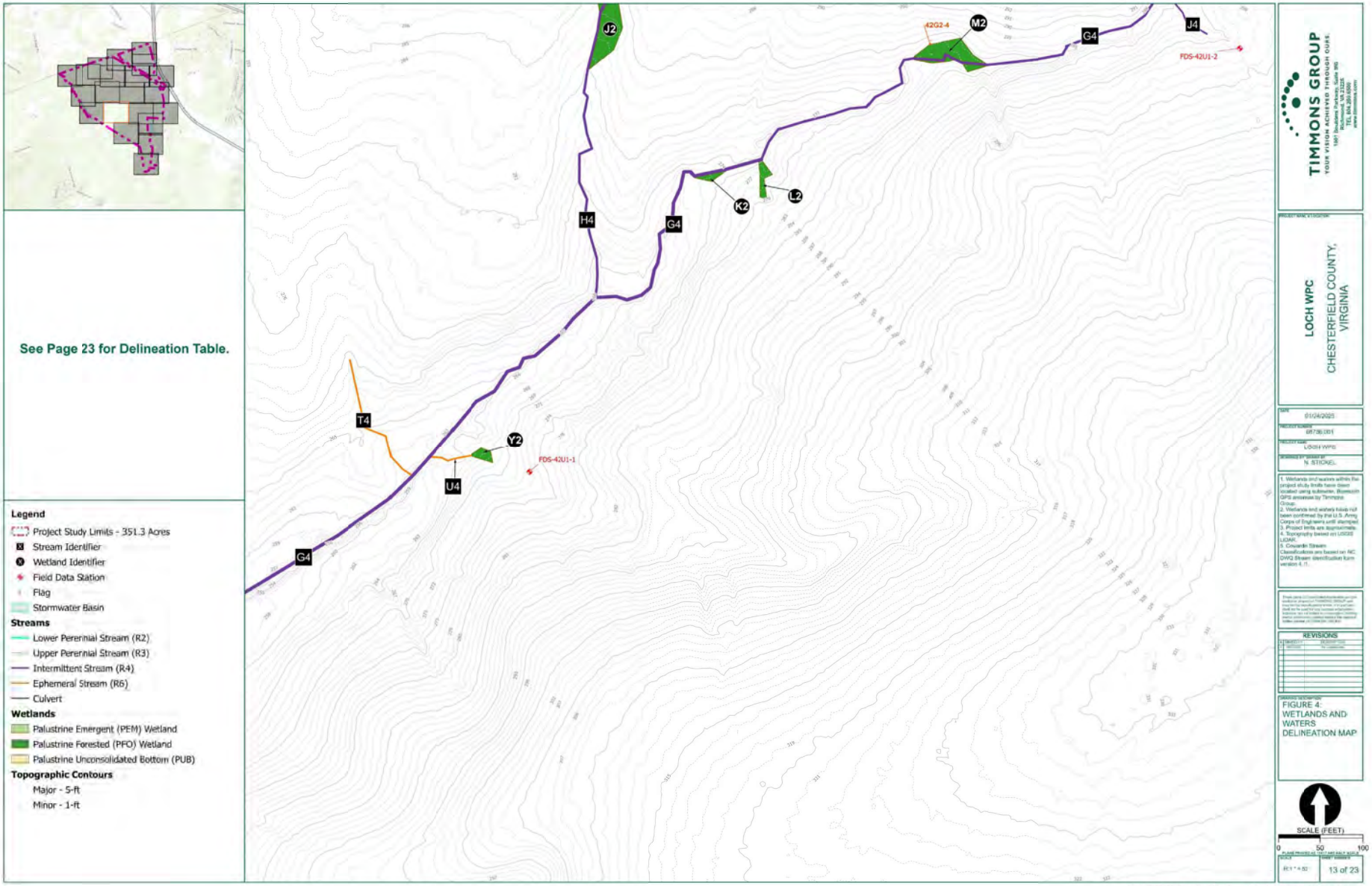
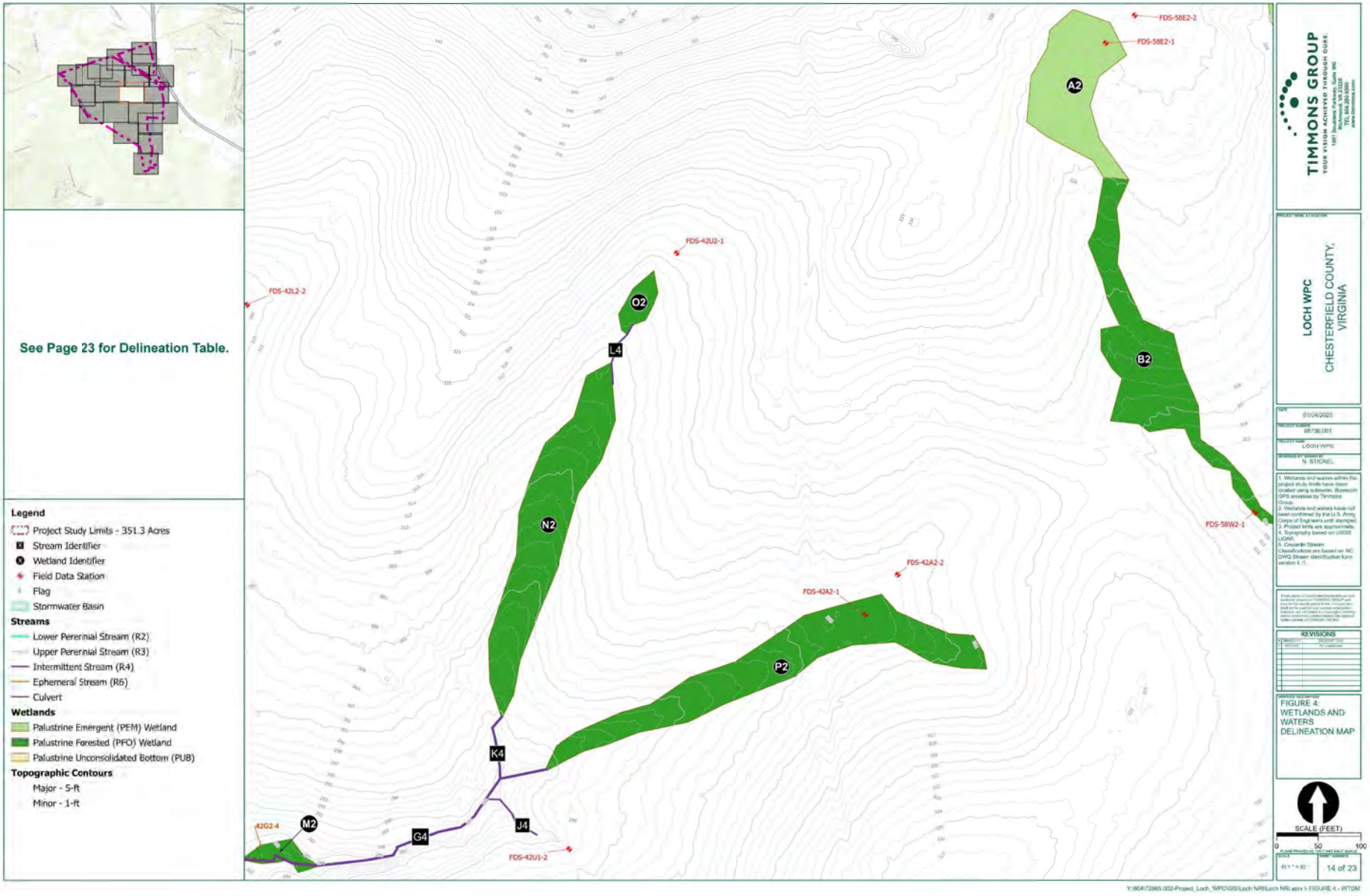
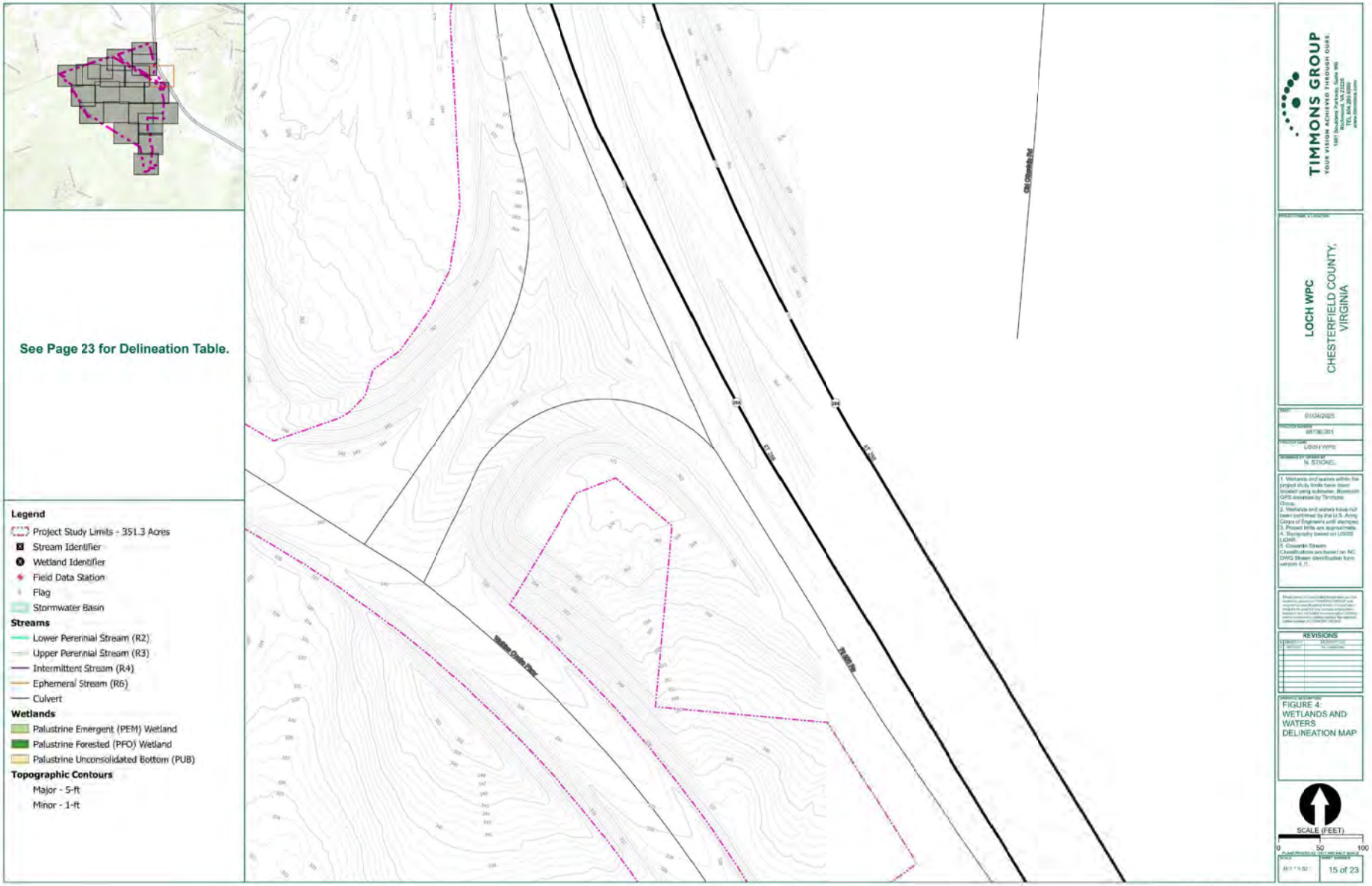
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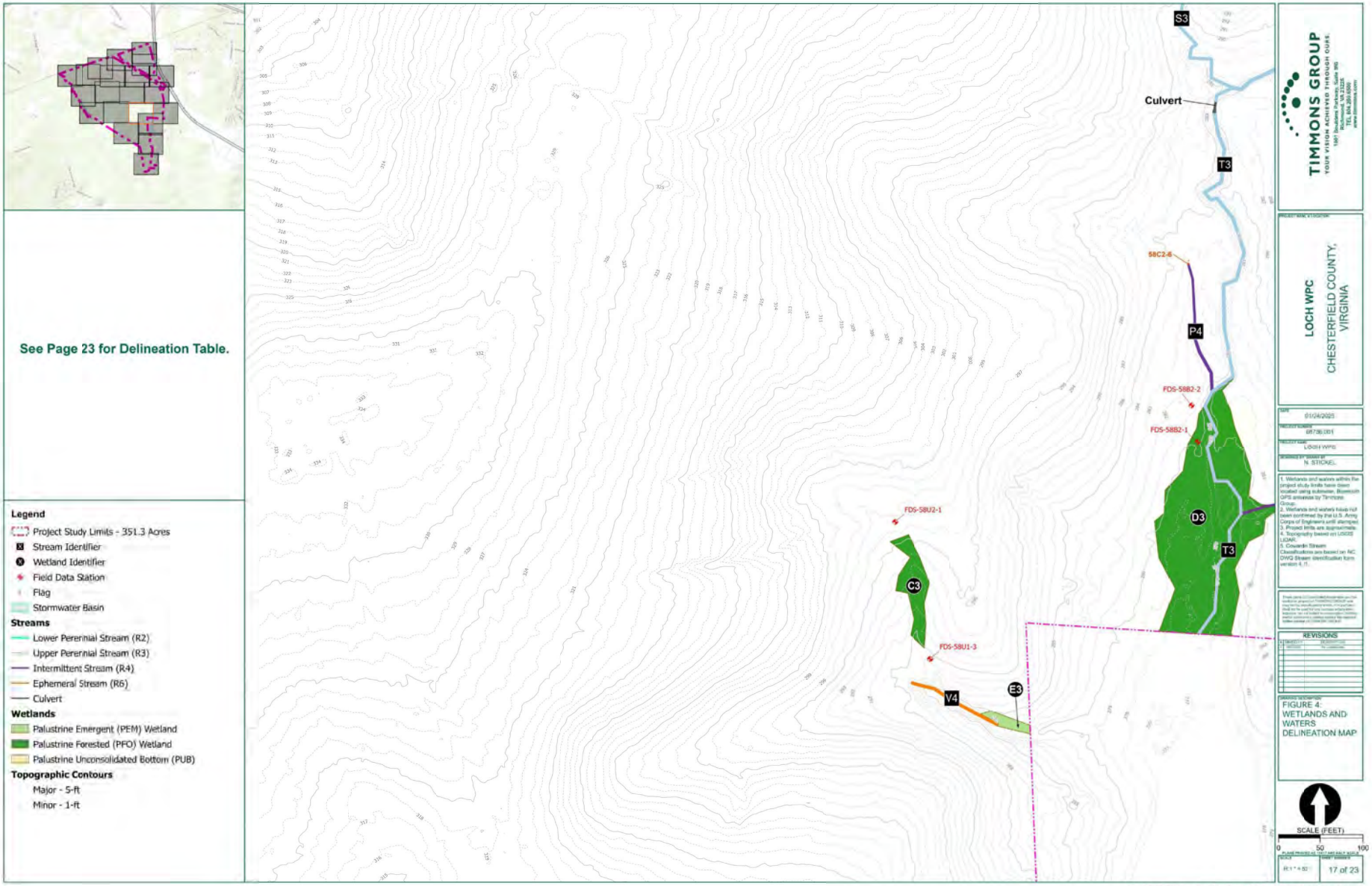
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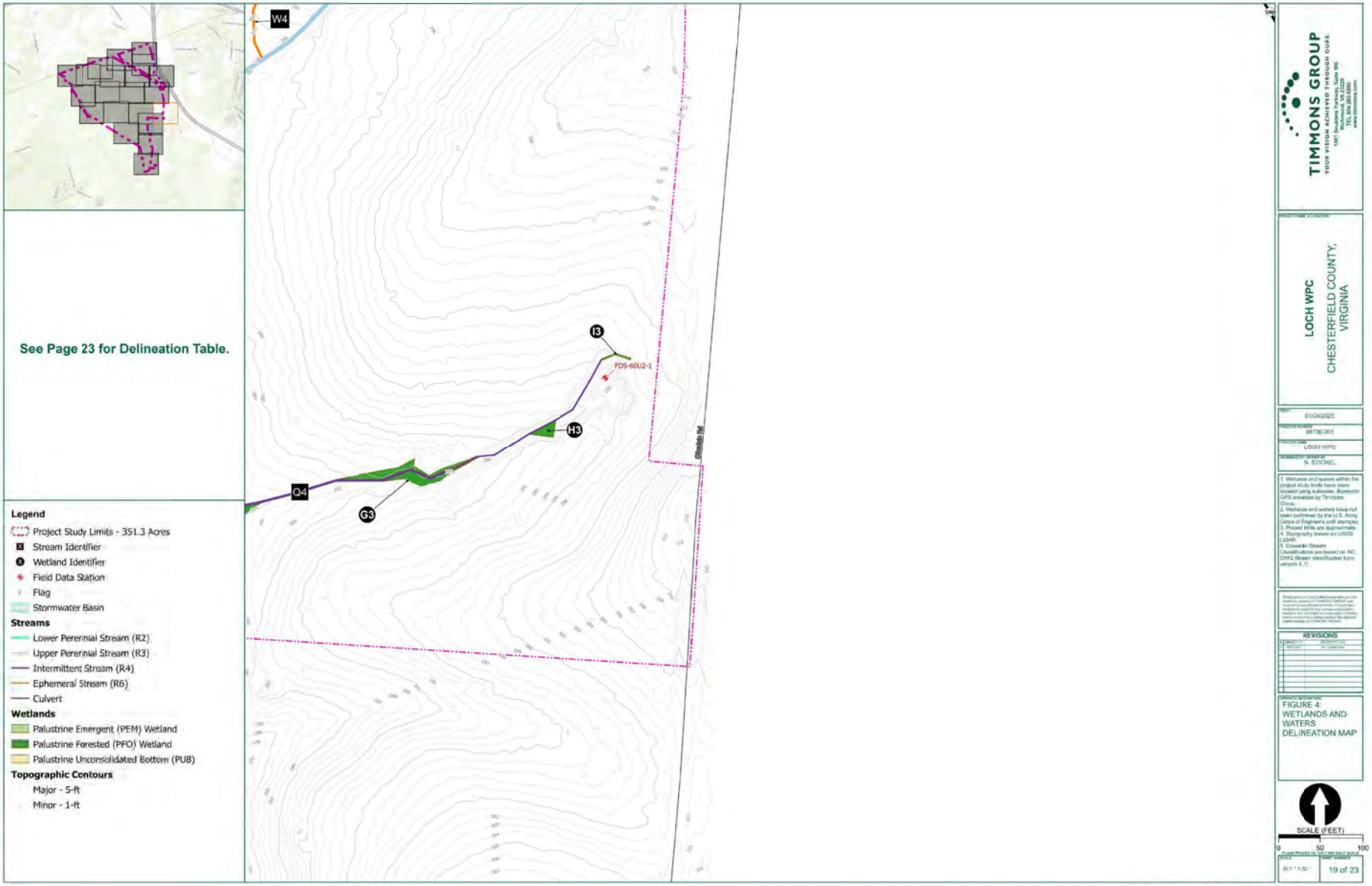
Received by VMRC January 29, 2026 / lra



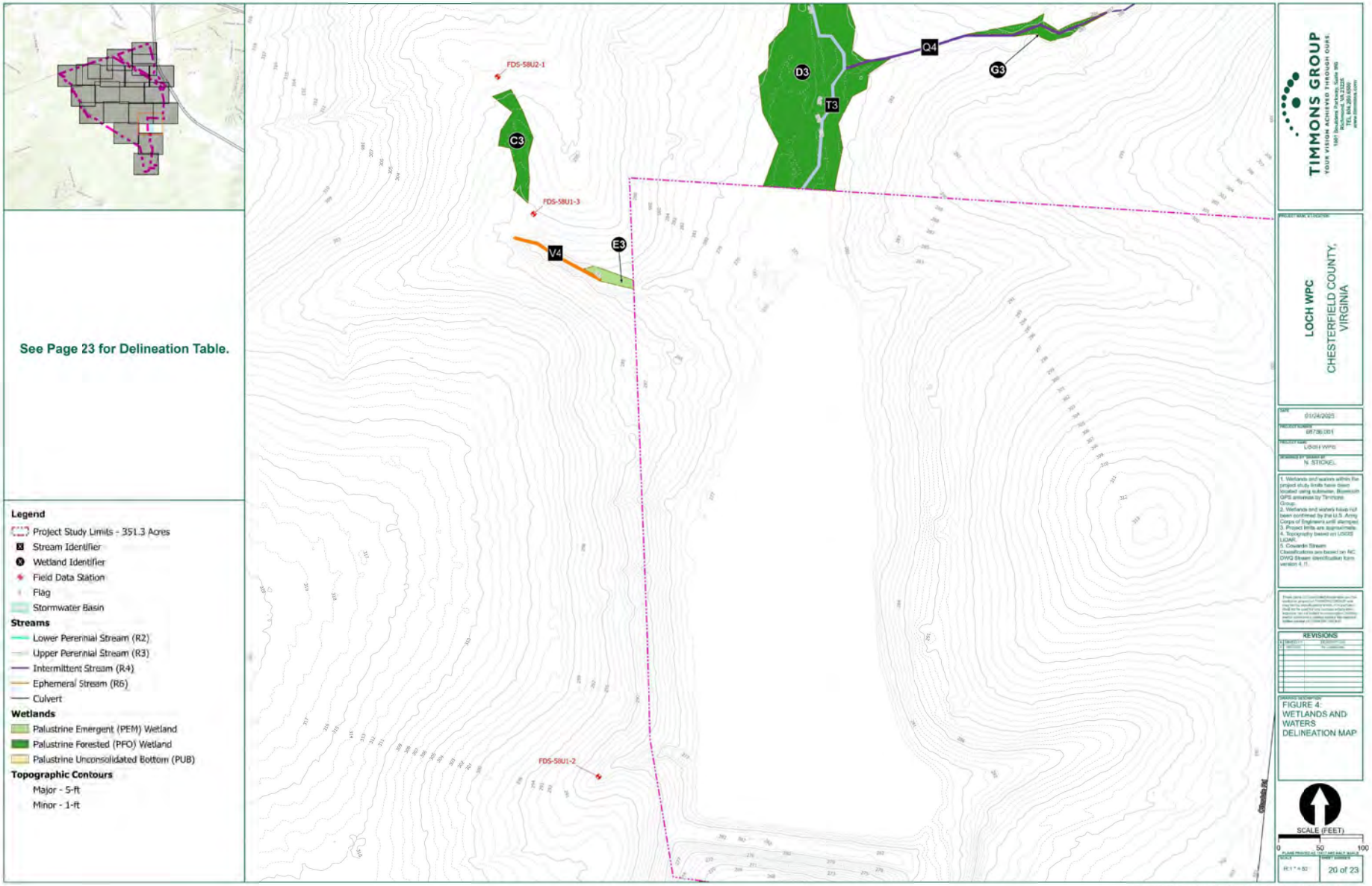
Received by VMRC January 29, 2026 / lra



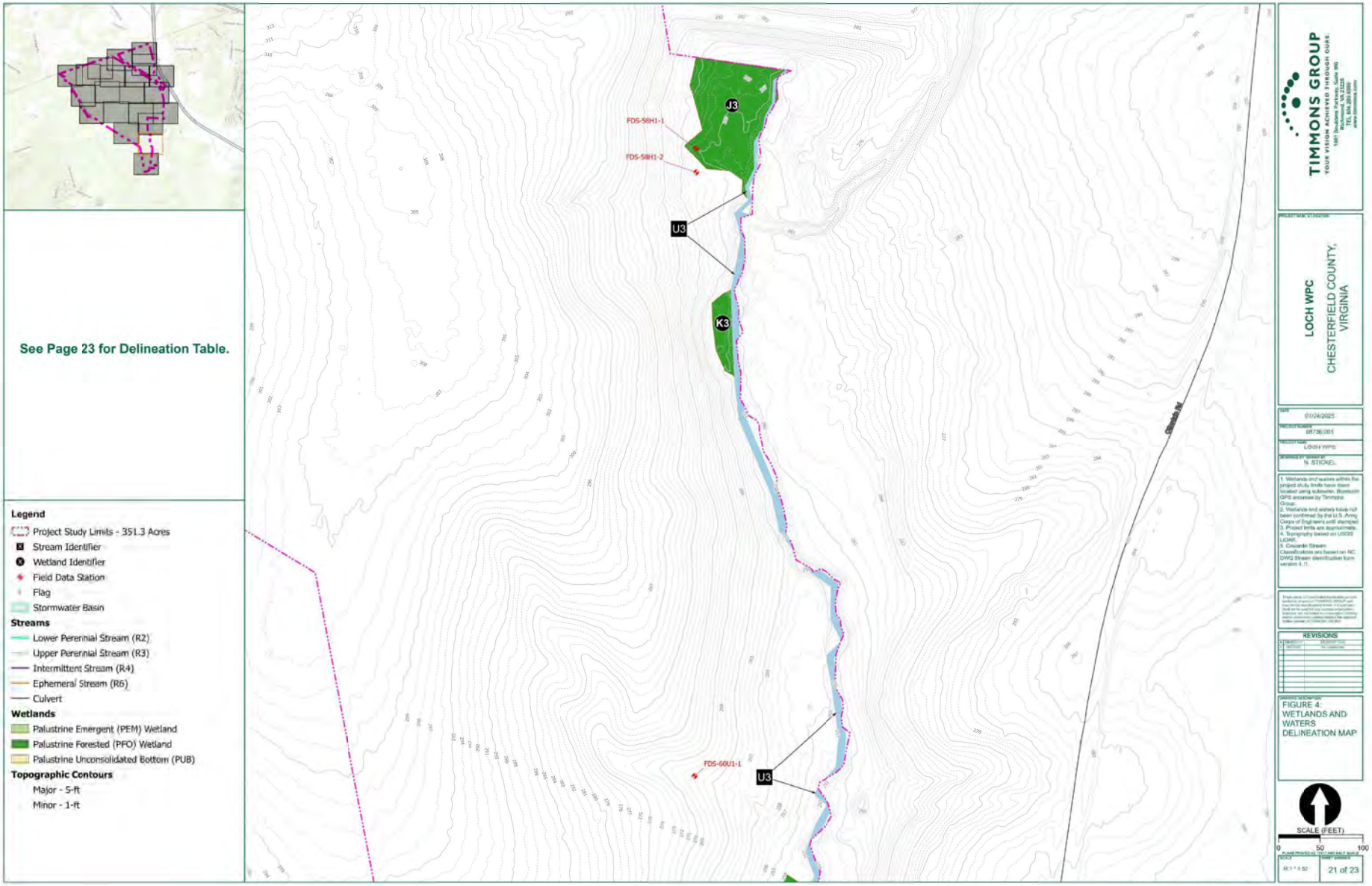
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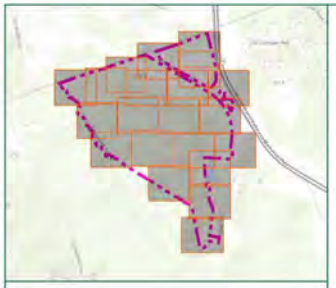
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Legend

- Project Study Limits - 351.3 acres
- Stream Identifier
- Wetland Identifier
- Field Data Station
- Flag
- Stormwater Basin

Streams

- Lower Perennial Stream (R2)
- Upper Perennial Stream (R3)
- Intermittent Stream (R4)
- Ephemeral Stream (R6)
- Culvert

Wetlands

- Palustrine Emergent (PEM) Wetland
- Palustrine Forested (PFO) Wetland
- Palustrine Unconsolidated Bottom (PUB)

Topographic Contours

- Major - 5-ft
- Minor - 1-ft

Resource Identification	Confirmation									Resource Description Notes*
	PFO (sq ft)	PEM (sq ft)	PUB (sq ft)	R2 (lf)	R3 (lf)	R4 (lf)	R6 (lf)	Ditch (lf)	Stream (sq ft)	
A	583									NT/V
B	3,728									NT/V
C	105									NT/V
D	68,089									NT/V
E		26,640								NT/V
F	16,997									NT/V
G	252									NT/V
H	320									NT/V
I	1,070									NT/V
J	341									NT/V
K	464									NT/V
L		7,837								NT/V
M		5,971								NT/V
N	7,964									NT/V
O	14,702									NT/V
P	297									NT/V
Q	86,940									NT/V
R		692								NT/V
S		1,071								NT/V
T	649									NT/V
U	943									NT/V
V	563									NT/V
W	4,270									NT/V
X		12,134								NT/V
Y	8,417									NT/V
Z		6,466								NT/V
A2		13,120								NT/V
B2	17,773									NT/V
C2		1,509								NT/V
D2	83,373									NT/V
E2	9,754									NT/V
F2			1,196							NT/V
G2	958									NT/V
H2	47,698									NT/V
I2	28,387									NT/V
J2	2,520									NT/V
K2	166									NT/V
L2	351									NT/V
M2	1,412									NT/V
N2	20,555									NT/V
O2	1,791									NT/V
P2	22,439									NT/V
Q2	2,130									NT/V
R2		2,313								NT/V
S2		26,288								NT/V
T2	2,551									NT/V
U2		795								NT/V
V2		248								NT/V
W2	12,327									NT/V
X2	6,900									NT/V
Y2	257									NT/V
Z2	724									NT/V
A3	6,794									NT/V
B3	826									NT/V
C3	2,706									NT/V
D3	22,219									NT/V
E3		634								NT/V
F3										NT/V

Resource Identification	Confirmation									Resource Description Notes*
	PFO (sq ft)	PEM (sq ft)	PUB (sq ft)	R2 (lf)	R3 (lf)	R4 (lf)	R5 (lf)	Ditch (lf)	Stream (sq ft)	
G3	1,338									NT/V
H3	269									NT/V
I3	72									NT/V
J3	10,957									NT/V
K3	1,902									NT/V
L3										NT/V
M3										NT/V
N3										NT/V
O3	39,039									NT/V
P3	140									NT/V
Q3				2,390					12,169	NT/NV
R3					1,102				11,753	NT/NV
S3					1,426				5,187	NT/NV
T3					1,575				7,793	NT/NV
U3					1,831				11,558	NT/NV
V3					8				55	NT/NV
W3						72			342	NT/NV
X3						547			1,810	NT/NV
Y3						108			164	NT/NV
Z3						407			850	NT/NV
A4						21			41	NT/NV
B4						295			1,187	NT/NV
C4						148			452	NT/NV
D4						231			698	NT/NV
E4						74			173	NT/NV
F4						19			61	NT/NV
G4						1,943			7,096	NT/NV
H4						659			1,973	NT/NV
I4						197			587	NT/NV
J4						78			155	NT/NV
K4						79			235	NT/NV
L4						78			159	NT/NV
M4						218			656	NT/NV
N4						117			349	NT/NV
O4						32			61	NT/NV
P4						156			529	NT/NV
Q4						524			1,334	NT/NV
R4										NT/NV
S4							75		186	NT/NV
T4							168		334	NT/NV
U4							52		101	NT/NV
V4							112		461	NT/NV
W4							119		353	NT/NV
X4							37		68	NT/NV
Y4						38			115	NT/NV
Z4						27			101	NT/NV
A5	1,949									
Total	566,970	105,718	1,196	2,390	5,942	6,867	563	0	69,146	
Total Wetland Area =	673,884 sq ft				15.47 ac					
Total Stream Area =	69,146 sq ft				1.59 ac					
Total Stream Length =	14,962 lf				N/A					

* T=Tidal; NT=Non-tidal; V=Vegetated; NV=Non-Vegetated; PFO=Palustrine Forested Wetland; PEM=Palustrine Emergent Wetland; R3= Upper Perennial Streams; R4=Intermittent Streams; R6 = Ephemeral Streams

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LOCH WPC
CHESTERFIELD COUNTY, VIRGINIA

DATE 01/24/2025
PROJECT NUMBER 85736.001
PROJECT NAME LOCH WPC
SCALE 1" = 450'
DESIGNED BY / DRAWN BY N. STONEL

1. Wetlands and waters within the project study limits have been located using submeter, Bluetooth GPS antennas by Trimble Ontop.
2. Wetlands and waters have not been confirmed by the U.S. Army Corps of Engineers until stamped.
3. Project limits are approximate.
4. Topography based on USGS LiDAR.
5. Cowardin Stream Classifications are based on NC DWQ Stream Identification form version 4.11.

REVISIONS

NO.	DATE	DESCRIPTION
1	04/07/2025	Per comments
2	08/01/2025	Per comments

FIGURE 4:
WETLANDS AND WATERS DELINEATION MAP

SCALE (FEET)
0 450 900

SHEET NUMBER 23 of 25

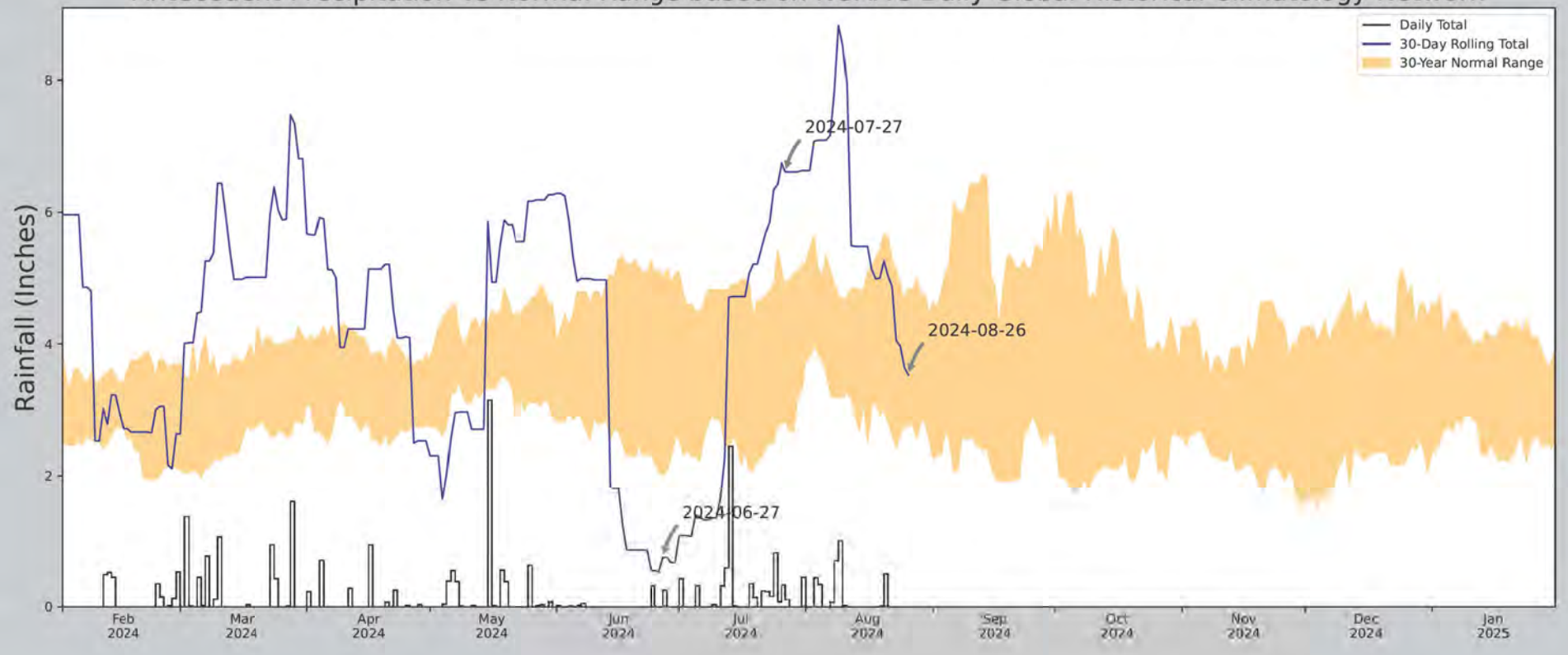
Y:\85736\2-Design\02-Project_Loch_WPC\GIS\Loch\MXD\Loch_NWI.aprx | FIGURE 4 - WTDM TABLE

APPENDIX A
USACE ANTECEDENT PRECIPITATION TOOL DATA

Received by VMRC January 29, 2026 / lra

Received by VMRC January 29, 2026 / lra

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.4930925, -77.6907819
Observation Date	2024-08-26
Elevation (ft)	333.104
Drought Index (PDSI)	Mild drought (2024-07)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-26	2.764961	4.83504	3.531496	Normal	2	3	6
2024-07-27	2.831102	4.916536	6.610236	Wet	3	2	6
2024-06-27	2.005906	5.008268	0.751969	Dry	1	1	1
Result							Normal Conditions - 13

US Army Corps of Engineers

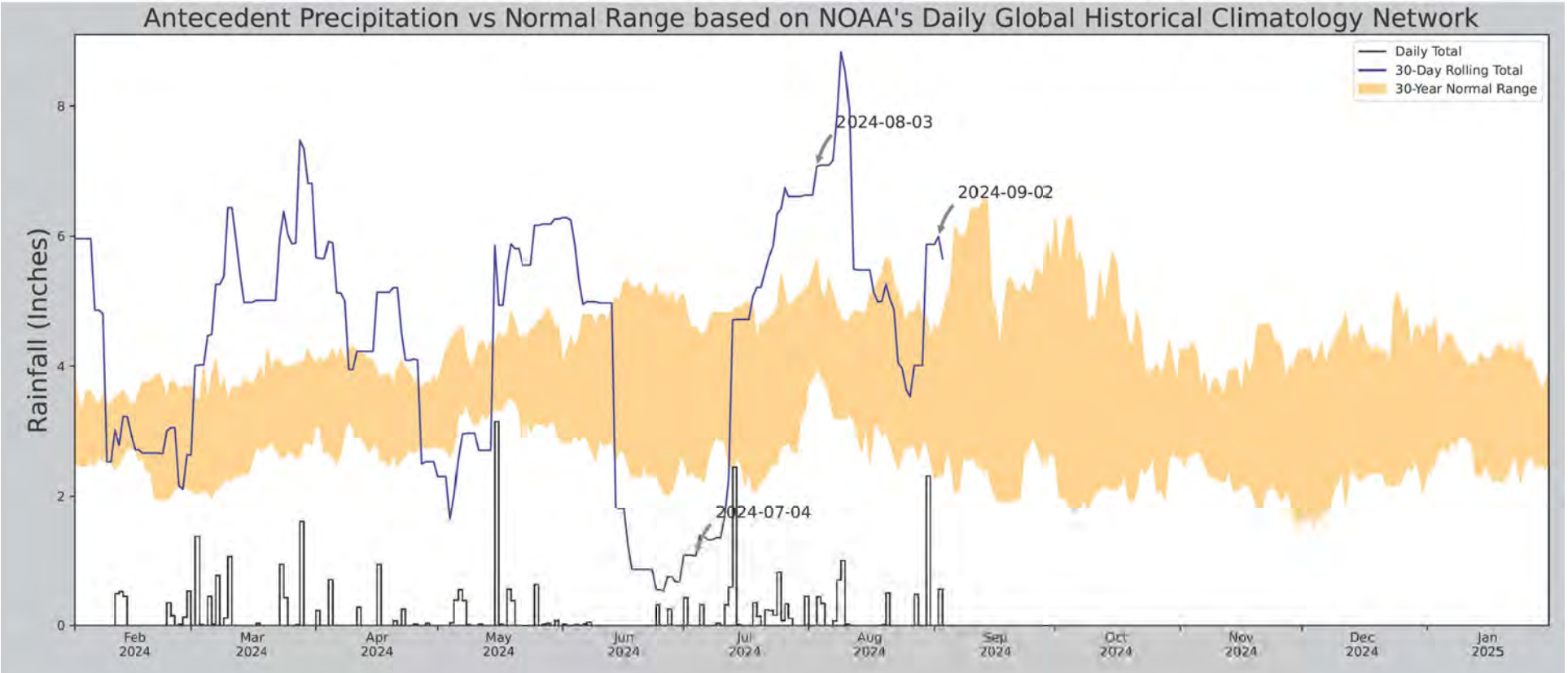
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WINTERPOCK	37.3247, -77.6436	319.882	11.919	13.222	5.521	11134	80
CHESTERFIELD 8.5 WSW	37.3252, -77.6443	369.094	0.052	49.212	0.026	97	0
MIDLOTHIAN 7.9 S	37.3895, -77.6522	249.016	4.502	70.866	2.345	17	10
MIDLOTHIAN 5.4 S	37.4259, -77.6432	238.845	6.992	81.037	3.713	1	0
MIDLOTHIAN 3.5 SSW	37.4562, -77.6624	265.092	9.144	54.79	4.616	34	0
CHESTERFIELD CO AP	37.4, -77.5169	236.877	8.688	83.005	4.631	1	0
MIDLOTHIAN 4.7 SSW	37.4399, -77.6671	183.071	8.063	136.811	4.731	3	0
MIDLOTHIAN 1.1 SW	37.4965, -77.6648	377.953	11.927	58.071	6.06	20	0
MIDLOTHIAN 1.4 WNW	37.5163, -77.671	334.974	13.323	15.092	6.196	20	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	14.926	21.982	7.045	13	0
POWHATAN	37.5144, -77.8858	399.934	18.666	80.052	9.894	12	0

Received by VMRC January 29, 2026 / lra



Coordinates	37.491603, -77.694997
Observation Date	2024-09-02
Elevation (ft)	280.155
Drought Index (PDSI)	Not available (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-02	2.312598	4.559843	5.992126	Wet	3	3	9
2024-08-03	3.970473	5.633858	7.070866	Wet	3	2	6
2024-07-04	2.304331	4.605512	1.070866	Dry	1	1	1
Result							Wetter than Normal - 16

US Army Corps of Engineers.

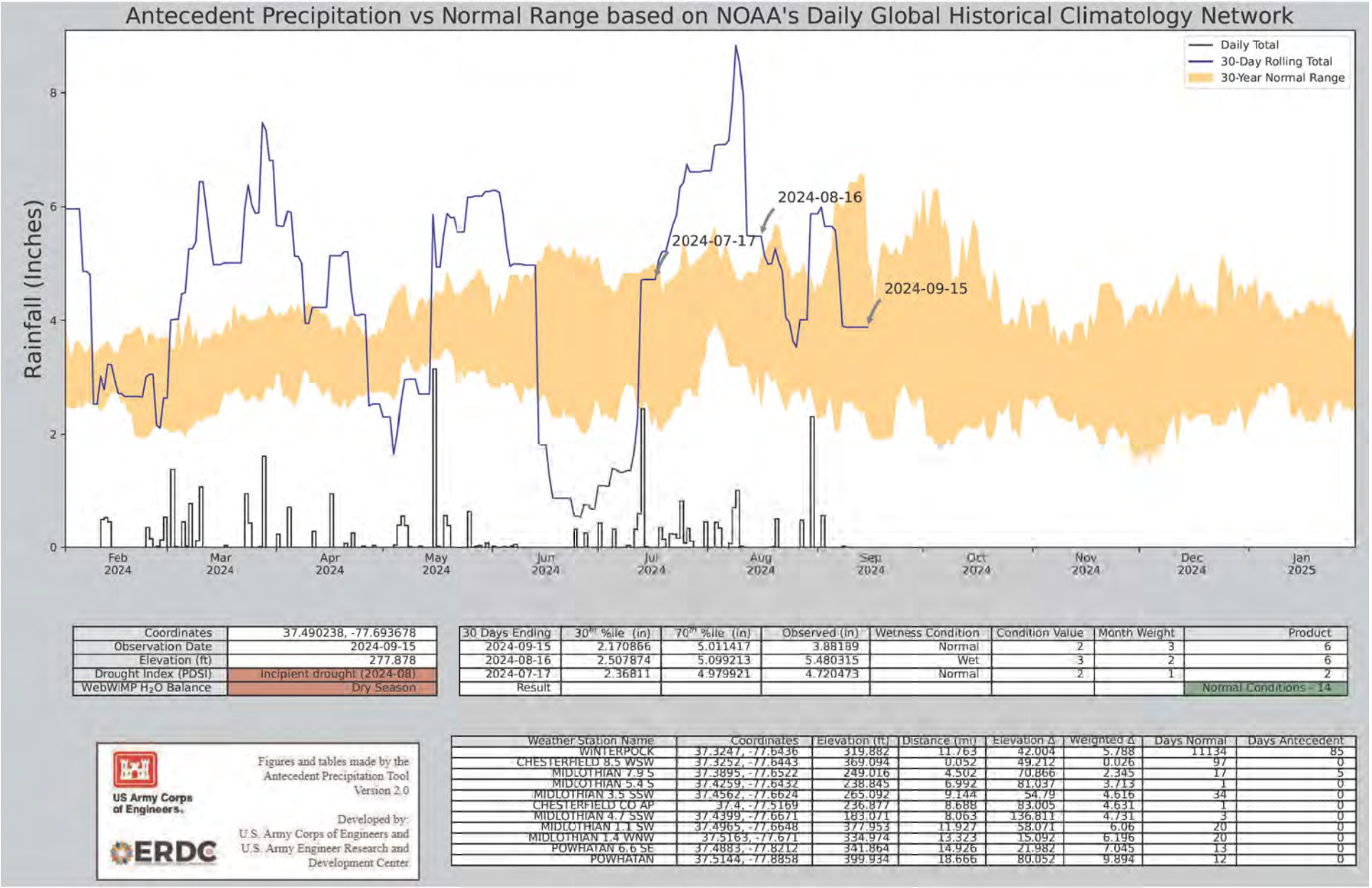
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WINTERPOCK	37.3247, -77.6436	319.882	11.872	39.727	5.814	11134	79
CHESTERFIELD 8.5 WSW	37.3252, -77.6443	369.094	0.052	49.212	0.026	97	1
MIDLOTHIAN 7.9 S	37.3895, -77.6522	249.016	4.502	70.866	2.345	17	10
MIDLOTHIAN 5.4 S	37.4259, -77.6432	238.845	6.992	81.037	3.713	1	0
MIDLOTHIAN 3.5 SSW	37.4562, -77.6624	265.092	9.144	54.79	4.616	34	0
CHESTERFIELD CO AP	37.4, -77.5169	236.877	8.688	83.005	4.631	1	0
MIDLOTHIAN 4.7 SSW	37.4399, -77.6671	183.071	8.063	136.811	4.731	3	0
MIDLOTHIAN 1.1 SW	37.4965, -77.6648	377.953	11.927	58.071	6.06	20	0
MIDLOTHIAN 1.4 WNW	37.5163, -77.671	334.974	13.323	15.092	6.196	20	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	14.926	21.982	7.045	13	0
POWHATAN	37.5144, -77.8858	399.934	18.666	80.052	9.894	12	0

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Coordinates	37.490238, -77.693678
Observation Date	2024-09-15
Elevation (ft)	277.878
Drought Index (PDSI)	Incipient drought (2024-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-15	2.170866	5.011417	3.88189	Normal	2	3	6
2024-08-16	2.507874	5.099213	5.480315	Wet	3	2	6
2024-07-17	2.36811	4.979921	4.720473	Normal	2	1	2
Result							Normal Conditions - 14

US Army Corps of Engineers.

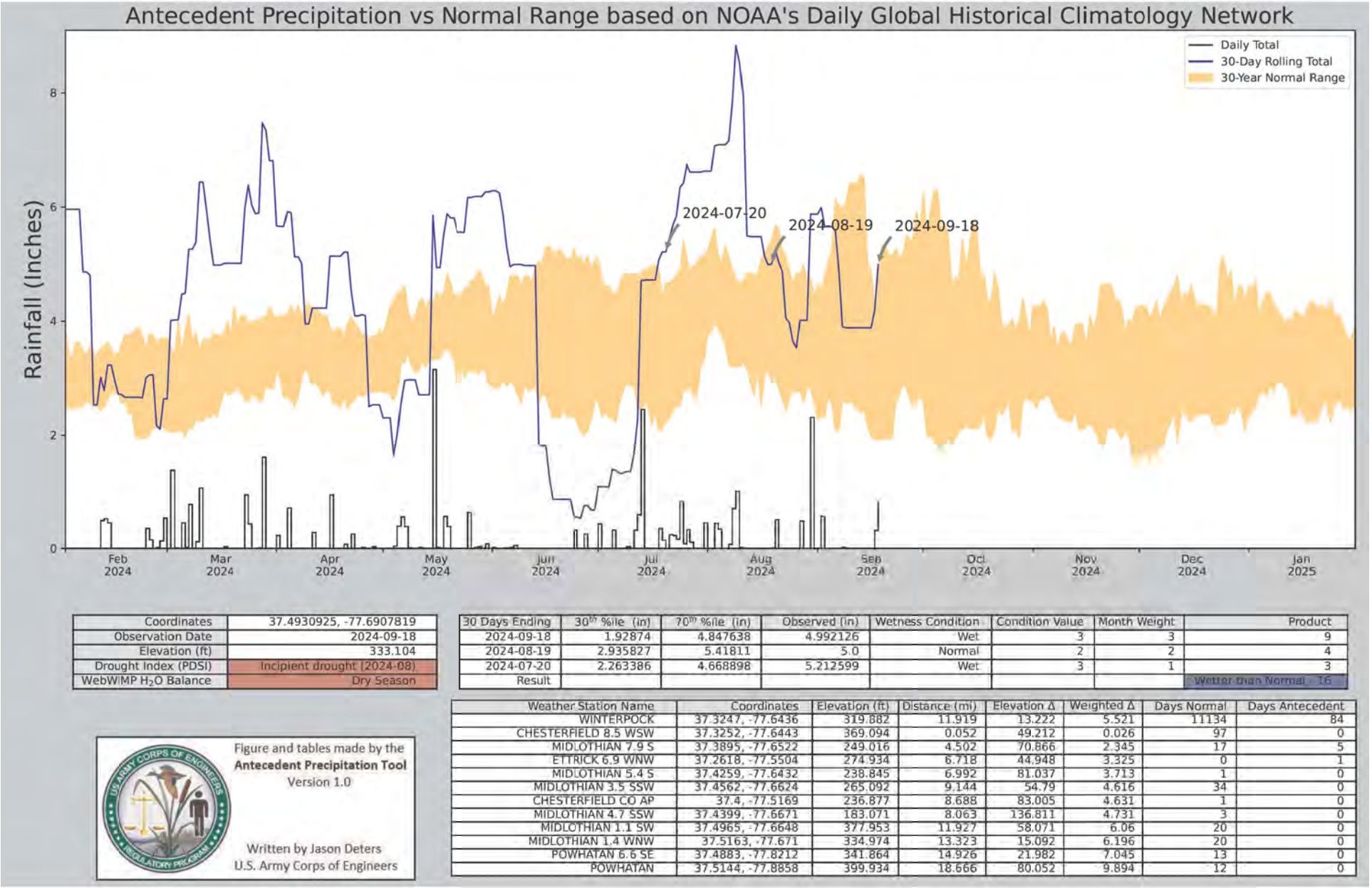
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WINTERPOCK	37.3247, -77.6436	319.882	11.763	42.004	5.788	11134	85
CHESTERFIELD 8.5 WSW	37.3252, -77.6443	369.094	0.052	49.212	0.026	97	0
MIDLOTHIAN 7.9 S	37.3895, -77.6522	249.016	4.502	70.866	2.345	17	5
MIDLOTHIAN 5.4 S	37.4259, -77.6432	238.845	6.992	81.037	3.713	1	0
MIDLOTHIAN 3.5 SSW	37.4562, -77.6624	265.092	9.144	54.79	4.616	34	0
CHESTERFIELD CO AP	37.4, -77.5169	236.877	8.688	83.005	4.631	1	0
MIDLOTHIAN 4.7 SSW	37.4399, -77.6671	183.071	8.063	136.811	4.731	3	0
MIDLOTHIAN 1.1 SW	37.4965, -77.6648	377.953	11.927	58.071	6.06	20	0
MIDLOTHIAN 1.4 WNW	37.5163, -77.671	334.974	13.323	15.092	6.196	20	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	14.926	21.982	7.045	13	0
POWHATAN	37.5144, -77.8858	399.934	18.666	80.052	9.894	12	0

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Coordinates	37.4930925, -77.6907819
Observation Date	2024-09-18
Elevation (ft)	333.104
Drought Index (PDSI)	Incipient drought (2024-08)
WebWIMP H_2O Balance	Dry Season

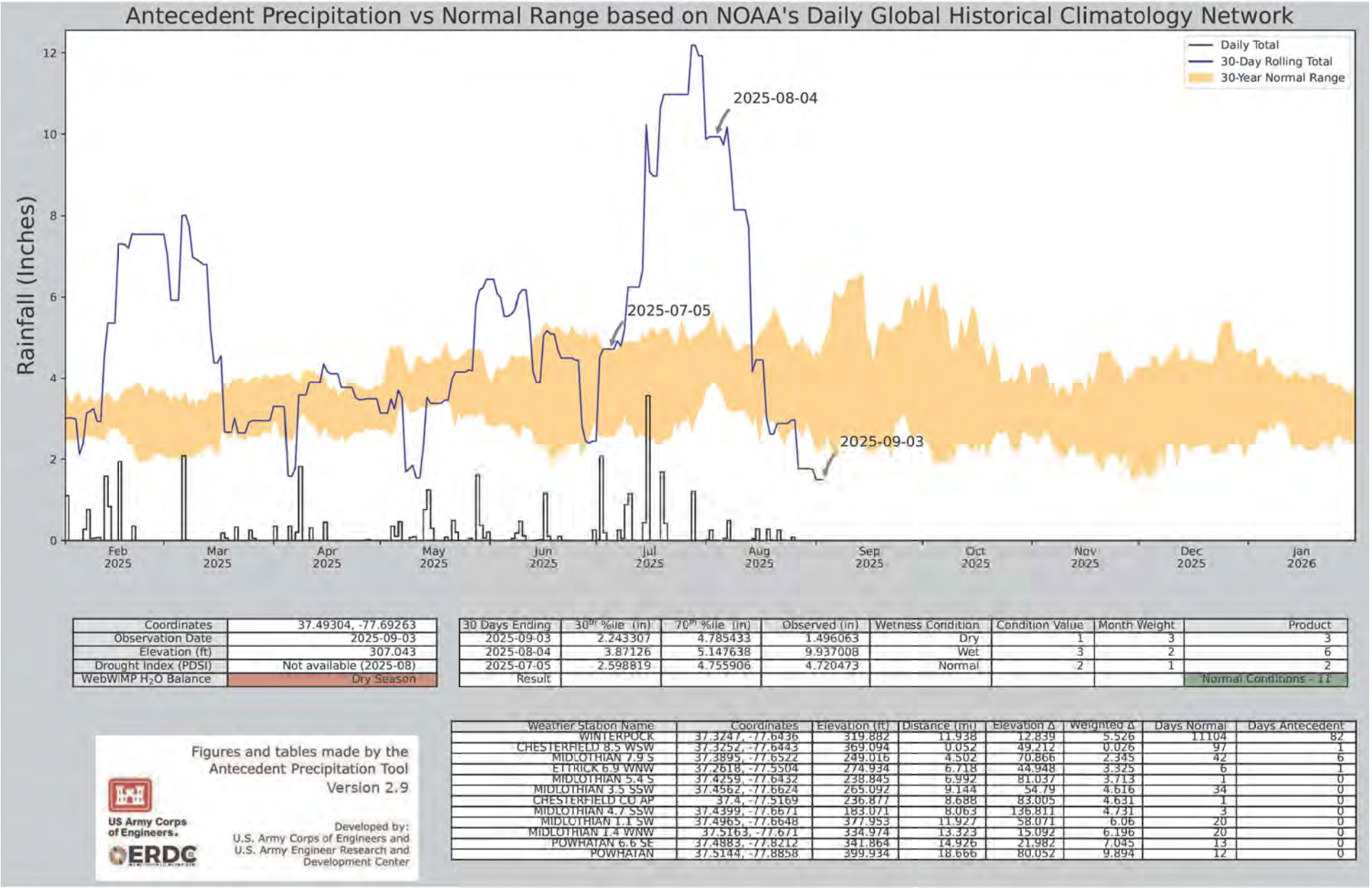
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-18	1.92874	4.847638	4.992126	Wet	3	3	9
2024-08-19	2.935827	5.41811	5.0	Normal	2	2	4
2024-07-20	2.263386	4.668898	5.212599	Wet	3	1	3
Result							Wetter than Normal: 16

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WINTERPOCK	37.3247, -77.6436	319.882	11.919	13.222	5.521	11134	84
CHESTERFIELD 8.5 WSW	37.3252, -77.6443	369.094	0.052	49.212	0.026	97	0
MIDLOTHIAN 7.9 S	37.3895, -77.6522	249.016	4.502	70.866	2.345	17	5
ETTRICK 6.9 WNW	37.2618, -77.5504	274.934	6.718	44.948	3.325	0	1
MIDLOTHIAN 5.4 S	37.4259, -77.6432	238.845	6.992	81.037	3.713	1	0
MIDLOTHIAN 3.5 SSW	37.4562, -77.6624	265.092	9.144	54.79	4.616	34	0
CHESTERFIELD CO AP	37.4, -77.5169	236.877	8.688	83.005	4.631	1	0
MIDLOTHIAN 4.7 SSW	37.4399, -77.6671	183.071	8.063	136.811	4.731	3	0
MIDLOTHIAN 1.1 SW	37.4965, -77.6648	377.953	11.927	58.071	6.06	20	0
MIDLOTHIAN 1.4 WNW	37.5163, -77.671	334.974	13.323	15.092	6.196	20	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	14.926	21.982	7.045	13	0
POWHATAN	37.5144, -77.8858	399.934	18.666	80.052	9.894	12	0

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Coordinates	37.49304, -77.69263
Observation Date	2025-09-03
Elevation (ft)	307.043
Drought Index (PDSI)	Not available (2025-08)
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-09-03	2.243307	4.785433	1.496063	Dry	1	3	3
2025-08-04	3.87126	5.147638	9.937008	Wet	3	2	6
2025-07-05	2.598819	4.755906	4.720473	Normal	2	1	2
Result							Normal Conditions - 11

Figures and tables made by the Antecedent Precipitation Tool Version 2.9

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
WINTERPOCK	37.3247, -77.6436	319.882	11.938	12.839	5.526	11104	82
CHESTERFIELD 8.5 WSW	37.3252, -77.6443	369.094	0.052	49.212	0.026	97	1
MIDLOTHIAN 7.9 S	37.3895, -77.6522	249.016	4.502	70.866	2.345	42	6
ETTRICK 6.9 WNW	37.2618, -77.5504	274.934	6.718	44.948	3.325	6	1
MIDLOTHIAN 5.4 S	37.4259, -77.6432	238.845	6.992	81.037	3.713	1	0
MIDLOTHIAN 3.5 SSW	37.4562, -77.6624	265.092	9.144	54.79	4.616	34	0
CHESTERFIELD CO AP	37.4, -77.5169	236.877	8.688	83.005	4.631	1	0
MIDLOTHIAN 4.7 SSW	37.4399, -77.6671	183.071	8.063	136.811	4.731	3	0
MIDLOTHIAN 1.1 SW	37.4965, -77.6648	377.953	11.927	58.071	6.06	20	0
MIDLOTHIAN 1.4 WNW	37.5163, -77.671	334.974	13.323	15.092	6.196	20	0
POWHATAN 6.6 SE	37.4883, -77.8212	341.864	14.926	21.982	7.045	13	0
POWHATAN	37.5144, -77.8858	399.934	18.666	80.052	9.894	12	0

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694

In Reply Refer To:
Project Code: 2026-0024733
Project Name: Project Loch

12/09/2025 18:10:41 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

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letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

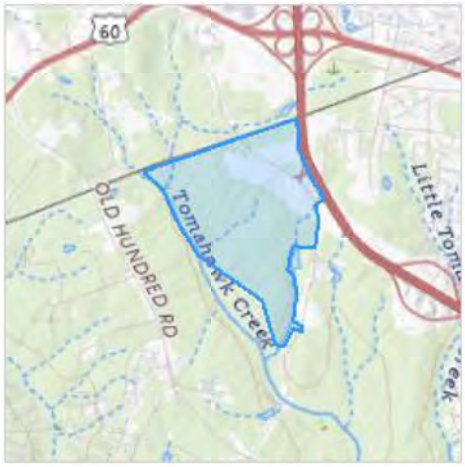
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

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PROJECT SUMMARY

Project Code: 2026-0024733
Project Name: Project Loch
Project Type: Commercial Development
Project Description: Site in chesterfield county
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.4934934,-77.69196322430236,14z



Counties: Chesterfield County, Virginia

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ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

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Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

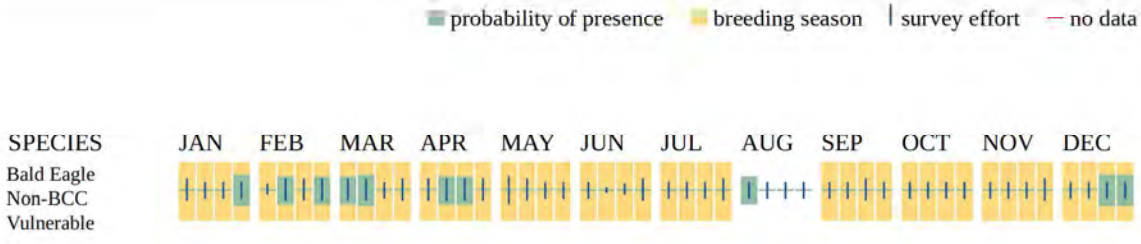
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Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Cerulean Warbler *Setophaga cerulea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 28 to Jul 20
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Kentucky Warbler *Geothlypis formosa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
Prairie Warbler *Setophaga discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere

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NAME	BREEDING SEASON
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

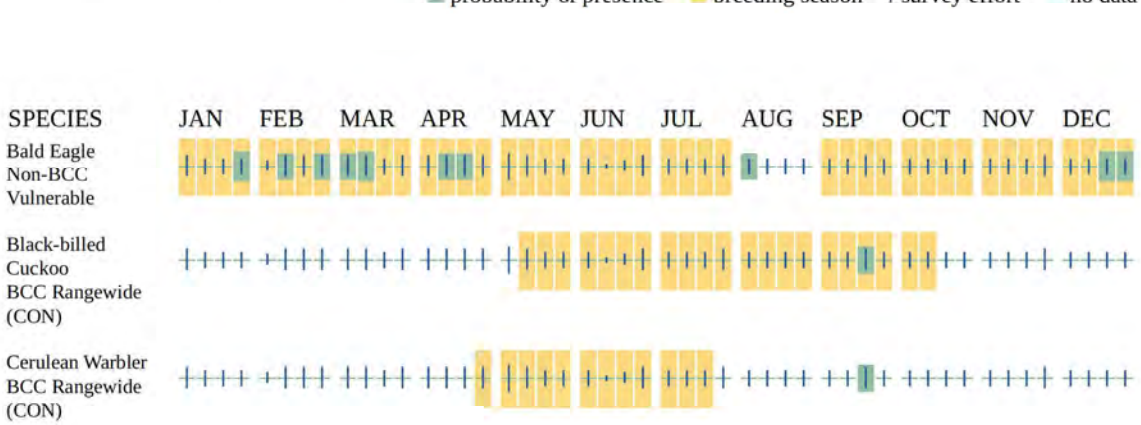
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

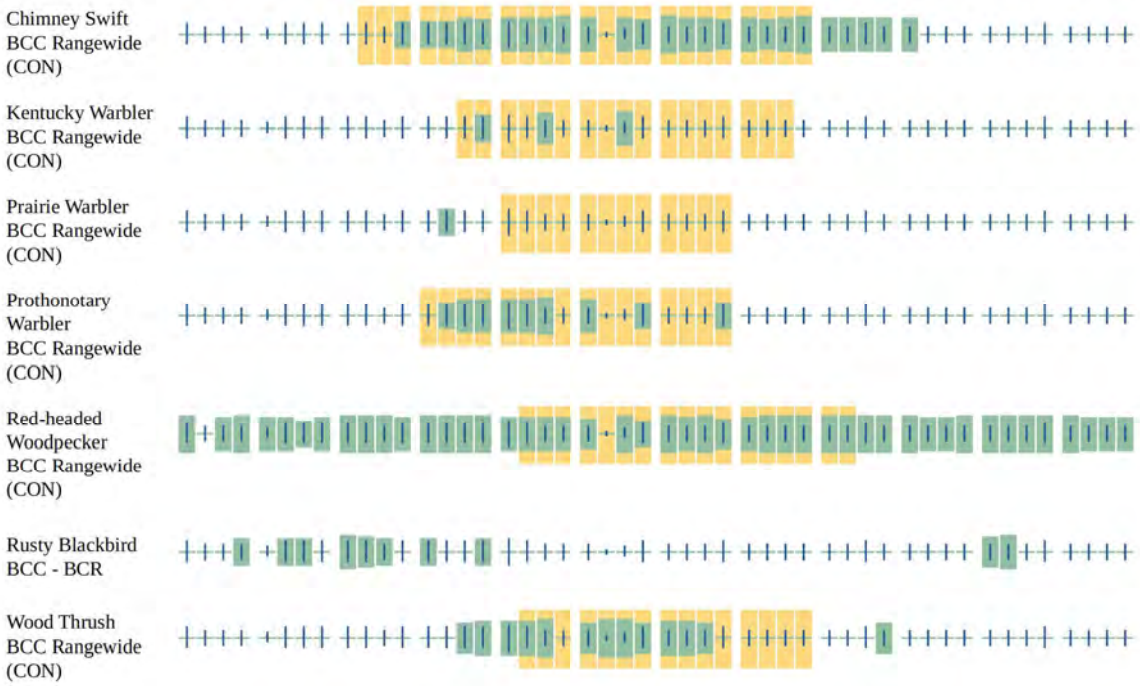
Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



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Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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IPAC USER CONTACT INFORMATION

Agency:	Private Entity
Name:	Timmons Group
Address:	7053 Celebration Park Avenue
Address Line 2:	Suite 300
City:	Richmond
State:	VA
Zip:	23225
Email	804@timmons.com
Phone:	8042006500

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JPA – State Specific Information

A. GENERAL INFORMATION

1. DEQ-VWP APPLICATION INSTRUCTIONS

"State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands. "Surface water" means all state waters that are not groundwater as groundwater is defined in § 62.1-255 of the Code of Virginia.

In addition to completing the other information requested by the United States Army Corps of Engineers' (USACE) Regulatory Request System (RRS) portal, please complete the DEQ Supplemental Information to apply for a DEQ Virginia Water Protection (VWP) individual permit or VWP general permit coverage for work in waters and/or wetlands within the Commonwealth of Virginia.

DEQ Complete Application Checklists are provided on the DEQ web site to assist in completing the required information and providing the required attachments, such as but not limited to project drawings, the State Surface Water Determination (SSWD), USACE Nationwide Permit Section 401 Certification Compliance Worksheet(s), DEQ 45-day Coverage Checklist, and materials for a complete State Programmatic General Permit (SPGP) application. The DEQ Complete Application Checklists and any required DEQ application attachments can be uploaded using the RRS portal. The VWP Permit and Compliance Manual is another source of information for completing many of the DEQ questions. Please visit for these tools: https://www.deq.virginia.gov/our-programs/water/wetlands-streams.

Information required for a complete VWP general permit coverage application is in accordance with the following regulations, unless otherwise noted on item in the checklist: The VWP General Permit Regulations are 9VAC25-660 (WP1); 9VAC25-670 (WP2); 9VAC25-680 (WP3); and 9VAC25-690 (WP4). *Sections 50 and 60 contain Notification and Application requirements. Sections 30, 50, 60, and 70 of each VWP general permit regulation, 9VAC25-210-116, and § 62.1-44.15:23 should be used as a reference in reviewing the requirements of Conceptual Compensatory Mitigation Plan.*

Information required for a complete VWP individual permit application is in accordance with the following regulations, unless otherwise noted on item in the checklist: The VWP Permit Program Regulation is 9VAC25-210. Section 10 contains definitions. *Sections 80 and 100 contain Application requirements* for VWP individual permits. *Sections 80 and 116, and § 62.1-44.15:23, should be used as a reference for the Conceptual Compensatory Mitigation Plan.* This checklist does not include detailed Final Compensatory Mitigation Plan requirements, as those are not required for a complete application.

Information required for a complete VWP individual permit application for surface water withdrawal or diversion projects is in accordance with the following regulations, unless otherwise noted on item in the checklist: The VWP Permit Program Regulation is 9VAC25-210. Sections 10 and 300 contain definitions. *Sections 80, 100, 340, and 360 contain application requirements for VWP-Surface Water Supply individual permits.* Section 350 contains application requirements for continuation of a surface water withdrawal, and Section 390 contains requirements for applying for a water supply variance, neither of which are included on this checklist. *Sections 80 and 116, and § 62.1-44.15:23, should be used as a reference for the Conceptual Compensatory Mitigation Plan.* This checklist does not include detailed Final Compensatory Mitigation Plan requirements, as those are not required for a complete application.

The VWP Permit Program works in conjunction with USACE-Norfolk District to provide verification of coverage under these State Programmatic General Permits (SPGP) per requirements and Standard Operating Procedures developed by USACE-Norfolk District. Information required by the USACE for a complete SPGP application is in accordance with the details in the 22-SPGP-RCIR (Residential, Commercial, Institutional, and Recreational activities) and 22-SPGP-LT (Linear Transportation activities) located at: https://www.nao.usace.army.mil/Missions/Regulatory/RBregional/.

Not all activities will require a VWP permit or coverage. Completing the information carefully will assist DEQ in making a permit need determination.

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DEQ prefers that required information identifying various boundaries, such as wetland boundaries, be submitted in Geographic Information System (GIS) shapefile format whenever possible.

Please do not attempt to send any money, credit card information, or proof of payment for fees at the time of application for VWP permitting purposes.

If a question does not apply to the project, respond NA (not applicable) in the space provided. *Upload additional pages, tables, narrative, and documents as necessary or requested.* DEQ may request other additional pertinent information necessary for a complete application, to make a permit decision, and/or issue a legal permit per regulation and Law.

2. **APPLICATION PURPOSE(S):** Select and complete all that apply:

   Nationwide Permit No.

   Regional Permit No.

   SPGP or PGP Name

   DEQ reapplication – existing permit or tracking number

3. **APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR INFORMATION**. For DEQ purposes, the applicant(s) is/are the *legal entity* to which the permit may be issued. "Legal name" means the full legal name of an individual, business, or other organization. For an individual, legal name means the first name, middle initial, last name, and suffix. For an entity authorized to do business in Virginia, the legal name means the exact name set forth in the entity's articles of incorporation, organization or trust, or formation agreement, as applicable. The applicant(s) can either be the property owner(s) or the person/people/company(ies) that intend(s) to undertake the activity. The agent is the person or company that is representing the applicant(s). *If the name entered in the USACE portion is not the legal name*, enter the legal name here. If an applicant, agent, or contractor is a company, provide the State Corporation Commission (SCC) information marked with an asterisk '*' below. ***Certain permits or authorizations may be provided via electronic mail instead of or in addition to postal mail.*

==

Legal Name(s) of Applicant(s) as registered with SCC*			Agent (if applicable) as registered with SCC*		
Applicant SCC-Registered Mailing address*			Agent SCC-Registered Mailing address*		
City	State	ZIP Code	City	State	ZIP Code
Email**			Email		
Primary Phone (Mobile)	Secondary Phone		Primary Phone (Mobile)	Secondary Phone	
*Enter State Corporation Commission ID number OR Not required to register with SCC			*Enter State Corporation Commission ID number OR Not required to register with SCC		
Property owner(s) legal name, if different from applicant, as registered with SCC*			Contractor, if known, as registered with SCC*		

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Property owner SCC-Registered Mailing address*			Contractor SCC-Registered Mailing address*		
City	State	ZIP code	City	State	ZIP code
Email			Email		
Primary Phone (Mobile)	Secondary Phone		Primary Phone (Mobile)	Secondary Phone	
*Enter State Corporation Commission ID number OR Not required to register with SCC			*Enter State Corporation Commission ID number OR Not required to register with SCC		

4. **PREVIOUS ACTIONS RELATED TO THE PROPOSED WORK**

If applicable, list in the table all ***state*** pre-application coordination, site visits, previous permits, applications, or State Surface Water Determination (SSWD) related to the project, whether issued, withdrawn, or denied. Historical information for past VWP permit submittals can be found online with VMRC - https://webapps.mrc.virginia.gov/public/habitat/ - or VIMS - http://ccrm.vims.edu/perms/newpermits.html. Include any applications submitted or permits issued through the DEQ Stormwater Management Program; DEQ Virginia Pollutant Discharge Elimination Program (VPDES); Virginia Department of Health (VDH); and Virginia Department of Energy (Virginia Energy). Some examples of permit or reference numbers may be 22-0123 (VWP individual permit); WP4-22-0123 (VWP general permit coverage); SSWD-123456 (State Surface Waters Determination); VAR12345 (VPDES general permit coverage); VA1234567 (VPDES individual permit).

Agency	Action / Activity	Permit or Reference Number	Date of Action	If denied, give reason for denial

5. **PROJECT INFORMATION**

5.a. Project Name (*Example: Water Creek driveway crossing*) and total size of the project area (in acres)

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5.b. Street Address, City/County/ZIP Code (911 address if available)

5.c. Subdivision

5.d. Lot/Block/Parcel #

5.e. Name of water body(ies) within project boundaries and drainage area (acres or square miles)

5.f. Tributary(ies) to Basin and Sub-basin *(Example: Basin: James River, Sub-basin: Middle James River)*

5.g Special Standards (based on DEQ Water Quality Standards 9VAC25-260 et seq.) – list all that apply:

5.h. Project type - select one:

Single user (private, non-commercial, residential)

Multi-user (community, commercial, industrial, government)

◯ Surface water withdrawal

5.i. Latitude and longitude at center of project site (decimal degrees)

37.4930427, -77.6926332

5.j. USGS topographic map name

Hallsboro, VA 2022

5.k. 8-digit USGS Hydrologic Unit Code (HUC) for your project site (See http://cfpub.epa.gov/surf/locate/index.cfm)

02080207

5.l. If known, indicate the 10-digit and 12-digit USGS HUCs (See http://consapps.dcr.virginia.gov/htdocs/maps/HUExplorer.htm)

0208020709; 020802070901

5.m. Is there an access road to the project? ◉ Yes ○ No. If yes, select all that apply:

☒ Public

☒ Private

☒ Improved

☒ Unimproved

5.n. Upload a detailed map, such as a USGS topographic map, street map, or GIS shapefile, showing all project site locations and boundaries, locality boundaries, and boundaries of any areas currently under preservation, conservation, or other protective instruments, such as deed restrictions.

5.o. Complete and upload to the RRS portal the Chesapeake Bay Preservation Act information in Appendix A.

5.p. Provide driving directions to your site, giving distances from the best and nearest visible landmarks or major intersections.

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6. **DESCRIPTION OF THE PROJECT, PROJECT PRIMARY AND SECONDARY PURPOSES, PROJECT NEED, INTENDED USE(S), AND ALTERNATIVES CONSIDERED**

Upload a narrative in response to these questions or items, numbering each response as shown in this section.

6.a. Describe all physical alteration of state surface waters, including wetlands. Indicate *whether or not tree clearing and/or grubbing will occur* (include the area in square feet and time of year). Ensure that the required plan-view, cross-sectional view, and profile view drawings required for a VWP complete application are detailed and include the proposed activities, structures, and related details – see requirements in DEQ's VWP Complete Application Checklists on https://www.deq.virginia.gov/permits/water/wetlands-streams-vwp and/or the applicable Virginia Administrative Code Chapters for the type of VWP permit sought. Upload drawings to the RRS portal.

6.b. If there is any aspect of the project purpose and need that may be specific to state regulations or laws, such as when one or more activities are not regulated by USACE, please include these here.

6.c. Include a description of alternatives considered and measures taken to avoid or minimize impacts to surface waters, including wetlands, to the maximum extent practicable. Explain why the proposed project is the least environmentally damaging practicable alternative (LEDPA). Include factors such as, but not limited to, alternative construction technologies, alternative project layout and design, alternative locations, local land use regulations, and existing infrastructure. For utility crossings, include both alternative routes and alternative construction methodologies considered. A complete application for VWP General Permit Coverage includes discussion of on-site alternatives; for VWP Individual Permits, discussion of on-site and off-site alternatives. Refer to the applicable VWP Complete Application Checklist for more information.

6.d. What is the approximate cost of the entire project, including materials and labor?

6.e. What is the approximate cost of only the portion of the project affecting state waters (channelward of mean low water in tidal areas and below ordinary high water mark in nontidal areas)?

6.h. Has any work in state waters commenced (Y/N)? If yes, give details stating when the work was completed and/or when it commenced, who performed the work, and which agency (if any) directed you to submit this application. Clearly differentiate between completed work and proposed work on your project drawings.

6.i. ***For VWP WP 1 general permit only:*** Upload to the RRS portal a copy of the FEMA flood insurance rate map or FEMA-approved local floodplain map showing 100-year floodplain(s)

7. **STATE LISTED THREATENED AND ENDANGERED SPECIES**

Upload a narrative in response to these questions or items, numbering each response as shown in this section.

7.a. Please provide any information concerning the potential for your project to impact state threatened and endangered species and critical habitat (listed or proposed).

7.b. Include information when applicable regarding the location of the project in designated or critical habitats. Upload correspondence from agencies and/or reference materials that address potential impacts, such as database search results or confirmed waters and wetlands delineation/jurisdictional determination.

Contact information:
U.S. Fish and Wildlife Service
Virginia Department of Wildlife Resources
Virginia Department of Conservation and Recreation-Natural Heritage

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8. **STATE SURFACE WATERS IMPACT INFORMATION**

Upload a narrative in response to these questions or items, numbering each response as shown in this section.

"Surface water" means all state waters that are not groundwater as groundwater is defined in § 62.1-255 of the Code of Virginia.

Please refer to the VWP Complete Application Checklists for the informational items and/or refer to the lists below. Users may expand upon the federal impact inventory provided in RRS in order to incorporate all of DEQ's information requirements and upload tables or spreadsheets into RRS. The RRS questions or informational requirements may differ for federal jurisdiction impacts.

Cowardin classifications may be found in Section 3 of the *Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC*.

Please ensure that the associated project drawings clearly depict the location and footprint of each numbered impact site. For dredging, mining, and excavating projects, also complete section A.9.

8.a. For each wetland impact site, provide the following information in tabular format:

1) Site number or identifier
2) Latitude and longitude
3) Describe the activity(ies) at the impact site. Select all that apply from the following: Fill, Discharge, Excavation, Flooding, Dredging, Surface water withdrawal or diversion, Draining, Dumping, Mechanized clearing of trees, Other (describe)
4) Identify the impact as impact temporary or permanent
    a) If permanent, also complete section A.11
    b) If temporary, describe the restoration actions proposed to bring the impact area to original conditions
5) Identify the wetland impact as non-tidal or tidal
    a) If non-tidal, identify if it is isolated
    b) If tidal, identify all if it is vegetated or non-vegetated
6) Cowardin classification (i.e., emergent, scrub-shrub, or forested)
7) For each Cowardin classification provide the proposed individual impacts quantified in square feet to the nearest whole number, cumulatively summed in square feet, and then the sum converted to acres and rounded to two decimal places using commonly accepted arithmetic principles of rounding
8) If applicable, area of tree clearing (acres)
9) Verify if this site under a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument (i.e., protected areas)
10) DEQ classification of impacted resource(s) (https://law.lis.virginia.gov/admincode/title9/agency25/chapter260/section50/) Select from the following:
11) Class II-Tidal waters in Chesapeake Bay/tidal tributaries, Class III-Coastal/Piedmont Zone nontidal waters, Class IV-Mountainous Zone waters, Class V-Stockable trout waters, Class VI-Natural trout waters, Class VII-Swamp waters

8.b. For each stream impact site, provide the following information in tabular format:

1) Site number or identifier
2) Latitude and longitude
3) Describe the activity(ies) at the impact site. Select all that apply from the following: Fill, Discharge, Excavation, Flooding, Dredging, Surface water withdrawal or diversion, Draining, Dumping, Mechanized clearing of trees, Other (describe)
4) Identify the impact as impact temporary or permanent
    a) If permanent, also complete section A.11
    b) If temporary, describe the restoration actions proposed to bring the impact area to original conditions
5) Identify the stream impact as non-tidal or tidal
6) Identify the stream as perennial or intermittent

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7) Impact area quantified as follows:
    a) by length in linear feet to the nearest whole number and by average width in feet to the nearest whole number
    b) in square feet to the nearest whole number; and
    c) when compensatory mitigation is required, the impacts identified according to the assessed type using the Unified Stream Methodology (USM)
8) If applicable, area of tree clearing (acres)
9) Verify if this site under a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument (i.e., protected areas)
10) DEQ classification of impacted resource(s) (https://law.lis.virginia.gov/admincode/title9/agency25/chapter260/section50/) Select from the following:
11) Class II-Tidal waters in Chesapeake Bay/tidal tributaries, Class III-Coastal/Piedmont Zone nontidal waters, Class IV-Mountainous Zone waters, Class V-Stockable trout waters, Class VI-Natural trout waters, Class VII-Swamp waters

8.c. For each open water impact site, provide the following information in tabular format:
1) Site number or identifier
2) Latitude and longitude
3) Describe the activity(ies) at the impact site. Select all that apply from the following: Fill, Discharge, Excavation, Flooding, Dredging, Surface water withdrawal or diversion, Draining, Dumping, Mechanized clearing of trees, Other (describe)
4) Identify the impact as impact temporary or permanent
    a) If permanent, also complete section A.11
    b) If temporary, describe the restoration actions proposed to bring the impact area to original conditions
5) Identify the open water impact as non-tidal or tidal
6) Cowardin classification
7) For each Cowardin classification provide the individual impacts quantified in square feet to the nearest whole number, cumulatively summed in square feet, and then the sum converted to acres and rounded to two decimal places using commonly accepted arithmetic principles of rounding
8) If applicable, area of tree clearing (acres)
9) Verify if this site under a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument (i.e., protected areas)
10) DEQ classification of impacted resource(s) (https://law.lis.virginia.gov/admincode/title9/agency25/chapter260/section50/) Select from the following:
11) Class II-Tidal waters in Chesapeake Bay/tidal tributaries, Class III-Coastal/Piedmont Zone nontidal waters, Class IV-Mountainous Zone waters, Class V-Stockable trout waters, Class VI-Natural trout waters, Class VII-Swamp waters

9. **DREDGING, MINING, AND EXCAVATING**

Please refer to the VWP Complete Application Checklists for the informational items and/or refer to the list below. The RRS requests information on activities involving dredging in *navigable Waters of the United States (WOTUS)*. Users may expand upon the federal impact inventory provided in RRS in order to incorporate all of DEQ's information requirements and upload tables or spreadsheets into RRS. The RRS questions or informational requirements may differ for federal jurisdiction impacts.

Note: *VWP Individual Permits, and VWP WP3 and WP4 general permit dredging activities*: Verification that the dredge material is free from toxic material may be required upon request by the DEQ. Verification may include evidence or certification that the material is free from toxic contaminants prior to disposal or that the dredging activity will not cause or contribute to a violation of water quality standards during dredging (e.g., grain size and composition analyses, tests for specific parameters or chemical constituents, or elutriate tests on the dredge material).

9.a. Provide dredging or excavation volume (cu yds) and area (sq ft) measurements and include the associated impact resource type(s) (vegetated wetlands, non-vegetated wetlands, subaqueous land, stream bed).

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9.b. For all activities, provide the contributing drainage area in square miles and the average stream flow at site (flow rate under normal rainfall conditions) in cubic feet per second.

9.c. If this is a maintenance dredging project, provide the original DEQ or VMRC permit number(s) and upload a copy of the original permit.

9.d. Upload documentation (e.g., laboratory results or analytical reports) that *dredged* material from on-site areas is free of toxics. If not free of toxics, provide documentation of proper disposal, such as a bill of lading from commercial supplier or disposal site.

9.e. If on-site dewatering is proposed, please upload plan view and cross-sectional drawings of the dewatering area and associated outfall.

9.f. Will the dredged material be used for any commercial purpose or beneficial use? Yes ○ No. If yes, please explain.

9.g. For mining projects: Upload to the RRS portal a description or explanation of the operation plans, including:

1) the frequency (e.g., every six weeks), duration (i.e., April through September), and volume (in cubic yards) to be removed per operation;

2) the temporary storage and handling methods of mined material, including the dimensions of the containment berm used for upland disposal of dredged material and the need (or no need) for a liner or impermeable material to prevent the leaching of any identified contaminants into ground water;

3) how equipment will access the mine site; and

4) verification that dredging:

a) will not occur in water body segments that are currently on the effective Section 303(d) Total Maximum Daily Load (TMDL) priority list (available at: https://www.deq.virginia.gov/our-programs/water/water-quality/tmdl-development) or that have an approved TMDL;

b) will not exacerbate any impairment; and

c) will be consistent with any waste load allocation/limit/conditions imposed by an approved TMDL (see spatial files at https://geohub-vadeq.hub.arcgis.com/ to determine the extent of TMDL watersheds and impairment segments).

9.h. Have you applied for a permit from the Virginia Department of Energy? Yes No. If yes, provide the existing permit number and date of issuance.

NA

9.i. Examples of excavation include boat ramps and stormwater pond excavation. If excavation is associated with boat ramps, also complete section B.2. If excavation is associated with stormwater management ponds, also complete section B.7.

1) Depth of excavation (from ground surface) in feet NA

2) Depth of water table (below ground surface) in feet NA

3) Normal pool elevation in feet above mean sea level NA

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4) If wetlands occur adjacent to the feature being excavated:

a) Provide the wetland elevation in feet above mean sea level

b) Provide the measures were used to prevent drainage effect on wetlands

5) Are outfalls being installed or used in wetlands or streams? Yes No.

10. **WATERS DELINEATION**

10.a. Was a USACE Approved Jurisdictional Determination (AJD) or Preliminary Jurisdictional Determination (PJD) uploaded to the RRS portal? ○ Yes ○ No.

10.b. If a DEQ State Surface Waters Determination (SSWD) is available, upload a copy to the RRS portal. *If an AJD is being submitted as part of the application, it only confirms WOTUS boundaries. A SSWD will also be necessary to delineate state waters outside of federal jurisdiction (non-WOTUS).*

10.c. If an AJD with SSWD or a PJD is not available, upload to the RRS portal other correspondence indicating approval of the boundary(ies) of applicable state and federal jurisdictional surface waters from USACE, USDA-NRCS, or DEQ, including wetland delineation data sheets, if applicable.

10.d. Provide a Delineation / Impact map showing:

1) Geographic area of all delineated surface water boundaries (GIS shapefiles are acceptable);

2) Wetlands, stream, and open water impacts, as applicable, described per section A.8 above; and

3) Any other surface waters described with Cowardin classification or similar terminology.

Note: See DEQ Memorandum *Recent Supreme Court Decision Sackett v. Environmental Protection Agency (EPA) - Effect in Virginia and How to Move Forward Without Economic Dislocation*, June 29, 2023, for more information about obtaining boundary and feature verifications in VA.

11. **COMPENSATORY MITIGATION**

Refer to DEQ's Complete Application Checklists for VWP General Permit Coverage or VWP Individual Permits at https://www.deq.virginia.gov/permits/water/wetlands-streams-vwp and the complete application requirements in the following Virginia Administrative Code sections, as applicable to the type of VWP permit being applied for:
9VAC25-210
9VAC25-660
9VAC25-670
9VAC25-680
9VAC25-690

Users may expand upon the federal compensatory mitigation information or plan provided in RRS in order to incorporate all of DEQ's information requirements and upload this along with supporting documentation into RRS. The RRS questions or informational requirements may differ for compensatory mitigation of federal jurisdiction impacts.

DEQ typically requires compensatory mitigation for permanent and conversion wetland impacts greater than 1/10 of an acre and for permanent stream bed impacts greater than 300 linear feet. There are instances when mitigation is not required.

If credits are being purchased, include documentation from the approved bank or in-lieu fee program sponsor of the availability of credits at the time of application.

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12. **STATE PROGRAMMATIC GENERAL PERMITS**

Upload a narrative in response to these questions or items, numbering each response as shown in this section; or indicate that this application is not intended for 22-SPGP verification.

If applying for the USACE-Norfolk District 22-SPGP-RCIR or 22-SPGP-LT, review this section and provide any information not already provided elsewhere in the RRS portal. Also refer to the DEQ SPGP Complete Application Checklist at https://www.deq.virginia.gov/permits/water/wetlands-streams-vwp.

12.a. Pre-application information:

1) In order for the SPGP application process to be initiated, the following information must be obtained *prior to application*:
   a) A valid Preliminary Screening Form (PSF), *OR*
   b) A Preliminary Jurisdictional Determination (PJD) from the USACE, *OR*
   c) An Approved Jurisdictional Determination (AJD) from the USACE

   Note: A State Surface Waters Determination (SSWD), provided by DEQ to an applicant, may be relied upon for DEQ permitting purposes. The USACE and other state or federal agencies may or may not accept the SSWD for their permitting purposes. See DEQ Memorandum *Recent Supreme Court Decision Sackett v. Environmental Protection Agency (EPA) - Effect in Virginia and How to Move Forward Without Economic Dislocation* (June 29, 2023; Chapter 1 References), for more information about obtaining boundary and feature verifications in VA.

2) A development plan that accurately accounts for all impacts to Waters of the United States (WOTUS), including secondary impacts, and that is acceptable by the USACE for permitting (includes all types of impacts, to WOTUS such as fill, dredging, temporary, permanent, etc.)

3) An accounting of all types of impacts (e.g., fill, dredging, temporary, permanent, etc.) to WOTUS.

12.b. The complete SPGP application includes, at a minimum:

1) *The pre-application information listed above in section A.12.a.*

2) A complete and signed Standard Joint Permit Application (JPA) clearly marked with “22-SPGP-RCIR” or “22-SPGP-LT”. The applicant must utilize the most recent JPA version.

3) A compensatory mitigation plan *applicable to the SPGP verification being sought*. Verify that any bank credits proposed are not outside of the General Service Area (GSA) of the approved mitigation bank. Also, USACE approval is required if permittee-responsible mitigation (PRM) is proposed, or if mitigation proposals do not follow the hierarchy in the Federal Mitigation Rule.
   a) Mitigation will generally be required for all projects where the permanent loss exceeds 0.1 acre of wetlands and/or 0.03 acre of stream bed and/or 300 linear feet of stream bed. Stream channel loss must be reported in acreage and linear feet.
   b) For linear transportation project, mitigation will generally be required for all permanent loss of wetlands and/or 0.03 acre of stream bed or 300 linear feet of stream bed. Stream channel loss must be reported in acreage and linear feet.

13. **APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR CERTIFICATIONS**

READ THE FOLLOWING CAREFULLY BEFORE SIGNING.

Complete and sign the certifications tables below. If more space is needed, copy the signature blocks to a separate file for uploading with this application. Also sign and upload the Virginia Water Protection Permit Program Property Access Agreement - Standard in Appendix B.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information

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submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Legal Name(s) of Applicant	Legal Name(s) of Second Applicant, if applicable
Title	Title
Signature	Signature
Date	Date
Legal Name of Property Owner, if different	Legal Name of Second Property Owner, if applicable
Property Owner Signature	Second Property Owner Signature
Date	Date

"I (we), **[print APPLICANT LEGAL NAME(S)]**,

hereby certify that I (we) have authorized **[print AGENT LEGAL NAME(S)]**

to act on my (our) behalf and take all actions necessary to the processing, issuance, and acceptance of this permit and any and all standard and special conditions attached. I (we) hereby certify that the information submitted in this application is true and accurate to the best of my (our) knowledge."

Applicant's Signature	Second Applicant's Signature, if applicable
Date	Date
Agent's Title	Second Agent's Title
Agent's Signature	Second Agent's Signature
Date	Date

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"I (we), **[print APPLICANT LEGAL NAME(S)]**,

have contracted **[print CONTRACTOR NAME(S)]**

to perform the work described in this form. I (we) will read and abide by all conditions as set forth in all federal, state, and local permits as required for this project. I (we) understand that failure to follow the conditions of the permits may constitute a violation of applicable federal, state, and local statutes and that we will be liable for any civil and/or criminal penalties imposed by these statutes. In addition, I (we) agree to make available a copy of any permit to any regulatory representative visiting the project site to ensure permit compliance. If I (we) fail to provide the applicable permit upon request, I (we) understand that the representative will have the option of stopping our operation until it has been determined that we have a properly signed and executed permit and are in full compliance with all of the terms and conditions."

Contractor Name or Name of Company	Contractor Title, if applicable
Mailing Address Street, City, State, Zip	
Contractor Signature	Contractor License Number
Date	License Expiration Date
Applicant Signature	Second Applicant Signature, if applicable
Date	Date

B. ACTIVITY-SPECIFIC SECTIONS

1. **SECTION B INSTRUCTIONS**. Complete each of the numbered subsections below *IF APPLICABLE TO THE PROPOSED ACTIVITIES.* If not applicable, respond "No" to the first question in each subsection and move to the next. If a subsection applies but a specific question does not, respond NA (not applicable). Upload any required or supporting document to the RRS portal, ensuring to match the numbering as shown in Section B.

2. **BOAT RAMPS**

2.a. Does this section apply to the project? ○Yes ○No.

2.b. Will excavation be required below the plane of the ordinary high water mark/mean high water line or in wetlands to construct the boat ramp? ○Yes ○No.

2.c. If yes, where will you dispose of the excavated material?

2.d. If yes, what type of design and materials will be used to construct the ramp (open pile design with salt treated lumber, concrete slab on gravel bedding, etc.)?

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2.e. Will other structures be constructed concurrent with the boat ramp installation? Yes No. If yes, describe structures.

3. **MISCELLANEOUS FILL and STRUCTURES IN STATE SURFACE WATERS**

3.a. Does this section apply to the project? Yes No.

3.b. Explain the purpose of the filling activity and describe the type of structure(s) to be constructed over the filled area (if any) or in wetlands

3.c. Total area occupied by any structure in square feet

3.e. Provide documentation (e.g., laboratory results or analytical reports) that *fill* material from *off-site* locations is free of toxics. If not free of toxics, provide documentation of proper disposal (i.e., bill of lading from commercial supplier or disposal site). Documentation is not necessary for fill material obtained from on-site areas.

4. **NONTIDAL STREAM CHANNEL MODIFICATIONS FOR RESTORATION OR ENHANCMENT, or TEMPORARY OR PERMANENT RELOCATIONS.**

If proposed activities are being conducted for the purposes of compensatory mitigation, please upload all information required by the most recent version of the stream assessment methodology approved by the Norfolk District of the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, ***in lieu of completing these questions****. Required information outlined by the methodology can be found at: http://www.nao.usace.army.mil/Missions/Regulatory/UnifiedStreamMethodology.aspx or https://www.deq.virginia.gov/permits/water/compensatory-mitigation. For all projects proposing stream restoration provide a completed Natural Channel Design Review Checklist and Selected Morphological Characteristics form. These forms and the associated manual can be located at: https://www.epa.gov/sites/default/files/2015-07/documents/ncd_review_checklist.pdf.*

4.a. Does this section apply to the project? ○ Yes ○ No.

4.b. Has the stream restoration project been designed by a local, state, or federal agency? ○ Yes ○ No. If yes, name of the agency

4.c. Is the agency also providing funding for this project? ○ Yes ○ No.

4.d. Stream dimensions at impact site (length and average width in linear feet, and area in square feet)

4.e. Contributing drainage area in acres and square miles

4.f. Existing average stream flow at site (flow rate under normal rainfall conditions) in cubic feet per second

4.g. Proposed average stream flow at site after modifications (flow rate under normal rainfall conditions) in cubic feet per second

4.h. Provide detailed explanation of the method(s) to be used to stabilize the banks; the composition of the existing stream bed (percent cobble, rock, sand, etc.); how low-flow channels will be maintained in the modified stream channel, if applicable; and what if any structure(s) will be placed in the stream to create riffles, pools, meanders, etc.

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5. **UTILITY CROSSINGS (below ordinary high water mark)**

5.a. Does this section apply to the project? Yes No.

5.b. List all types of crossings that apply (overhead, trenched, directionally drilled, etc.)

5.c. List all methods of clearing corridor of vegetation (mechanized land clearing that disturbs the soil surface; cutting vegetation above the soil surface; etc.)

5.d. Will the proposed utility provide empty conduits for any additional utilities that may propose to co-locate at a later date? Yes ○No.

5.e. Describe the materials to be used in the installation of the utility line (including gravel bedding for trenched installations, bentonite slurries used during direction-drilling, etc.) and a sequence of events to detail how the installation will be accomplished (including methods used for in-stream and dry crossings).

5.f. Will there be an excess of excavated material? Yes ○ No. If yes, describe the method that will be undertaken to dispose of, and transport, the material to its permanent disposal location and give that location.

5.g. If the materials will be stockpiled on site, will wetlands be impacted? Yes ○ No. If yes, include these impacts with the wetland impacts table in section A.8. Stockpiled material should be placed on filter fabric or some other type of impervious surface.

5.h. If the utility line runs through wetlands or stream bed, will it be continually maintained (e.g., via mowing or herbicide)? Yes ○ No. If yes, what is the maximum width in feet?

5.g. Will permanent access roads be placed through wetlands/streams? Yes ○ No. If yes, will the roads be at grade or above grade?

6. **ROAD CROSSINGS**

6.a. Does this section apply to the project? ⊙Yes ○ No.

6.b. Have you conducted hydraulic studies to verify the adequacy of the culverts?○ Yes ○ No. If yes, upload a copy of the hydraulic study/report to the RRS portal. Note: *Virginia Department of Transportation (VDOT) standards require that the backwater for a 100 year storm not exceed 1 foot for all road, culvert, and bridge projects within FEMA-designated floodplains. DEQ requires pipes and culverts 24 inches or less in diameter to be countersunk three inches below the natural stream bed elevations, and pipes and culverts greater than 24 inches to be countersunk at least six inches below the natural stream bed elevations. Hydraulic capacity is determined based on the reduced capacity due to the countersunk position. For all bridges proposed over navigable waterways (including all tidal water bodies), you will be required to contact the U.S. Coast Guard to determine if a permit is required from their agency.*

6.c. Will the culverts be countersunk below the stream bottom? ○Yes ○ No. If no, explain

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6.d. Describe the materials to be used, the method of construction (including the use of cofferdams), the sequence of construction events, and if bedrock conditions may be encountered. Upload to the RRS the cross-sections and profile plans of the culvert crossings including wing walls or rip rap.

7. **IMPOUNDMENTS, DAMS, AND STORMWATER MANAGEMENT FACILITIES.**

If the impoundment or dam is a component of a water withdrawal project, also complete section C. If the structure involves dredging or excavation, also complete applicable questions in section A.9 for this excavation.

7.a. Does this section apply to the project? Yes No.

7.b. What type(s) of impoundment is/are involved – proposed, existing, or both?

7.c. Will the impoundment, dam, or stormwater management facility be used for agricultural purposes (e.g., in the operation of a farm)? *For DEQ permitting purposes, a farm is considered to be a property or operation that produces goods for market.* ○ Yes ○ No.

7.d. Is the project excluded from the Virginia Dam Safety Regulations? *If uncertain, contact the Virginia Department of Conservation and Recreation's Dam Safety Program at (804) 371-6095 or dam@dcr.virginia.gov.*
◉ Yes ○ No ○ Uncertain.

7.e. Provide the dimensions of impoundment, dam, or stormwater management facility, including the height and width of all structures.

7.f. For impoundments in stream beds, what is the area of the impoundment structure to be located in or on the stream bed in square feet and the *area and length* of streambed that will be excavated and/or back-flooded in square feet and linear feet?

7.g. What is the area of vegetated wetlands that will be excavated and/or back-flooded by the impoundment in square feet?

7.h. What type of materials will be used in the construction (earth, concrete, rock, etc.) and what is the source of the materials being used?

7.i. *For stormwater management and flood control facilities,*

1) What is the drainage area upstream of the impoundment in square miles?

2) What is the design storm event in "year storm" and the proposed peak outflow for the design storm in cubic feet per second?

3) What is the retention time in hours?

4) Has the facility been designed in accordance with applicable requirements in the Erosion and Stormwater Management regulation 9VAC25-875? ○ Yes ○ No ○ Uncertain.

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7.j. *For all facilities:*

1) What is the storage capacity of impoundment in acre-feet? *Capacity should be given for the normal pool of recreational or farm ponds, or design pool for stormwater management ponds or reservoirs (the elevation the pond will be at for the design storm, e.g., 10-year, 24-hour storm)*.

2) What is the surface area of the impoundment in acres? *Surface area should be given for the normal pool of recreational or farm ponds, or design pool for stormwater management ponds or reservoirs (the elevation the pond will be at for the design storm, e.g., 10-year, 24-hour storm)*.

3) Current average flow (flow rate under normal rainfall conditions) in cubic feet per second and method used to derive average flow

4) Will the impoundment structure be designed to pass a minimum flow at all times? ○ Yes No. If yes, please give the minimum rate of flow in cubic feet per second.

5) Are fish ladders being proposed to accommodate the passage of fish? Yes ○ No.

8. **PRIVATE PIERS; MARGINAL WHARVES; UNCOVERED OR COVERED BOAT LIFTS; BOATHOUSES; GAZEBOS; OTHER ROOFED STRUCTURES OVER WATERWAYS; FREE-STANDING MOORING PILES; MOORING BUOYS; OSPREY NESTING POLES; DOLPHINS.**

8.a. Does this section apply to the project? Yes No.

8.b. Is there an existing pier on the property? ○ Yes ○ No. If yes, will it be removed? ○ Yes ○ No.

8.c. In locating the structure(s), is the property or lot platted to the mean low water shoreline? ○ Yes ○ No.

8.d. If applicable, will the sides of the structure be enclosed? ○ Yes ○ No.

8.e. What is the area covered by the roof structure in square feet

8.f. If applicable, how many moorings are proposed?

8.g. Describe how access to the mooring(s) will occur.

8.h. Total number of vessels to be moored and location (pier, wharf, or other proposed structure).

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8.i. Complete the table with the type (e.g., sail, power, skiff, etc.), size, and registration number of the vessel(s) to be moored. If not the same as the applicant, include the name and complete mailing address(es) of the vessel owner(s).

Type	Length	Width	Draft	Registration #	Owner Name	Owner Address

9. **MARINAS AND COMMERCIAL, GOVERNMENTAL, AND COMMUNITY PIERS**

9.a. Does this section apply to the project? Yes No.

9.b. Will the facility be equipped to off-load sewage from boats? ○Yes ○No. Have you obtained the Virginia Department of Health's approval for sanitary facilities? ○Yes ○No.

9.c. If petroleum products or other hazardous materials will be stored or handled at the facility, upload a spill contingency plan.

9.d. How many wet slips and dry storage slips are present, and/or how many of each are proposed?

10. **OUTFALLS NOT ASSOCIATED WITH SURFACE WATER WITHDRAWALS**

Complete the "Outfalls" column in the table provided for Section C.2.

C. SURFACE WATER WITHDRAWALS / DIVERSIONS

1. **SECTION C INSTRUCTIONS.** ***The following sections are typically related to surface water withdrawal and/or diversion activities; Federal Energy Regulatory Commission license projects; or impacts likely to require instream flow limits.*** Examples of such projects include, but are not limited to, reservoirs, irrigation projects, power generation facilities, and public water supply facilities that may or may not have associated features, such as dams, intake pipes, outfall structures, berms, etc. ***If completing these sections, enter NA (not applicable) in any section that does not apply to the project.*** Refer to the VWP Permit Program regulation 9VAC25-210 and the Virginia

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Water Protection Individual Permit Checklist on DEQ's website: https://www.deq.virginia.gov/permits/water/water-withdrawal/surface-water.

If there is not enough space here to respond, upload a narrative in response to these questions or items, numbering each response as shown in this section.

2. **INTAKES, OUTFALLS, AND WATER CONTROL STRUCTURES (including all proposed water withdrawal activities)**

Intakes		Outfalls	
Identifier of withdrawal point		Identifier of outfall point	
Latitude / Longitude at withdrawal point (Deg/Min/Sec)		Latitude / Longitude at outfall point (Deg/Min/Sec)	
Type of pipe		Type of pipe	
Size of pipe (inside and outside diameter)		Size of pipe (inside and outside diameter)	
Type of pump		Hydraulic capacity of pipe	
Size of pump		Daily rate of discharge (mgd)	
Average daily rate of withdrawal (mgd)		Maximum temperature (degrees Fahrenheit)	
Maximum daily rate of withdrawal (mgd)		Contributing drainage area at outfall point (sq mi)	
Velocity of withdrawal (fps)		Average daily stream flow under normal rainfall conditions at outfall point (cfs)	
Screen mesh size (inches and mm) – if other units, specify		Method used to derive average daily streamflow	
Contributing drainage area at withdrawal point (sq mi)			
Average daily stream flow under normal rainfall conditions at withdrawal point (cfs)			
Method used to derive average daily streamflow			
Average annual stream flow at withdrawal point			

3. **INTAKES AND DAMS**

3.a. For intakes and dams, use the table below to provide the median monthly stream flows in cubic feet per second (cfs) at the water intake or dam site (not at the stream gage; if there is not a gage at the intake or dam site, you will need to interpolate flows to the intake or dam site based upon the most closely related watershed in which there is an operational stream gage monitored by the United States Geologic Survey (USGS)). *Median flow, sometimes referred*

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to as the '50% exceedence flow', is the value at which half of the measurements are above and half of the measurements are below. The median flow generally must be calculated from USGS historical data. Please do not provide mean (average) flow. **Required for gages at intake and outfall sites.*
Example USGS stream flow gage number and name: USGS 01671100 Little River near Doswell, VA
Example calculations used: drainage area correction factors were used
Example period of record: 40 (should span a minimum of 30 years)

Month	Median Flow (CFS)	Gage Number(s) and Name(s)*	Type of Calculation*	Period of Record (YRS)*
JANUARY				
FEBRUARY				
MARCH				
APRIL				
MAY				
JUNE				
JULY				
AUGUST				
SEPTEMBER				
OCTOBER				
NOVEMBER				
DECEMBER				

3.b. Provide any available historical low flows at the intake or dam site.

3.c. Describe how the proposed withdrawal at the intake or dam site will impact stream flows in terms of rates, volumes, frequency, etc. (e.g., percent of the flow to be withdrawn, percent of withdrawal returned to the original source, etc.).

3.d. Describe how the withdrawal of water will vary over time. For example, will the withdrawal vary by the time of year, by the time of day, or by the time of week? Examples of projects that should describe variable withdrawals include but are not limited to: power plant cooling withdrawals that increase and decrease seasonally; golf course irrigation; municipal water supply; nurseries; ski resorts that use water for snowmaking; and resorts with weekend or seasonal variations.

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3.e. Provide the amount of water that will be lost due to consumptive use. For the purpose of this application, consumptive use means the withdrawal of surface waters without recycling of said waters to their source or basin of origin. Examples of consumptive uses are water that is evaporated in cooling towers or by other means in power plants; irrigation water (all types); residential water use that takes place outside of the home; and residential water use both inside and outside of homes for residences served by septic systems. Projects that propose a transfer of water from one river basin to another and/or localities that sell water to other jurisdictions, should document the portion of the withdrawal that is not returned to the originating watershed.

3.f. Proposed monthly consumptive volume and volume of return flow in million gallons.

3.g. For withdrawals proposed on an impoundment, provide a description of flow or release control structures. Include type of structure, rate of flow, size, capacity, invert elevation of outfall pipes referenced to the normal pool elevation, and the mechanism used to control release. Provide a description of available water storage facilities. Include the volume, depth, normal pool elevation, unusable storage volume and dimensions. If applicable, stage-storage relationship at the impounding structure (the volume of water in the impoundment at varying stages of water depth) and volume or rate of withdrawals from the storage facility.

3.h. Upload a map showing the *location* of each withdrawal and return of flow point.

3.i. Provide the following information at the water intake or dam site. Specify the units of measurement (e.g., million gallons per day, gallons per minute, cubic feet per second, etc.).

End of 15-year *Permit* Term	**End of 30-year *Planning* Term**
Proposed maximum instantaneous withdrawal:	Proposed maximum instantaneous withdrawal:
Proposed average daily withdrawal	Proposed average daily withdrawal
Proposed maximum daily withdrawal	Proposed maximum daily withdrawal
Proposed maximum monthly withdrawal	Proposed maximum monthly withdrawal
Proposed maximum annual withdrawal	Proposed maximum annual withdrawal

3.j. Describe how the above withdrawals were calculated, including the relevant assumptions made in that calculation and the documentation or resources used to support the calculations, such as population projections, population growth rates, per-capita use, new uses, changes to service areas, and if applicable, evapotranspiration data and irrigation data. Provide the calculations showing how the demand volumes were derived.

4. INTERBASIN TRANSFERS

4.a. For interbasin transfer of water resources proposed from either the *Chowan River, New River, Potomac River, Roanoke River, Big Sandy River, or Tennessee River* basins to another river basin, provide the destination location (discharge point) of the transfer; the 8-digit USGS Hydrologic Unit Code (HUC) (https://www.dcr.virginia.gov/soil-and-water/hu); if known, the 10-digit and 12-digit USGS HUCs; and the latitude and longitude in Deg/Min/Sec.

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4.b. Provide the amount of water that will be lost due to consumptive use. For the purpose of this application, consumptive use means the withdrawal of surface waters without recycling of said waters to their source or basin of origin. Examples of consumptive uses are water that is evaporated in cooling towers or by other means in power plants; irrigation water (all types); residential water use that takes place outside of the home; and residential water use both inside and outside of homes for residences served by septic systems. Projects that propose a transfer of water from one river basin to another and/or localities that sell water to other jurisdictions, should document the portion of the withdrawal that is not returned to the originating watershed.

4.c. Proposed monthly consumptive volume and volume of return flow in million gallons.

4.d. Upload a map showing the *location* of each withdrawal and return of flow point.

5. **WATER WITHDRAWAL USES, NEED, AND ALTERNATIVES**

5.a. Describe the proposed use(s) and need for the surface water and information on how demand for surface water was determined. *Golf courses* must provide documentation to justify the amount of water withdrawal, such as the amount of acreage under irrigation, the acreage of fairways versus greens, type of turf grass, evapotranspiration, and irrigation efficiency. Agricultural users must supply documentation justifying their requested withdrawal amount, such as type of crop, livestock, or other agriculture animal, number of animals, watering needs, acres irrigated, inches of water applied, and frequency of application. Other users of withdrawals for purposes other than those described above must provide sufficient documentation to justify the requested withdrawal amounts. Demand justification should include all of the requirements contained in 9VAC25-210-340.B.

5.b. For surface water withdrawals, public water supply withdrawals, and projects that will alter instream flows, provide information to establish the local water supply need. If there is not enough space to respond here, upload a separate file containing the table and information shown below.

EXISTING		**PROJECTED**	
Existing supply sources, yields, and demands		Projected demands over a minimum 30-year planning period	
Peak day withdrawal		Projected demands in local or regional water supply plan (9VAC25-780 et seq.) or demand for the project service area, if that is smaller in area	
Average daily withdrawal		Statistical population (growth) trends	
Safe yield (reservoir)		Projected demands by type of water use	
Lowest daily flow of record		Projected demands without water conservation measures	
Types of water uses (residential, public water supply, commercial, industrial, agricultural)		Projected demands with long-term water conservation measures	

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Existing water conservation measures and drought response plan, including what conditions trigger implementation			

5.c. For surface water withdrawals other than public water supply, upload to the RRS portal information or documentation that demonstrates alternate sources of water are available for the proposed project during times of reduced instream flow, including all of the requirements contained in 9VAC25-210-360.4.

5.d. Upload to the RRS portal information *from the State Water Resources Plan and the local or regional water supply plan(s)* that cover(s) the area in which the proposed water withdrawal project is located, including information that pertains to projected demand, analysis of alternatives, and water conservation measures. Discuss any discrepancies between the water supply plan and the proposed project. For projects that propose a transfer of water resources from the Chowan River, New River, Potomac River, Roanoke River, Big Sandy River, or Tennessee River basins to another river basin, include information for both the source and receiving basins.
https://www.deq.virginia.gov/our-programs/water/water-quantity/water-supply-planning/virginia-water-resources-plan
https://www.deq.virginia.gov/our-programs/water/water-quantity/water-supply-planning

5.e. Upload to the RRS portal an alternatives analysis for the proposed water withdrawal project, including the required range of alternatives to be analyzed; a narrative outlining the opportunities and status of regional efforts undertaken; and the criteria used to evaluate each alternative. The analysis must address all of the criteria contained in 9VAC25-210-360.

5.f. Upload to the RRS portal a description of any existing, flow-dependent beneficial uses along the affected stream reach, including both instream and offstream uses; the stream flow necessary to protect existing beneficial uses; how the proposed withdrawal will impact existing beneficial uses; and any measures proposed to mitigate any adverse impacts that may arise. For projects that propose a transfer of water resources from the Chowan River, New River, Potomac River, Roanoke River, Big Sandy River, or Tennessee River basins to another river basin, include both the source and receiving basins. For the purposes of this application, beneficial instream uses include, but are not limited to, the protection of fish and wildlife habitat; maintenance of waste assimilation; recreation; navigation; and cultural and aesthetic values. Offstream beneficial uses include, but are not limited to, domestic uses (including public water supply); agricultural uses; electric power generation; commercial uses; and industrial uses.

5.g. Describe the aquatic life known to be present along the affected stream reach and the aquatic life that may be impacted by the proposed water withdrawal. Include the species' habitat requirements. For projects that propose a transfer of water resources from either the Chowan River, New River, Potomac River, Roanoke River, Big Sandy River, or Tennessee River basins to another river basin, include both the source and receiving basins. If applicable, upload to the RRS portal any species survey results or reports to date.

6. PUBLIC COMMENTS/ISSUES FOR MAJOR WATER WITHDRAWALS OR INTERBASIN TRANSFERS

6.a. For new or expanded surface water supply projects, upload to RRS a summary of the steps taken to seek public input per 9VAC25-210-320 and a list of the issues raised during the public information process.

6.b. *For transfer of water resources proposed from either the Chowan River, New River, Potomac River, Roanoke River, Big Sandy River, or Tennessee River basins to another river basin*: If public input was not required per 9VAC25-210-320, upload a summary of any coordination and/or notice provided to the public, local/state government, and interested parties in the affected river basins and identify any issues raised.

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APPENDIX A

Chesapeake Bay Preservation Act Information

Please answer the following questions to determine if your project is subject to the requirements of the Bay Act Regulations:

1. Is your project located within Tidewater Virginia? Yes No. (https://www.deq.virginia.gov/our-programs/coastal-zone-management/about-czm/czm-boundaries)

   If "no", the Bay Act requirements do not apply. If "yes", then please continue to question #2, and note the Virginia Water Protection (VWP) complete permit application requirements regarding Chesapeake Bay Preservation Areas.

2. Please indicate if the project proposes to impact any of the following Resource Protection Area (RPA) features:

   - ☐ Tidal wetlands;
   - ☑ Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;
   - ☐ Tidal shores;
   - ☐ Other lands considered by the local government to meet the provisions of subsection A of 9VAC25-830-80 and to be necessary to protect the quality of state waters (contact the local government for specific information);
   - ☑ A buffer area not less than 100 feet in width located adjacent to and landward of the components listed above, and along both sides of any water body with perennial flow.

If the answer to question #1 was "yes" and any of the features listed under question #2 will be impacted, compliance with the Chesapeake Bay Preservation Area Designation and Management Regulations is required. **The Chesapeake Bay Preservation Area Designation and Management Regulations** are enforced through locally adopted ordinances based on the Chesapeake Bay Preservation Act (CBPA) program. Compliance with state and local CBPA requirements mandates the submission of a ***Water Quality Impact Assessment (WQIA)*** for the review and approval of the local government. Contact the appropriate local government office to determine if a WQIA is required for the proposed activity(ies).

The individual localities are responsible for enforcing the CBPA requirements, *not DEQ*. Therefore, local permits for land disturbance are not issued through this JPA process. If a VWP permit or coverage is issued, it ***does not constitute compliance with the CBPA regulations nor does it guarantee that the local government will grant approval for encroachments into the RPA that may result from this project.***

Notes for all projects in RPAs

Development, redevelopment, construction, land disturbance, or placement of fill within the RPA features listed above requires the approval of the locality and may require an exception or variance from the local Bay Act ordinance. Please contact the appropriate local government to determine the types of development or land uses that are permitted within RPAs.

Pursuant to 9VAC25-830-110, *on-site delineation of the RPA is required for all projects in CBPAs*. Because USGS maps are not always indicative of actual "in-field" conditions, they may not be used to determine the site-specific boundaries of the RPA.

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Notes for shoreline erosion control projects in RPAs

Re-establishment of woody vegetation in the buffer will be required by the locality to mitigate for the removal or disturbance of buffer vegetation associated with your proposed project. Please contact the local government to determine the mitigation requirements for impacts to the 100-foot RPA buffer. Pursuant to 9VAC25-830-140.5.a(4) of the Virginia Administrative Code, shoreline erosion projects are a permitted modification to RPAs provided that the project is based on the “best technical advice” and complies with applicable permit conditions and meets the applicable criteria in 9VAC25-830-140.

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APPENDIX B

Virginia Water Protection Permit Program Property-Access Agreement – Standard

[*insert* PROPERTY OWNER NAME(S) – must include ALL] ("Owner")

who own[s] the property located at
[*insert* ADDRESS and/or DEED BOOK INFORMATION and/or TAX PARCEL #] ("Property"),

and **[*insert* APPLICANT OR PERMITTEE NAME(S)]** ("Applicant or Permittee)",

hereby authorizes the Department of Environmental Quality, its employees, agents, and contractors ("Authorized Parties") the right of entry to the Property to conduct inspections necessary to evaluate the application for and ensure compliance with **[*insert* PERMIT NUMBER]** ("VWP Permit").

For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency. Inspections may include but are not limited to the following activities:

1. Enter upon the property, and have access to, inspect and copy any records that required as part of the VWP permit;
2. Inspect any facilities, operations, or practices (including monitoring and control equipment) regulated or required under the VWP permit; and
3. Sample or monitor any substance, parameter, or activity for the purpose of ensuring compliance with the VWP permit or as otherwise required by law.

The Owner and the Applicant or Permittee understands that access to the Property is a requirement pursuant to 9VAC25-210-90 and the VWP Permit. The DEQ may enforce the provisions of this agreement utilizing all applicable procedures and authorities under Va. Code §§ 62.1-44.15 and 10.1-1186. *Complete the table(s) below:*

[*Include Title for owners who are not individual persons. If more than four signature blocks are applicable, copy the signature blocks to a separate document for upload that shows each individual owner listed on the property record.*]

Property Owner Name (print)	Applicant or Permittee Name (print)
Property Owner Signature	Applicant or Permittee Signature
Title	Title
Date	Date

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Property Owner Name (print)	Applicant or Permittee Name (print)
Property Owner Signature	Applicant or Permittee Signature
Title	Title
Date	Date

Property Owner Name (print)	Applicant or Permittee Name (print)
Property Owner Signature	Applicant or Permittee Signature
Title	Title
Date	Date

Property Owner Name (print)	Applicant or Permittee Name (print)
Property Owner Signature	Applicant or Permittee Signature
Title	Title
Date	Date

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PHOTOGRAPHS **Sampling Point:** FDS-42D1-1



Photograph 1:

FDS-42D1-1; Hydrophytic Vegetation (08/27/2024, L. Freeman)



Photograph 2:

FDS-42D1-1; Hydric Soils (08/27/2024, L. Freeman)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42D1-2
Investigator(s): L. Freeman, K. Ratcliffe Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Depression Slope (%): 3-5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.492702 Long: -77.69555 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Point taken with an area that has been thinned within the last 5-7 years; in between berm and hillslope. No disturbance was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

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

Sampling Point: FDS-42D1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	35	Yes	FACU
2. *Liriodendron tulipifera*	20	Yes	FACU
3. *Quercus rubra*	20	Yes	FACU
4. *Acer rubrum*	15	No	FAC
5. *Liquidambar styraciflua*	15	No	FAC
6.			
7.			
	105	=Total Cover	
50% of total cover: 53		20% of total cover:	21
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Carpinus caroliniana*	35	Yes	FAC
2. *Viburnum dentatum*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	55	=Total Cover	
50% of total cover: 28		20% of total cover:	11
Herb Stratum (Plot size: 5 ft.)			
1. *Lonicera japonica*	20	Yes	FACU
2. *Quercus rubra*	15	Yes	FACU
3. *Carya tomentosa*	5	No	UPL
4. *Pinus taeda*	5	No	FAC
5. *Viburnum dentatum*	5	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	50	=Total Cover	
50% of total cover: 25		20% of total cover:	10
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	110	x 4 =	440
UPL species	5	x 5 =	25
Column Totals:	210 (A)		750 (B)
Prevalence Index = B/A =			3.57

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

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SOIL

Sampling Point: FDS-42D1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/4	60	2.5Y 4/3	20	D	M	Loamy/Clayey	SCL
			10YR 4/6	20	C	M		
12-18	2.5Y 7/4	77	2.5Y 6/4	20	C	M	Loamy/Clayey	SL
			7.5YR 5/6	3	C	M		
18-24	2.5Y 6/4	95	10YR 6/6	5	C	M	Loamy/Clayey	SL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-42D1-2



Photograph 1: FDS-42D1-2; Representative Vegetation (08/27/2024, L. Freeman)



Photograph 2: FDS-42D1-2; Representative Soils (08/27/2024, L. Freeman)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42F3-1
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Drainage swale Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.497005 Long: -77.696082 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken within area that had been cleared within the last 5-6 years; less than 3" DBH species observed; no other disturbance present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42F3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	40	Yes	FAC
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Liriodendron tulipifera*	15	No	FACU
4. *Acer rubrum*	12	No	FAC
5. *Lindera benzoin*	12	No	FAC
6. *Vaccinium fuscatum*	10	No	FAC
7.			
8.			
9.			
	109	=Total Cover	
50% of total cover: 55		20% of total cover:	22
Herb Stratum (Plot size: 5 ft.)			
1. *Vaccinium fuscatum*	20	Yes	FAC
2. *Lindera benzoin*	15	Yes	FAC
3. *Rubus pensilvanicus*	10	No	FAC
4. *Campsis radicans*	8	No	FAC
5. *Smilax rotundifolia*	5	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	58	=Total Cover	
50% of total cover: 29		20% of total cover:	12
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Campsis radicans*	20	Yes	FAC
2. *Smilax rotundifolia*	20	Yes	FAC
3.			
4.			
5.			
	40	=Total Cover	
50% of total cover: 20		20% of total cover:	8

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	212	x 3 =	636
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	227 (A)		696 (B)
Prevalence Index = B/A =			3.07

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42F3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	SiCL
4-8	10YR 3/2	95	2.5Y 5/4	5	C	M	Loamy/Clayey	SCL
8-16	2.5Y 5/1	85	10YR 5/6	15	C	M	Loamy/Clayey	SCL
16-24	2.5Y 6/1	75	10YR 6/6	25	C	M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-56F3-1



Photograph 1:

FDS-56F3-1; Hydrophytic Vegetation (09/03/2024, K. Winklepleck)



Photograph 2:

FDS-56F3-1; Hydric Soils (09/03/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42F3-2
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of drainage swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.497299 Long: -77.696101 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken withn area that had been cleared within the last 5-6 years; woody species present did not exceed a DBH of at least 3"; dominating shrub and herbaceous strata present; no signifricant disturbance was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42F3-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	40	Yes	FAC
2. *Liriodendron tulipifera*	25	Yes	FACU
3. *Liquidambar styraciflua*	20	Yes	FAC
4. *Quercus alba*	20	Yes	FACU
5. *Quercus phellos*	10	No	FACW
6. *Carya glabra*	8	No	FACU
7. *Vaccinium fuscatum*	8	No	FAC
8.			
9.			
	131	=Total Cover	
50% of total cover: 66		20% of total cover:	27
Herb Stratum (Plot size: 5 ft.)			
1. *Vaccinium fuscatum*	20	Yes	FAC
2. *Smilax rotundifolia*	15	Yes	FAC
3. *Rubus pensilvanicus*	12	Yes	FAC
4. *Campsis radicans*	10	No	FAC
5. *Quercus alba*	10	No	FACU
6. *Carya glabra*	8	No	FACU
7. *Athyrium asplenioides*	5	No	FAC
8.			
9.			
10.			
11.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 77.8% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42F3-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 5/4	100					Loamy/Clayey	SL
12-24	2.5Y 6/4	90	10YR 6/6	10	C	M	Loamy/Clayey	SL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-56F3-2



Photograph 1: FDS-56F3-2; Representative Vegetation (09/03/2024, K. Winklepleck



Photograph 2: FDS-56F3-2; Representative Soils (09/03/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42G3-1
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Drainage swale Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495806 Long: -77.697 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken within area that had been previously thinned within the last 5-6 years, dominating shrub and herbaceous layer present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42G3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	40	Yes	FAC
2. *Quercus alba*	20	Yes	FACU
3. *Carya glabra*	15	No	FACU
4. *Liquidambar styraciflua*	15	No	FAC
5.			
6.			
7.			
	90	=Total Cover	
50% of total cover: 45		20% of total cover:	18
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Acer rubrum*	20	Yes	FAC
2. *Viburnum dentatum*	20	Yes	FAC
3. *Quercus phellos*	20	Yes	FACW
4. *Quercus alba*	18	No	FACU
5. *Liquidambar styraciflua*	18	No	FAC
6. *Carya glabra*	10	No	FACU
7. *Nyssa sylvatica*	10	No	FAC
8.			
9.			
	116	=Total Cover	
50% of total cover: 58		20% of total cover:	24
Herb Stratum (Plot size: 5 ft.)			
1. *Cinna arundinacea*	30	Yes	FACW
2. *Chasmanthium laxum*	20	Yes	FACW
3. *Viburnum dentatum*	15	Yes	FAC
4. *Rubus pensilvanicus*	10	No	FAC
5. *Smilax rotundifolia*	10	No	FAC
6. *Quercus alba*	8	No	FACU
7. *Toxicodendron radicans*	8	No	FAC
8. *Juncus effusus*	5	No	FACW
9.			
10.			
11.			
	106	=Total Cover	
50% of total cover: 53		20% of total cover:	22
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	75	x 2 =	150
FAC species	186	x 3 =	558
FACU species	71	x 4 =	284
UPL species	0	x 5 =	0
Column Totals:	332 (A)		992 (B)
Prevalence Index = B/A =			2.99

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42G3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/1	92	10YR 5/6	8	C	PL	Loamy/Clayey	SiCL
6-20	2.5Y 5/2	82	10YR 6/6	10	C	M	Loamy/Clayey	SCL
			7.5YR 4/6	8	C	PL		
20-24	2.5Y 6/2	82	7.5YR 5/6	18	C	PL/M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10) **(LRR N)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
___ Thin Dark Surface (S9) **(MLRA 147, 148)**
___ Loamy Mucky Mineral (F1) **(MLRA 136)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
___ Umbric Surface (F13) **(MLRA 122, 136)**
___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(MLRA 147)**
___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-42G3-1



Photograph 1:

FDS-42G3-1; Hydrophytic Vegetation (09/03/2024, K. Winklepleck)



Photograph 2:

FDS-42G3-1; Hydric Soils (09/03/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42G3-2
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Convex Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496031 Long: -77.696876 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken below area that had been previously thinned within the last 5-6 years. No disturbance present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42G3-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	40	Yes	FACU
2. *Carya glabra*	30	Yes	FACU
3. *Liquidambar styraciflua*	20	Yes	FAC
4.			
5.			
6.			
7.			
	90	=Total Cover	
50% of total cover: 45		20% of total cover:	18
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Carya glabra*	20	Yes	FACU
3. *Quercus alba*	20	Yes	FACU
4. *Quercus rubra*	15	No	FACU
5. *Cornus florida*	10	No	FACU
6. *Juniperus virginiana*	10	No	FACU
7.			
8.			
9.			
	105	=Total Cover	
50% of total cover: 53		20% of total cover:	21
Herb Stratum (Plot size: 5 ft.)			
1. *Vaccinium stamineum*	30	Yes	FACU
2. *Quercus alba*	15	Yes	FACU
3. *Carya glabra*	12	No	FACU
4. *Chasmanthium laxum*	10	No	FAC
5. *Rubus pensilvanicus*	10	No	FAC
6. *Smilax rotundifolia*	8	No	FAC
7.			
8.			
9.			
10.			
11.			
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	98	x 3 =	294
FACU species	202	x 4 =	808
UPL species	0	x 5 =	0
Column Totals:	300 (A)		1102 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42G3-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 4/2	100					Loamy/Clayey	SiL
3-14	2.5Y 5/4	80	10YR 4/3	20	D	M	Loamy/Clayey	SL
14-24	2.5Y 5/4	100					Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-42G3-2



Photograph 1: FDS-42G3-2; Representative Vegetation (09/03/2024, K. Winklepleck)



Photograph 2: FDS-42G3-2; Representative Soils (09/03/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/18/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42H6-1
Investigator(s): L. Freeman. M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.487819 Long: -77.691681 Datum: NAD83
Soil Map Unit Name: Pinkston gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 14. The Palmer Drought Severity Index indicates the area was under "Incipient Drought" conditions. Data point was taken within drainage feature at base of swale. No disturbance present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42H6-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	90	Yes	FAC
2. *Liquidambar styraciflua*	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	120	=Total Cover	
50% of total cover: 60		20% of total cover:	24
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus alba*	15	Yes	FACU
2. *Cornus amomum*	10	Yes	FACU
3. *Liquidambar styraciflua*	7	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	32	=Total Cover	
50% of total cover: 16		20% of total cover:	7
Herb Stratum (Plot size: 5 ft.)			
1. *Microstegium vimineum*	70	Yes	FAC
2. *Cinna arundinacea*	20	Yes	FACW
3. *Smilax rotundifolia*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	=Total Cover	
50% of total cover: 48		20% of total cover:	19
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	202	x 3 =	606
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	247 (A)		746 (B)
Prevalence Index = B/A =			3.02

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42H6-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2						Loamy/Clayey	Sandy clay loam
6-14	10YR 5/2	85	10YR 4/1	10	D	M	Loamy/Clayey	Coarse sandy loam
			10YR 5/6	5	C	PL		
14-24	2.5Y 5/2	85	7.5YR 4/6	15	C	PL	Loamy/Clayey	Coarse sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-42H6-1



Photograph 1: FDS-42H6-1; Representative Vegetation (09/18/2024, L. Freeman)



Photograph 2: FDS-42H6-1; Representative Soils (09/18/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/18/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42H6-2
Investigator(s): L. Freeman, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.487573 Long: -77.692031 Datum: NAD83
Soil Map Unit Name: Pinkston gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 14. The Palmer Drought Severity Index indicates the area was under "Incipient Drought" conditions. Data was taken between swale and floodplain, below wet drainage. Area had notable hydrology indicators but was transitioning into more FACU vegetation and hydric soils were not present within 24" beneath the surface. No disturbance was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42H6-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya glabra*	40	Yes	FACU
2. *Quercus alba*	30	Yes	FACU
3. *Juniperus virginiana*	15	No	FACU
4.			
5.			
6.			
7.			
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus alba*	40	Yes	FACU
2. *Acer rubrum*	15	Yes	FAC
3. *Ilex opaca*	15	Yes	FACU
4. *Carya glabra*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Herb Stratum (Plot size: 5 ft.)			
1. *Microstegium vimineum*	15	Yes	FAC
2. *Cinna arundinacea*	10	Yes	FACW
3. *Vitis rotundifolia*	5	No	FAC
4. *Smilax rotundifolia*	3	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	33	=Total Cover	
50% of total cover: 17		20% of total cover:	7
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	38	x 3 =	114
FACU species	150	x 4 =	600
UPL species	0	x 5 =	0
Column Totals:	198 (A)		734 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42H6-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					Loamy/Clayey	Fine sandy loam
8-18	10YR 4/4	80	2.5Y 5/3	20	D	M	Loamy/Clayey	Sandy clay loam
18-24	10YR 4/4	90	10YR 6/4	10	D	M	Loamy/Clayey	Coarse sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-42H6-2



Photograph 1: FDS-42H6-2; Representative Vegetation (09/18/2024, L. Freeman)



Photograph 2: FDS-42H6-2; Representative Soils (09/18/2024, L. Freeman)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42L2-1
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Drainage swale Local relief (concave, convex, none): Concave Slope (%): 1-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496283 Long: -77.692857 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken within area that had been previously cleared within the last 5-6 years. Dominating shrub layer present with an overlapping tree stratum.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 16

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42L2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	30	Yes	FACW
2. *Liquidambar styraciflua*	30	Yes	FAC
3. *Acer rubrum*	20	Yes	FAC
4.			
5.			
6.			
7.			
	80	=Total Cover	
50% of total cover: 40	20% of total cover: 16		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Acer rubrum*	30	Yes	FAC
2. *Liquidambar styraciflua*	30	Yes	FAC
3. *Ilex opaca*	20	No	FACU
4. *Liriodendron tulipifera*	15	No	FACU
5. *Pinus taeda*	10	No	FAC
6.			
7.			
8.			
9.			
	105	=Total Cover	
50% of total cover: 53	20% of total cover: 21		
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	40	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3. *Woodwardia areolata*	15	Yes	FACW
4. *Athyrium asplenioides*	12	No	FAC
5. *Osmundastrum cinnamomeum*	10	No	FACW
6. *Liquidambar styraciflua*	8	No	FAC
7. *Vitis rotundifolia*	8	No	FAC
8. *Acer rubrum*	4	No	FAC
9. *Quercus alba*	4	No	FACU
10.			
11.			
	116	=Total Cover	
50% of total cover: 58	20% of total cover: 24		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	192	x 3 =	576
FACU species	54	x 4 =	216
UPL species	0	x 5 =	0
Column Totals:	301 (A)		902 (B)
Prevalence Index = B/A =			3.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42L2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 4/2	95	10YR 6/6	5	C	M	Loamy/Clayey	SCL
8-12	2.5Y 5/2	65	2.5Y 4/2	20	D	M	Loamy/Clayey	SCL
			10YR 5/6	15	C	PL		
12-24	2.5Y 6/1	88	10YR 6/6	12	C	M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-42L2-1



Photograph 1:

FDS-42L2-1; Representative Vegetation (08/29/2024, L. Freeman)



Photograph 2:

FDS-42L2-1; Representative Soils (08/29/2024, L. Freeman)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42L2-2
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of swale Local relief (concave, convex, none): Convex Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496401 Long: -77.692612 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken within area that had been previously thinned within the last 5-6 years. Dominating shrub layer with an overhanging tree stratum was observed. No disturbance was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42L2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	40	Yes	FACU
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Acer rubrum*	15	Yes	FAC
4.			
5.			
6.			
7.			
	75	=Total Cover	
50% of total cover: 38		20% of total cover:	15
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liriodendron tulipifera*	60	Yes	FACU
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Acer rubrum*	15	No	FAC
4. *Prunus serotina*	8	No	FACU
5. *Quercus rubra*	8	No	FACU
6. *Carya glabra*	5	No	FACU
7. *Quercus alba*	5	No	FACU
8.			
9.			
	121	=Total Cover	
50% of total cover: 61		20% of total cover:	25
Herb Stratum (Plot size: 5 ft.)			
1. *Rubus pensilvanicus*	25	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3. *Quercus alba*	15	Yes	FACU
4. *Smilax rotundifolia*	10	No	FAC
5. *Ilex opaca*	8	No	FACU
6. *Vitis rotundifolia*	8	No	FAC
7. *Woodwardia areolata*	5	No	FACW
8. *Athyrium asplenioides*	5	No	FAC
9.			
10.			
11.			
	91	=Total Cover	
50% of total cover: 46		20% of total cover:	19
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Vitis rotundifolia*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 55.6% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42L2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/3	100					Loamy/Clayey	SL
8-20	2.5Y 5/3	100					Loamy/Clayey	SL
20-24	2.5Y 6/3	92	10YR 5/8	8	C	M	Loamy/Clayey	FSCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-42L2-2



Photograph 1: FDS-42L2-2; Representative soil (08/29/2024, L. Freeman)



Photograph 2: FDS-42L2-2; Representative vegetation (08/29/2024, L. Freeman)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U1-1
Investigator(s): L. Freeman, K. Ratcliffe Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.493257 Long: -77.694228 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken within area that had been previously thinned, but little to no disturbance was present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya glabra*	35	Yes	FACU
2. *Quercus rubra*	30	Yes	FACU
3. *Liquidambar styraciflua*	25	Yes	FAC
4. *Quercus alba*	25	Yes	FACU
5.			
6.			
7.			
	115	=Total Cover	
50% of total cover: 58		20% of total cover:	23
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Carya glabra*	35	Yes	FACU
2. *Liquidambar styraciflua*	30	Yes	FAC
3. *Pinus taeda*	10	No	FAC
4. *Quercus alba*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	15	Yes	FAC
2. *Rubus pensilvanicus*	15	Yes	FAC
3. *Vaccinium pallidum*	15	Yes	UPL
4. *Carya glabra*	10	No	FACU
5. *Quercus alba*	10	No	FACU
6. *Eupatorium capillifolium*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
	70	=Total Cover	
50% of total cover: 35		20% of total cover:	14
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	160	x 4 =	640
UPL species	15	x 5 =	75
Column Totals:	270 (A)		1000 (B)
Prevalence Index = B/A =			3.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42U1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 4/4	100					Loamy/Clayey	SiL
3-8	2.5Y 6/3	80	7.5YR 4/6	20	C	M	Loamy/Clayey	C
8-24	2.5Y 6/3	70	7.5YR 4/6	20	C	PL	Loamy/Clayey	Gravelly C
			10YR 6/1	10	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-42U1-1



Photograph 1:

FDS-42U1-1; Representative Vegetation (08/27/2024, L. Freeman)



Photograph 2:

FDS-42U1-1; Representative Soils (08/27/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U1-2
Investigator(s): L. Freeman, K. Ratcliffe Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of Drainage Local relief (concave, convex, none): Concave Slope (%): 6
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.4946161 Long: -77.69131 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	25	Yes	FAC
2. *Carya glabra*	20	Yes	FACU
3. *Liriodendron tulipifera*	20	Yes	FACU
4. *Liquidambar styraciflua*	15	No	FAC
5.			
6.			
7.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Carya glabra*	20	Yes	FACU
2. *Pinus taeda*	15	Yes	FAC
3. *Quercus alba*	10	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	45	=Total Cover	
50% of total cover: 23		20% of total cover:	9
Herb Stratum (Plot size: 5 ft.)			
1. *Senna hebecarpa*	50	Yes	FAC
2. *Microstegium vimineum*	30	Yes	FAC
3. *Clethra alnifolia*	25	No	FAC
4. *Pinus taeda*	10	No	FAC
5. *Polystichum acrostichoides*	10	No	FACU
6. *Liquidambar styraciflua*	5	No	FAC
7.			
8.			
9.			
10.			
11.			
	130	=Total Cover	
50% of total cover: 65		20% of total cover:	26
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	175	x 3 =	525
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	255 (A)		845 (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42U1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 4/4	100					Loamy/Clayey	SL
8-24	2.5Y 6/4	100					Loamy/Clayey	SL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-42U1-2



Photograph 1:

FDS-42U1-2; Representative Vegetation (08/27/2024, L. Freeman)



Photograph 2:

FDS-42U1-2; Representative Soils (08/27/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U2-1
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of swale Local relief (concave, convex, none): Convex Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496558 Long: -77.69085 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken in area that was cleared approximately 5-6 years ago based on DBH (I3" or less) sizes of woody species present. Dominating shrub layer present. No other disturbance observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Acer rubrum*	25	Yes	FAC
3. *Quercus alba*	25	Yes	FACU
4. *Quercus phellos*	20	No	FAC
5. *Pinus taeda*	12	No	FAC
6. *Ilex opaca*	10	No	FACU
7. *Liriodendron tulipifera*	10	No	FACU
8.			
9.			
	132 =Total Cover		
50% of total cover: 66	20% of total cover: 27		
Herb Stratum (Plot size: 5 ft.)			
1. *Smilax rotundifolia*	15	Yes	FAC
2. *Vaccinium fuscatum*	15	Yes	FAC
3. *Lonicera japonica*	12	Yes	FACU
4. *Rubus pensilvanicus*	10	No	FAC
5. *Quercus alba*	10	No	FACU
6. *Polystichum acrostichoides*	7	No	FACU
7.			
8.			
9.			
10.			
11.			
	69 =Total Cover		
50% of total cover: 35	20% of total cover: 14		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	25	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3.			
4.			
5.			
	40 =Total Cover		
50% of total cover: 20	20% of total cover: 8		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

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SOIL

Sampling Point: FDS-42U2-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/4	97	10YR 6/8	3	C	M	Loamy/Clayey	SiCL
18-24	2.5Y 6/2	92	10YR 6/8	8	C	M	Loamy/Clayey	SiCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-42U2-1



Photograph 1:

FDS-42U2-1; Representative Vegetation (08/29/2024, L. Freeman)



Photograph 2:

FDS-42U2-1; Representative Soils (08/29/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U2-2
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Drainage swale Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.49632 Long: -77.694042 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken within drainage swale that has evidence of drainage patterns, but they are inconsistent. Area has not been disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Nyssa sylvatica*	30	Yes	FAC
3. *Liquidambar styraciflua*	20	Yes	FAC
4. *Quercus alba*	20	Yes	FACU
5.			
6.			
7.			
	100	=Total Cover	
50% of total cover: 50		20% of total cover:	20
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	25	Yes	FAC
2. *Acer rubrum*	20	Yes	FAC
3. *Fraxinus americana*	15	Yes	FACU
4. *Ilex opaca*	15	Yes	FACU
5. *Juniperus virginiana*	10	No	FACU
6. *Quercus alba*	10	No	FACU
7. *Carya glabra*	8	No	FACU
8. *Pinus taeda*	5	No	FAC
9.			
	108	=Total Cover	
50% of total cover: 54		20% of total cover:	22
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	15	Yes	FAC
2. *Carex radiata*	10	Yes	FAC
3. *Parthenocissus quinquefolia*	10	Yes	FACU
4. *Lonicera japonica*	7	No	FACU
5. *Carya glabra*	5	No	FACU
6. *Rubus pensilvanicus*	5	No	FAC
7. *Dichanthelium acuminatum*	4	No	FAC
8. *Smilax rotundifolia*	4	No	FAC
9.			
10.			
11.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42U2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	2.5Y 5/4	100					Loamy/Clayey	SiL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-42U2-2



Photograph 1:

FDS-42U2-2; Representative Vegetation (08/29/2024, L. Freeman)



Photograph 2:

FDS-42U2-2; Representative Soils (08/29/2024, L. Freeman)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U2-3
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of drainage Local relief (concave, convex, none): Concave Slope (%): 1-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.494178 Long: -77.695687 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. Data taken within area that had been previously thinned within the last 5-6 years. A dominating shrub and herbaceous layer is present with an overhang of a tree stratum. No notable disturbance was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U2-3

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	30	Yes	FAC
2. *Carya glabra*	20	Yes	FACU
3. *Quercus alba*	20	Yes	FACU
4. *Liquidambar styraciflua*	15	No	FAC
5.			
6.			
7.			
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	35	Yes	FAC
2. *Acer rubrum*	15	Yes	FAC
3. *Pinus taeda*	15	Yes	FAC
4. *Prunus serotina*	10	No	FACU
5. *Quercus alba*	8	No	FACU
6. *Cornus florida*	5	No	FACU
7. *Vaccinium fuscatum*	5	No	FAC
8.			
9.			
	93	=Total Cover	
50% of total cover: 47		20% of total cover:	19
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	15	Yes	FAC
2. *Vitis rotundifolia*	12	Yes	FAC
3. *Quercus alba*	10	Yes	FACU
4. *Polystichum acrostichoides*	10	Yes	FACU
5. *Andropogon virginicus*	8	No	FACU
6. *Vaccinium fuscatum*	7	No	FAC
7. *Asplenium platyneuron*	5	No	FACU
8. *Carex albicans*	5	No	UPL
9.			
10.			
11.			
	72	=Total Cover	
50% of total cover: 36		20% of total cover:	15
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42U2-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	2.5Y 5/3	95	10YR 6/6	5	C	M	Loamy/Clayey	SiL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-42U2-3



Photograph 1: FDS-42U2-3; Representative Vegetation (08/29/2024, L. Freeman)



Photograph 2: FDS-42U2-3; Representative Soils (08/29/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U3-1
Investigator(s): L. Freeman Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Floodplain depression Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.494606 Long: -77.699049 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. No disturbance was present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

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

Sampling Point: FDS-42U3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Liquidambar styraciflua*	30	Yes	FAC
3. *Liriodendron tulipifera*	10	No	FACU
4. *Quercus rubra*	10	No	FACU
5.			
6.			
7.			
	110	=Total Cover	
50% of total cover: 55		20% of total cover:	22
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Acer rubrum*	20	Yes	FAC
3. *Ilex opaca*	20	Yes	FACU
4. *Quercus alba*	15	No	FACU
5. *Liriodendron tulipifera*	12	No	FACU
6. *Quercus nigra*	10	No	FAC
7. *Quercus rubra*	10	No	FACU
8.			
9.			
	117	=Total Cover	
50% of total cover: 59		20% of total cover:	24
Herb Stratum (Plot size: 5 ft.)			
1. *Carex radiata*	20	Yes	FAC
2. *Viburnum dentatum*	20	Yes	FAC
3. *Rubus pensilvanicus*	15	Yes	FAC
4. *Polystichum acrostichoides*	12	No	FACU
5. *Lonicera japonica*	10	No	FACU
6. *Smilax rotundifolia*	10	No	FAC
7. *Onoclea sensibilis*	8	No	FACW
8.			
9.			
10.			
11.			
	95	=Total Cover	
50% of total cover: 48		20% of total cover:	19
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	8	x 2 =	16
FAC species	215	x 3 =	645
FACU species	99	x 4 =	396
UPL species	0	x 5 =	0
Column Totals:	322 (A)		1057 (B)
Prevalence Index = B/A =			3.28

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-42U3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/4	100					Loamy/Clayey	SL
6-24	10YR 5/6	90	2.5Y 6/3	10	D	M	Loamy/Clayey	CoSL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-42U3-1



Photograph 1:

FDS-42U3-1; Representative Vegetation (09/03/2024, L. Freeman)



Photograph 2:

FDS-42U3-1; Representative Soils (09/03/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U4-1
Investigator(s): L. Freeman, A. Pletch Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope (%): 1-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.499444 Long: 77.693949 Datum: NAD83
Soil Map Unit Name: Turbeville gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Area is highly disturbed with dirt stock piles, fill dirt, and other debris piles.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U4-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft.)			
1. *Echinochloa crus-galli*	60	Yes	FAC
2. *Lolium perenne*	20	Yes	FACU
3. *Cyperus iria*	15	Yes	FACW
4. *Rumex crispus*	15	Yes	FAC
5. *Ludwigia peploides*	12	No	OBL
6. *Bidens frondosa*	10	No	FACW
7. *Eupatorium capillifolium*	8	No	FACU
8. *Phytolacca americana*	8	No	FACU
9. *Eupatorium album*	5	No	UPL
10. *Juncus effusus*	5	No	FACW
11. *Scirpus cyperinus*	5	No	FACW
	163 =Total Cover		
50% of total cover: 82	20% of total cover: 33		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	12	x 1 =	12
FACW species	35	x 2 =	70
FAC species	75	x 3 =	225
FACU species	36	x 4 =	144
UPL species	5	x 5 =	25
Column Totals:	163 (A)		476 (B)
Prevalence Index = B/A =			2.92

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42U4-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Loamy/Clayey	SiCL
6-10	7.5YR 5/8	100					Loamy/Clayey	SC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Compaction

Depth (inches): 10

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Soil has been altered and contains fill clay and burned organic material.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-42U4-1



Photograph 1:

FDS-42U4-1; Representative Vegetation (09/04/2024, L. Freeman)



Photograph 2:

FDS-42U4-1; Representative Soils (09/04/2024, L. Freeman)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/18/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-42U6-2
Investigator(s): L. Freeman, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.485934 Long: -77.693467 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 14. The Palmer Drought Severity Index indicates the area was under "Incipient Drought" conditions.Data taken on slight berm between Tomahawk creek and its floodplain.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-42U6-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula nigra*	40	Yes	FACW
2. *Liriodendron tulipifera*	30	Yes	FACU
3. *Quercus alba*	30	Yes	FACU
4. *Carpinua caroliniana*	20	No	FAC
5. *Carya glabra*	20	No	FACU
6.			
7.			
	140	=Total Cover	
50% of total cover: 70		20% of total cover:	28
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Carpinus caroliniana*	40	Yes	FAC
2. *Carya glabra*	8	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	48	=Total Cover	
50% of total cover: 24		20% of total cover:	10
Herb Stratum (Plot size: 5 ft.)			
1. *Smilax rotundifolia*	15	Yes	FAC
2. *Dichanthelium acuminatum*	5	No	FAC
3. *Cinna arundinacea*	5	No	FACW
4. *Elephantopus carolinianus*	3	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	28	=Total Cover	
50% of total cover: 14		20% of total cover:	6
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	80	x 3 =	240
FACU species	91	x 4 =	364
UPL species	0	x 5 =	0
Column Totals:	216 (A)		694 (B)
Prevalence Index = B/A =			3.21

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-42U6-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 5/2	100					Loamy/Clayey	SiL
3-10	2.5Y 6/3	80	2.5Y 6/4	20	C	M	Sandy	FSL
10-22	2.5Y 6/4	100					Sandy	FSL
22-24	2.5Y 6/3	72	2.5Y 6/2	20	D	M	Sandy	FSL
			2.5Y 7/8	8	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-42U6-2



Photograph 1: FDS-42U6-2; Representative Vegetation 09/18/2024, L. Freeman)



Photograph 2: FDS-42U6-2; Representative Soils (09/18/2024, L. Freeman)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44A2-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.500460 Long: -77.695578 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in powerline easement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 14
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44A2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Sambucus nigra*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	10 =Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size: 5 ft.)			
1. *Leersia oryzoides*	70	Yes	OBL
2. *Persicaria arifolia*	70	Yes	OBL
3. *Solidago rugosa*	25	No	FAC
4. *Juncus effusus*	15	No	FACW
5. *Carex intumescens*	3	No	FACW
6. *Chelone glabra*	3	No	OBL
7. *Vernonia noveboracensis*	3	No	FACW
8. *Chamaenerion angustifolium*	2	No	FAC
9.			
10.			
11.			
	191 =Total Cover		
50% of total cover: 96	20% of total cover: 39		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44A2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 6/4	92	7.5YR 5/8	8	C	PL	Loamy/Clayey	SCL
3-8	2.5Y 5/2	82	5YR 4/6	18	C	PL	Loamy/Clayey	SiCL
8-18	2.5Y 3/1	88	5YR 4/6	12	C	PL	Loamy/Clayey	SiCL
18-24	5Y 5/2	93	5Y 6/3	6	C	M	Loamy/Clayey	SiC
			7.5YR 5/8	1	C	PL		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44A2-1



Photograph 1:

FDS-44A2-1; Hydrophytic Vegetation (09/03/2024, A. Burket)



Photograph 2:

FDS-44A2-1; Hydric Soils (09/03/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44A2-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Convex Slope (%): 3-4
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.500399 Long: -77.695799 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken within powerline easement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44A2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	2	No	FAC
2. *Pyrus calleryana*	2	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	4 =Total Cover		
50% of total cover: 2	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft.)			
1. *Andropogon virginicus*	80	Yes	FACU
2. *Campsis radicans*	10	No	FAC
3. *Solidago rugosa*	10	No	FAC
4. *Andropogon ternarius*	8	No	FACU
5. *Solidago odora*	5	No	UPL
6. *Pinus taeda*	4	No	FAC
7. *Eupatorium rotundifolium*	2	No	FAC
8. *Juniperus virginiana*	2	No	FACU
9. *Lespedeza violacea*	2	No	UPL
10.			
11.			
	123 =Total Cover		
50% of total cover: 62	20% of total cover: 25		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	28	x 3 =	84
FACU species	90	x 4 =	360
UPL species	9	x 5 =	45
Column Totals:	127 (A)		489 (B)
Prevalence Index = B/A =			3.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44A2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/6	100					Loamy/Clayey	CoSCL
6-24	7.5YR 5/6	100					Loamy/Clayey	CoSCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-44A2-2



Photograph 1:

FDS-44A2-2; Representative Vegetation (09/03/2024, A. Burket)



Photograph 2:

FDS-44A2-2; Representative Soils (09/03/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44D1-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Relict Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.497359° Long: -77.700929° Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken at the edge of approximately 10-year cutover with dense shrub-sapling growback.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Hydrology appears undisturbed.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44D1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Ulmus rubra*	8	No	FAC
3. *Liquidambar styraciflua*	5	No	FAC
4.			
5.			
6.			
7.			
	43	=Total Cover	
50% of total cover: 22		20% of total cover:	9
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus phellos*	60	Yes	FAC
2. *Liquidambar styraciflua*	5	No	FAC
3. *Viburnum recognitum*	5	No	FAC
4. *Lindera benzoin*	3	No	FAC
5. *Pinus taeda*	3	No	FAC
6. *Fraxinus pennsylvanica*	2	No	FACW
7.			
8.			
9.			
	78	=Total Cover	
50% of total cover: 39		20% of total cover:	16
Herb Stratum (Plot size: 5 ft.)			
1. *Dichanthelium lucidum*	70	Yes	FAC
2. *Cinna arundinacea*	8	No	FACW
3. *Lobelia cardinalis*	8	No	FACW
4. *Toxicodendron radicans*	8	No	FAC
5. *Carex crinita*	2	No	OBL
6. *Carex intumescens*	2	No	FACW
7. *Juncus effusus*	1	No	FACW
8.			
9.			
10.			
11.			
	99	=Total Cover	
50% of total cover: 50		20% of total cover:	20
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
Date taken at edge of 10-year cutover.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44D1-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/1	95	7.5YR 4/6	5	C	PL	Loamy/Clayey	SiCL
2-18	2.5Y 6/1	70	7.5YR 5/8	30	C	PL/M	Loamy/Clayey	SiCL
18-24	2.5Y 6/1	85	7.5YR 5/8	15	C	M	Loamy/Clayey	SiCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Soil profile appears undisturbed.

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44D1-1



Photograph 1: FDS-44D1-1; Hydrophytic Vegetation (08/29/2024, A. Burket)



Photograph 2: FDS-44D1-1; Hydric Soils (08/29/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44D1-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Relict Floodplain Local relief (concave, convex, none): None Slope (%): 1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.497424° Long: -77.700766° Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken at the edge of approximately 10-year cutover with dense shrub-sapling growback.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:
Hydrology appears undisturbed.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44D1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Acer rubrum*	15	Yes	FAC
3. *Ulmus rubra*	15	Yes	FAC
4. *Liriodendron tulipifera*	5	No	FACU
5.			
6.			
7.			
	55	=Total Cover	
50% of total cover: 28		20% of total cover:	11
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Viburnum dentatum*	60	Yes	FAC
2. *Juniperus virginiana*	8	No	FACU
3. *Quercus phellos*	8	No	FAC
4. *Cornus florida*	5	No	FACU
5. *Fraxinus americana*	5	No	FACU
6. *Lindera benzoin*	5	No	FAC
7. *Liquidambar styraciflua*	5	No	FAC
8. *Pinus taeda*	5	No	FAC
9. *Ulmus alata*	5	No	FACU
	106	=Total Cover	
50% of total cover: 53		20% of total cover:	22
Herb Stratum (Plot size: 5 ft.)			
1. *Campsis radicans*	10	Yes	FAC
2. *Toxicodendron radicans*	10	Yes	FAC
3. *Carex albursina*	8	Yes	UPL
4. *Carex blanda*	5	No	FAC
5. *Chasmanthium laxum*	5	No	FAC
6. *Polystichum acrostichoides*	1	No	FACU
7.			
8.			
9.			
10.			
11.			
	39	=Total Cover	
50% of total cover: 20		20% of total cover:	8
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Date taken at edge of 10-year cutover.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44D1-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					Loamy/Clayey	SiCL
3-20	10YR 6/4	100					Loamy/Clayey	SiCL
20-24	10YR 6/4	98	10YR 4/6	2	C	M	Loamy/Clayey	SiC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Soil profile appears undisturbed.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-44D1-2



Photograph 1: FDS-44D1-2; Representative Vegetation (08/29/2024, A. Burket)



Photograph 2: FDS-44D1-2; Representative Soils (08/29/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44D3-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.49688 Long: -77.700306 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation X, 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 X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in recent cutover. Due to the invasive and opportunistic nature of honeysuckle - which is typical of a transitional vegetative boundary - and the presence of strongly hydric soils, it was concluded that this area qualifies as a wetland despite not meeting usual hydrophytic vegetation requirements.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44D3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	20	Yes	FAC
2. *Liriodendron tulipifera*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
50% of total cover: 13		20% of total cover: 5	
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Nyssa sylvatica*	40	Yes	FAC
2. *Quercus alba*	30	Yes	FACU
3. *Clethra alnifolia*	20	No	FAC
4. *Quercus phellos*	15	No	FAC
5. *Fraxinus pennsylvanica*	10	No	FACW
6. *Pinus taeda*	5	No	FAC
7.			
8.			
9.			
	120	=Total Cover	
50% of total cover: 60		20% of total cover: 24	
Herb Stratum (Plot size: 5 ft.)			
1. *Rubus pensilvanicus*	60	Yes	FAC
2. *Fraxinus pennsylvanica*	5	No	FACW
3. *Viburnum dentatum*	5	No	FAC
4. *Athyrium asplenioides*	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	72	=Total Cover	
50% of total cover: 36		20% of total cover: 15	
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	50	Yes	FACU
2. *Smilax rotundifolia*	15	No	FAC
3. *Vitis rotundifolia*	15	No	FAC
4.			
5.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover: 16	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	197	x 3 =	591
FACU species	85	x 4 =	340
UPL species	0	x 5 =	0
Column Totals:	297 (A)		961 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
The invasive and opportunistic nature of honeysuckle - which was released/conduced due through typical logging practices - as well as the propagation of loblolly pine which may crowd out other, wetter species, makes this point not pass vegetation despite strongly hydric soils. This point does pass the dominance test if the invasive honeysuckle is excluded from consideration, making it likely that this area would naturally pass vegetation requirements were it not disturbed.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44D3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/1	87	7.5YR 5/8	8	C	PL/M	Loamy/Clayey	CL
			2.5YR 3/6	5	C	PL		
3-12	2.5Y 6/1	98	7.5YR 4/6	2	C	PL	Loamy/Clayey	CL
12-24	2.5Y 7/1	99	10YR 6/8	1	C	M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-44D3-1



Photograph 1: FDS-44D3-1; Hydrophytic Vegetation (09/04/2024, A. Burket)



Photograph 2: FDS-44D3-1; Hydric Soils (09/04/2024, A. Burket)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44D3-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Convex Slope (%): 6
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.49687 Long: -77.700168 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in 10-12 y/o cutover.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44D3-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	50	Yes	FAC
2. *Liriodendron tulipifera*	8	No	FACU
3.			
4.			
5.			
6.			
7.			
	58	=Total Cover	
50% of total cover: 29		20% of total cover:	12

Sapling/Shrub Stratum (Plot size: 15 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Clethra alnifolia*	60	Yes	FAC
2. *Pinus taeda*	30	Yes	FAC
3. *Liriodendron tulipifera*	15	No	FACU
4. *Ilex opaca*	10	No	FACU
5. *Quercus alba*	8	No	FACU
6. *Carya tomentosa*	6	No	UPL
7. *Carya glabra*	5	No	FACU
8. *Liquidambar styraciflua*	5	No	FAC
9. *Ulmus alata*	3	No	FACU
	142	=Total Cover	
50% of total cover: 71		20% of total cover:	29

Herb Stratum (Plot size: 5 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Clethra alnifolia*	15	Yes	FAC
2. *Carex blanda*	2	No	FAC
3. *Ilex opaca*	2	No	FACU
4. *Vaccinium pallidum*	2	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	21	=Total Cover	
50% of total cover: 11		20% of total cover:	5

Woody Vine Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Lonicera japonica*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44D3-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					Loamy/Clayey	SL
3-8	10YR 5/4	100					Loamy/Clayey	CoSL
8-24	2.5Y 6/4	100					Loamy/Clayey	CoSL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44D3-2



Photograph 1: FDS-44D3-2; Representative Vegetation (09/04/2024, A. Burket)



Photograph 2: FDS-44D3-2; Representative Soils (09/04/2024, A. Burket)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44H2-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.499608 Long: -77.698404 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in a 10-12 y/o cutover. Fill present in first 7 inches of soil due to nearby intermittent stream outwash; stream is very eroded/flashy as a result of erosional downcutting and has lots of cobble/gravel fill originating from railroad fill material.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44H2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	50	Yes	FAC
2. *Acer rubrum*	25	Yes	FAC
3. *Liquidambar styraciflua*	25	Yes	FAC
4. *Nyssa sylvatica*	12	No	FAC
5. *Liriodendron tulipifera*	8	No	FACU
6. *Quercus alba*	5	No	FACU
7. *Quercus phellos*	3	No	FAC
8.			
9.			
	128 =Total Cover		
50% of total cover: 64	20% of total cover: 26		
Herb Stratum (Plot size: 5 ft.)			
1. *Microstegium vimineum*	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 =Total Cover		
50% of total cover: 3	20% of total cover: 1		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44H2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					Loamy/Clayey	SiL; fill
3-7	10YR 6/4	85	10YR 6/2	10	D	M	Loamy/Clayey	CoSL: fill
			10YR 5/8	5	C	M		
7-12	10YR 4/1	83	7.5YR 8/6	12	C	PL/M	Loamy/Clayey	SCL
			10YR 6/2	5	D	M		
12-24	N 7/	73	5YR 5/8	28	C	PL/M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44H2-1



Photograph 1: FDS-44H2-1; Hydrophytic Vegetation (09/03/2024, A. Burket)



Photograph 2: FDS-44H2-1; Hydric Soils (09/03/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44H2-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.499672 Long: 77.698265 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in a recent cutover.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44H2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	50	Yes	FAC
2. *Acer rubrum*	30	Yes	FAC
3. *Liquidambar styraciflua*	20	No	FAC
4. *Fraxinus americana*	5	No	FACU
5. *Liriodendron tulipifera*	5	No	FACU
6. *Quercus alba*	5	No	FACU
7. *Quercus falcata*	5	No	FACU
8. *Quercus marilandica*	5	No	UPL
9. *Carya glabra*	3	No	FACU
	128 =Total Cover		
50% of total cover: 64	20% of total cover: 26		
Herb Stratum (Plot size: 5 ft.)			
1. *Rubus pensilvanicus*	12	Yes	FAC
2. *Chasmanthium laxum*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	17 =Total Cover		
50% of total cover: 9	20% of total cover: 4		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44H2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 5/4	77	2.5Y 6/2	15	D	M	Loamy/Clayey	CoSCL
			7.5YR 6/6	8	C	M		
10-20	2.5Y 6/4	96	2.5Y 6/2	3	D	M	Loamy/Clayey	CoSCL
			7.5YR 6/6	1	C	M		
20-24	2.5Y 6/2	98	7.5YR 6/6	2	C	M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-44H2-2



Photograph 1: FDS-44H2-2; Representative Vegetation (09/03/2024, A. Burket)



Photograph 2: FDS-44H2-2; Representative Soils (09/03/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U1-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 4
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498341° Long: -77.702197° Datum: NAD83
Soil Map Unit Name: Worsham fine sandy loam, 0 to 4 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken at the edge of approximately 10-year cutover with dense shrub-sapling growback.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:
Hydrology appears undisturbed.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	25	Yes	FACU
2. *Acer rubrum*	15	Yes	FAC
3. *Quercus phellos*	15	Yes	FAC
4. *Quercus rubra*	8	No	FACU
5. *Carya glabra*	5	No	FACU
6. *Prunus serotina*	5	No	FACU
7.			
	73	=Total Cover	
50% of total cover: 37	20% of total cover:	15	
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	25	Yes	FAC
2. *Quercus alba*	10	Yes	FACU
3. *Vaccinium stamineum*	10	Yes	FACU
4. *Nyssa sylvatica*	5	No	FAC
5. *Carya glabra*	3	No	FACU
6. *Juniperus virginiana*	3	No	FACU
7. *Pinus taeda*	3	No	FAC
8. *Quercus phellos*	3	No	FAC
9.			
	62	=Total Cover	
50% of total cover: 31	20% of total cover:	13	
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	40	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3. *Carex albursina*	5	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60	=Total Cover	
50% of total cover: 30	20% of total cover:	12	
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	106	x 3 =	318
FACU species	84	x 4 =	336
UPL species	5	x 5 =	25
Column Totals:	195 (A)		679 (B)

Prevalence Index = B/A = 3.48

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Date taken at edge of 10-year cutover.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U1-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	10YR 3/2	100					Loamy/Clayey	Organic L
1-4	2.5Y 6/4	77	2.5Y 6/3	15	D	M	Loamy/Clayey	SCL
			10YR 5/8	8	C	M		
4-24	2.5Y 6/4	100					Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Soil profile appears undisturbed.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-44U1-1



Photograph 1:

FDS-44U1-1; Representative Vegetation (08/29/2024, A. Burket)



Photograph 2:

FDS-44U1-1; Representative Soils (08/29/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U1-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498099° Long: -77.701922° Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken at the edge of approximately 10-year cutover with dense shrub-sapling growback.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:
Hydrology appears undisturbed.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2. *Quercus rubra*	10	No	FACU
3. *Liriodendron tulipifera*	8	No	FACU
4. *Prunus serotina*	5	No	FACU
5. *Quercus phellos*	5	No	FAC
6. *Juniperus virginiana*	4	No	FACU
7. *Liquidambar styraciflua*	3	No	FAC
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Viburnum dentatum*	15	Yes	FAC
2. *Liriodendron tulipifera*	10	Yes	FACU
3. *Quercus alba*	10	Yes	FACU
4. *Ulmus rubra*	10	Yes	FAC
5. *Ilex opaca*	6	No	FACU
6. *Cornus florida*	5	No	FACU
7. *Liquidambar styraciflua*	5	No	FAC
8. *Pinus taeda*	5	No	FAC
9. *Quercus phellos*	5	No	FAC
	71	=Total Cover	
50% of total cover: 36		20% of total cover:	15
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	20	Yes	FAC
2. *Rubus pensilvanicus*	15	Yes	FAC
3. *Athyrium asplenioides*	5	No	FAC
4. *Quercus alba*	5	No	FACU
5. *Rosa multiflora*	5	No	FACU
6. *Ilex opaca*	2	No	FACU
7.			
8.			
9.			
10.			
11.			
	52	=Total Cover	
50% of total cover: 26		20% of total cover:	11
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
Date taken at edge of 10-year cutover.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/4	93	10YR 8/1	5	D	M	Loamy/Clayey	FSCL
			10YR 5/8	2	C	M		
6-20	10YR 5/4	70	10YR 6/1	25	D	M	Loamy/Clayey	FSCL
20-24	10YR 6/1	63	7.5YR 4/6	12	C	PL/M	Loamy/Clayey	SCL
			10YR 5/4	25				Additional Matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10) **(LRR N)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
___ Thin Dark Surface (S9) **(MLRA 147, 148)**
___ Loamy Mucky Mineral (F1) **(MLRA 136)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
___ Umbric Surface (F13) **(MLRA 122, 136)**
___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(MLRA 147)**
___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:
Soil profile appears undisturbed.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-44U1-2



Photograph 1: FDS-44U1-2; Representative Vegetation (08/29/2024, A. Burket)



Photograph 2: FDS-44U1-2; Representative Soils (08/29/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U1-3
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Relict Floodplain Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498093° Long: -77.700058° Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data taken in vegetated erosional feature in the relict floodplain at the edge of approximately 10-year cutover with dense shrub-sapling growback.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:
Hydrology appears undisturbed.

Received by VMRC January 29, 2026 / Ira

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

Sampling Point: FDS-44U1-3

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
50% of total cover: 8		20% of total cover:	3
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Cornus florida*	15	Yes	FACU
2. *Ilex opaca*	15	Yes	FACU
3. *Liquidambar styraciflua*	15	Yes	FAC
4. *Viburnum dentatum*	15	Yes	FAC
5. *Lindera benzoin*	12	No	FAC
6. *Liriodendron tulipifera*	5	No	FACU
7. *Quercus phellos*	5	No	FAC
8. *Fraxinus americana*	3	No	FACU
9.			
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Herb Stratum (Plot size: 5 ft.)			
1. *Lonicera japonica*	15	Yes	FACU
2. *Parathelypteris noveboracensis*	15	Yes	FAC
3. *Rubus pensilvanicus*	15	Yes	FAC
4. *Polystichum acrostichoides*	8	No	FACU
5. *Athyrium asplenioides*	5	No	FAC
6. *Carex albicans*	5	No	UPL
7. *Carex albursina*	5	No	UPL
8.			
9.			
10.			
11.			
	68	=Total Cover	
50% of total cover: 34		20% of total cover:	14
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	82	x 3 =	246
FACU species	76	x 4 =	304
UPL species	10	x 5 =	50
Column Totals:	168 (A)		600 (B)
Prevalence Index = B/A =			3.57

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Date taken at edge of 10-year cutover.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U1-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/4	100					Loamy/Clayey	SiCL
10-24	10YR 6/2	90	7.5YR 5/8	10	C	M	Loamy/Clayey	SiCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Soil profile appears undisturbed.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-44U1-3



Photograph 1:

FDS-44U1-3; Representative Vegetation (08/29/2024, A. Burket)



Photograph 2:

FDS-44U1-3; Representative Soils (08/29/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U2-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Roadside ditch Local relief (concave, convex, none): Concave Slope (%): 10
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498774 Long: -77.697896 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken at edge of cutover.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	35	Yes	FAC
2. *Liquidambar styraciflua*	10	No	FAC
3. *Rhus copallinum*	5	No	FACU
4. *Quercus alba*	2	No	FACU
5.			
6.			
7.			
8.			
9.			
	52 =Total Cover		
50% of total cover: 26	20% of total cover: 11		
Herb Stratum (Plot size: 5 ft.)			
1. *Digitaria ciliaris*	30	Yes	FAC
2. *Dichanthelium acuminatum*	20	Yes	FAC
3. *Eupatorium capillifolium*	20	Yes	FACU
4. *Eupatorium serotinum*	15	No	FAC
5. *Lespedeza cuneata*	15	No	FACU
6. *Rubus pensilvanicus*	10	No	FAC
7. *Echinochloa muricata*	8	No	FACW
8. *Andropogon virginicus*	5	No	FACU
9. *Dichanthelium scoparium*	5	No	FACW
10.			
11.			
	128 =Total Cover		
50% of total cover: 64	20% of total cover: 26		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/6	100					Loamy/Clayey	CoSCL
16-24	2.5Y 4/2	92	7.5YR 2.5/2	8	C	M	Loamy/Clayey	CoSCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44U2-1



Photograph 1:

FDS-44U2-1; Representative Vegetation (09/03/2024, A. Burket)



Photograph 2:

FDS-44U2-1; Representative Soils (09/03/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U2-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of swale Local relief (concave, convex, none): Concave Slope (%): 6
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.49846 Long: -77.697343 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in 10-12 y/o cutover.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	40	Yes	FAC
2. *Liquidambar styraciflua*	35	Yes	FAC
3. *Viburnum dentatum*	15	No	FAC
4. *Oxydendrum arboreum*	8	No	UPL
5. *Fraxinus americana*	5	No	FACU
6. *Vaccinium stamineum*	5	No	FACU
7. *Quercus phellos*	3	No	FAC
8.			
9.			
	111 =Total Cover		
50% of total cover: 56	20% of total cover: 23		
Herb Stratum (Plot size: 5 ft.)			
1. *Rubus pensilvanicus*	20	Yes	FAC
2. *Chasmanthium laxum*	15	Yes	FAC
3. *Lonicera japonica*	15	Yes	FACU
4. *Quercus alba*	8	No	FACU
5. *Juncus effusus*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	63 =Total Cover		
50% of total cover: 32	20% of total cover: 13		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15 =Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/6	82	10YR 4/2	10	D	M	Loamy/Clayey	SCL
			7.5YR 5/8	8	C	M		
4-10	2.5Y 5/3	77	2.5Y 5/2	15	D	M	Loamy/Clayey	CoSCL
			7.5YR 4/6	8	C	M		
10-24	2.5Y 5/6	87	7.5YR 4/4	8	C	M	Loamy/Clayey	CoSCL
			5YR 6/8	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44U2-2



Photograph 1:

FDS-44U2-2; Representative Vegetation (09/03/2024, A. Burket)



Photograph 2:

FDS-44U2-2; Representative Soils (09/03/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U3-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Convex Slope (%): 80
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.500873 Long: -77.693864 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in 10-12 y/o cutover on the side of a spoil pile in what used to be a swale.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	30	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	50	Yes	FAC
2. *Salix nigra*	25	Yes	OBL
3. *Liriodendron tulipifera*	8	No	FACU
4. *Cercis canadensis*	5	No	FACU
5. *Ligustrum sinense*	5	No	FACU
6. *Rhus copallinum*	5	No	FACU
7. *Quercus phellos*	3	No	FAC
8.			
9.			
	101	=Total Cover	
50% of total cover: 51		20% of total cover:	21
Herb Stratum (Plot size: 5 ft.)			
1. *Rubus pensilvanicus*	70	Yes	FAC
2. *Rubus occidentalis*	8	No	UPL
3. *Phytolacca americana*	2	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	60	Yes	FACU
2. *Vitis rotundifolia*	15	No	FAC
3. *Smilax rotundifolia*	8	No	FAC
4.			
5.			
	83	=Total Cover	
50% of total cover: 42		20% of total cover:	17

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 4/3	100					Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-44U3-1



Photograph 1: FDS-44U3-1; Representative Vegetation (09/04/2024, A. Burket)



Photograph 2: FDS-44U3-1; Representative Soils (09/04/2024, A. Burket)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44U3-2
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.499923 Long: -77.693378 Datum: NAD83
Soil Map Unit Name: Turbeville gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in a hole dug between spoil piles in order to store stump and log debris surrounded by graded pad.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 4
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Some algae observed in surface water.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U3-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft.)			
1. *Digitalis ciliaris*	50	Yes	FAC
2. *Typha latifolia*	25	Yes	OBL
3. *Eupatorium serotinum*	15	No	FAC
4. *Persicaria hydropiperoides*	15	No	OBL
5. *Persicaria lapathifolia*	15	No	FACW
6. *Echinochloa muricata*	8	No	FACW
7. *Ambrosia artemisiifolia*	5	No	FACU
8. *Lespedeza cuneata*	5	No	FACU
9. *Cyperus esculentus*	3	No	FACW
10. *Erechtites hieraciifolius*	3	No	FACU
11.			
	144 =Total Cover		
50% of total cover: 72	20% of total cover: 29		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-44U3-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 4/2	100					Loamy/Clayey	CL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Buried logs

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Around 50% of the soil is buried organic material, such as mulch, leaves, and pieces of log. Auger refusal due to the buried organic material occurs at 12 inches.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-44U3-2



Photograph 1: FDS-44U3-2; Representative Vegetation (09/04/2024, A. Burket)



Photograph 2: FDS-44U3-2; Representative Soils (09/04/2024, A. Burket)

Received by VMRC January 29, 2026 / Ira

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Project Loch | City/County: Chesterfield County | Sampling Date: 9/3/2025
Applicant/Owner: EMH&T | State: VA | Sampling Point: FDS-44U6-1
Investigator(s): A. Burket | Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): None | Slope (%): 2%
Subregion (LRR or MLRA): LRR P, MLRA 136 | Lat: 37.498712 | Long: -77.699544 | Datum: NAD83
Soil Map Unit Name: Fluvaquents | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No ___ (If no, explain in remarks)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "normal circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in remarks)

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

Hydrophytic vegetation present?	Yes X	No ___
Hydric soil present?	Yes ___	No X
Indicators of wetland hydrology present?	Yes ___	No X

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
USACE Antecedent Precipitation Tool indicates the site was within "Normal Conditions" during the dry season with a precipitation normalcy index of 11. The Palmer Drought Severity Index indicates the area is under "Normal" conditions during the most recently available month of July 2025. Data taken in small gap between large wet-weather seep slope wetland and small riverine wetland driven by hydrologic connectivity to the perennial stream channel. The closenesss of the perennial channel and subterranean erosion provide enough drainage that depth to hydric soils is deeper than jurisdictional hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No X	Depth (inches): N/A
Water table present?	Yes ___	No X	Depth (inches): N/A
Saturation present? (includes capillary fringe)	Yes ___	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ___ No X

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-44U6-1

Tree stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1 *Acer rubrum*	45	Y	FAC
2 *Liquidambar styraciflua*	40	Y	FAC
3 *Nyssa sylvatica*	10	N	FAC
4			
5			
6			
7			
8			
	95	= Total Cover	
50% of total cover: 48%	20% of total cover: 19%		

Sapling/Shrub stratum (Plot size: 15 feet)			
1 *Clethra alnifolia*	50	Y	FAC
2 *Ilex opaca*	10	N	FACU
3 *Juniperus virginiana*	10	N	FACU
4 *Lindera benzoin*	5	N	FAC
5 *Viburnum dentatum*	5	N	FAC
6			
7			
8			
9			
10			
	80	= Total Cover	
50% of total cover: 40%	20% of total cover: 16%		

Herb stratum (Plot size: 5 feet)			
1 *Clethra alnifolia*	8	Y	FAC
2 *Carex blanda*	5	Y	FAC
3 *Chasmanthium laxum*	3	N	FAC
4 *Rubus pensilvanicus*	3	N	FAC
5 *Viburnum dentatum*	3	N	FAC
6 *Sceptridium biternatum*	1	N	FAC
7			
8			
9			
10			
11			
12			
	23	= Total Cover	
50% of total cover: 12%	20% of total cover: 5%		

Woody vine stratum (Plot size: 30 feet)			
1 *Smilax rotundifolia*	40	Y	FAC
2 *Lonicera japonica*	8	N	FACU
3			
4			
5			
6			
	48	= Total Cover	
50% of total cover: 24%	20% of total cover: 10%		

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

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

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	218	x 3 =	654
FACU species	28	x 4 =	112
UPL species	0	x 5 =	0
Column totals	246 (A)		766
Prevalence Index = B/A =			3.11 (B)

Hydrophytic Vegetation Indicators:

___ 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is >50%

___ 3 – Prevalence Index is ≤3.0[1]

___ 4 – Morphogical Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

___ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

Remarks (If observed, list morphological adaptations below):

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SOIL Sampling Point: FDS-44U6-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR 4/4	100%					Silt Loam	
6-13	2.5Y 5/3	100%					Silt Loam	
13-24	2.5Y 6/2	92%	7.5YR 5/8	8%	C	PL/M	Silty Clay Loam	

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

PHOTOGRAPHS Sampling Point: FDS-44U6-1

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Photograph 1. FDS-44U6-1; Representative Vegetation (09/03/2025, A. Burket)



Photograph 2. FDS-44U6-1; Representative Soils (09/03/2025, A. Burket)

Received by VMRC January 29, 2026 / lra

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Project Loch | City/County: Chesterfield County | Sampling Date: 9/3/2025
Applicant/Owner: EMH&T | State: VA | Sampling Point: FDS-44U6-2
Investigator(s): A. Burket | Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Toeslope | Local relief (concave, convex, none): Convex | Slope (%): 2-3%
Subregion (LRR or MLRA): LRR P, MLRA 136 | Lat: 37.498875 | Long: -77.699561 | Datum: NAD83
Soil Map Unit Name: Fluvaquents | NWI Classification: None
Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No ___ (If no, explain in remarks)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "normal circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in remarks)

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

Hydrophytic vegetation present?	Yes X	No ___
Hydric soil present?	Yes ___	No X
Indicators of wetland hydrology present?	Yes ___	No X

Is the Sampled Area within a Wetland? Yes ___ No X

Remarks:
USACE Antecedent Precipitation Tool indicates the site was within "Normal Conditions" during the dry season with a precipitation normalcy index of 11. The Palmer Drought Severity Index indicates the area is under "Normal" conditions during the most recently available month of July 2025. Data taken in small gap between large wet-weather seep slope wetland and small riverine wetland driven by hydrologic connectivity to the perennial stream channel. The closenesss of the perennial channel and subterranean erosion provide enough drainage that depth to hydric soils is deeper than jurisdictional hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No X	Depth (inches): N/A
Water table present?	Yes ___	No X	Depth (inches): N/A
Saturation present? (includes capillary fringe)	Yes ___	No X	Depth (inches): N/A

Wetland Hydrology Present? Yes ___ No X

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: FDS-44U6-2

Tree stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1 *Liquidambar styraciflua*	35	Y	FAC
2 *Ulmus rubra*	10	N	FAC
3 *Acer rubrum*	5	N	FAC
4 *Liriodendron tulipifera*	5	N	FACU
5			
6			
7			
8			
	55	= Total Cover	
50% of total cover:	28%	20% of total cover:	11%

Sapling/Shrub stratum (Plot size: 15 feet)			
1 *Lindera benzoin*	70	Y	FAC
2 *Fraxinus americana*	3	N	FACU
3 *Ligustrum sinense*	2	N	FACU
4			
5			
6			
7			
8			
9			
10			
	75	= Total Cover	
50% of total cover:	38%	20% of total cover:	15%

Herb stratum (Plot size: 5 feet)			
1 *Microstegium vimineum*	50	Y	FAC
2 *Cinna arundinacea*	3	N	FACW
3 *Toxicodendron radicans*	3	N	FAC
4 *Sceptridium biternatum*	1	N	FAC
5			
6			
7			
8			
9			
10			
11			
12			
	57	= Total Cover	
50% of total cover:	29%	20% of total cover:	11%

Woody vine stratum (Plot size: 30 feet)			
1 *Lonicera japonica*	25	Y	FACU
2			
3			
4			
5			
6			
	25	= Total Cover	
50% of total cover:	13%	20% of total cover:	5%

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	174	x 3 =	522
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column totals	212 (A)		668
Prevalence Index = B/A =			3.15 (B)

Hydrophytic Vegetation Indicators:

____ 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is >50%

____ 3 – Prevalence Index is ≤3.0[1]

____ 4 – Morphogical Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks (If observed, list morphological adaptations below):

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SOIL Sampling Point: FDS-44U6-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	10YR 4/3	100%					Silty Clay Loam	
5-9	10YR 5/3	100%					Silty Clay Loam	
9-24	10YR 5/3	62%	2.5Y 6/2	30%	D	M	Silty Clay Loam	
			7.5YR 5/8	8%	C	M		

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

PHOTOGRAPHS Sampling Point: FDS-44U6-2

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Photograph 1. FDS-44U6-2; Representative Vegetation (09/03/2025, A. Burket)



Photograph 2. FDS-44U6-2; Representative Soils (09/03/2025, A. Burket)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-44W3-1
Investigator(s): A. Burket Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498854 Long: -77.699382 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Data taken in sewerline easement.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Surface saturation likely due to recent rainfall event from 0-5".

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

Sampling Point: FDS-44W3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft.)			
1. *Carex lurida*	70	Yes	OBL
2. *Juncus effusus*	30	Yes	FACW
3. *Scirpus cyperinus*	20	No	FACW
4. *Eupatorium perfoliatum*	15	No	FACW
5. *Echinochloa muricata*	8	No	FACW
6. *Lespedeza cuneata*	3	No	FACU
7. *Persicaria punctata*	3	No	OBL
8. *Ludwigia leptocarpa*	2	No	OBL
9. *Cyperus esculentus*	2	No	FACW
10.			
11.			
	153 =Total Cover		
50% of total cover: 77	20% of total cover: 31		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75
FACW species	75	x 2 =	150
FAC species	0	x 3 =	0
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	153 (A)		237 (B)
Prevalence Index = B/A =			1.55

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-44W3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 5/2	89	7.5YR 5/8	11	C	PL	Loamy/Clayey	SCL
5-12	10Y 5/1	71	7.5YR 5/8	16	C	PL/M	Loamy/Clayey	SCL
			5GY 6/1	8	D	M		
			10GY 6/1	5	D	M		
12-24	10Y 5/1	82	7.5YR 5/8	11	C	M	Loamy/Clayey	SCL
			10GY 6/1	5	D	M		
			5GY 6/1	2	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10) **(LRR N)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
___ Thin Dark Surface (S9) **(MLRA 147, 148)**
___ Loamy Mucky Mineral (F1) **(MLRA 136)**
X Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
___ Umbric Surface (F13) **(MLRA 122, 136)**
___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(MLRA 147)**
___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-44W3-1



Photograph 1:

FDS-44W3-1; Hydrophytic Vegetation (09/04/2024, A. Burket)



Photograph 2:

FDS-44W3-1; Hydric Soils (09/04/2024, A. Burket)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56A2-2
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of slope Local relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498804 Long: 77.687907 Datum: NAD83
Soil Map Unit Name: Mayodan-Creedmoor-Edgehill NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Data point was taken within a drainage area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-56A2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Ligustrum sinense*	15	Yes	FACU
2. *Ilex opaca*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Herb Stratum (Plot size: 5 ft.)			
1. *Eupatorium capillifolium*	25	Yes	FACU
2. *Lespedeza cuneata*	20	Yes	FACU
3. *Solidago altissima*	15	No	FACU
4. *Dichanthelium acuminatum*	10	No	FAC
5. *Lonicera japonica*	5	No	FACU
6. *Ilex opaca*	3	No	FACU
7.			
8.			
9.			
10.			
11.			
	78	=Total Cover	
50% of total cover: 39		20% of total cover:	16
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	88	x 4 =	352
UPL species	0	x 5 =	0
Column Totals:	108 (A)		412 (B)
Prevalence Index = B/A =			3.81

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

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SOIL

Sampling Point: FDS-56A2-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 5/3	100					Loamy/Clayey	Silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Auger refusal due to dense rock

Depth (inches): 8

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-56A2-2



Photograph 1:

FDS-56A2-2; Representative Vegetation (08/29/2024, A. Leonard)



Photograph 2:

FDS-56A2-2; Representative Soils (08/29/2024, A. Leonard)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56C1-1
Investigator(s): K. Winklepleck, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.500647 Long: -77.691698 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Swale with strong hydrology shows water comes through. Hydrophytic vegetation and hydric soils shows it stays wet for prolonged periods of time.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

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

Sampling Point: FDS-56C1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Quercus alba*	15	Yes	FACU
4.			
5.			
6.			
7.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Vaccinium fuscatum*	20	Yes	FAC
2. *Quercus alba*	15	Yes	FACU
3. *Acer rubrum*	10	No	FAC
4. *Liquidambar styraciflua*	10	No	FAC
5. *Quercus phellos*	5	No	FAC
6.			
7.			
8.			
9.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	25	Yes	FAC
2. *Vitis rotundifolia*	20	Yes	FAC
3. *Lonicera japonica*	15	Yes	FACU
4. *Ligustrum sinense*	5	No	FACU
5. *Pinus taeda*	5	No	FAC
6. *Rosa multiflora*	2	No	FACU
7.			
8.			
9.			
10.			
11.			
	72	=Total Cover	
50% of total cover: 36		20% of total cover:	15
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	140	x 3 =	420
FACU species	52	x 4 =	208
UPL species	0	x 5 =	0
Column Totals:	192 (A)		628 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-56C1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	95	7.5YR 4/4	5	C	M	Loamy/Clayey	CL
6-12	2.5Y 5/2	85	10YR 5/8	15	C	M	Loamy/Clayey	CL
12-20	2.5Y 5/4	85	10YR 5/8	15	C	M	Loamy/Clayey	SCL
20-24	2.5Y 5/3	90	10YR 5/8	10	C	M	Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-56C1-1



Photograph 1: FDS-56C1-1; Hydrophytic Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56C1-1; Hydric Soils (08/27/2024, K. Winklepleck)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56C1-2
Investigator(s): K. Winklepleck, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of Swale Local relief (concave, convex, none): Concave Slope (%): 10
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.500514 Long: -77.691694 Datum: NAD83
Soil Map Unit Name: Edgehill very gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Top of swale on sideslope. Drainage for water but vegetation an dsoils show water does not sit here for prolonged periods.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-56C1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	30	Yes	FACU
2. *Acer rubrum*	10	No	FAC
3. *Fraxinus pennsylvanica*	10	No	FACW
4. *Liquidambar styraciflua*	5	No	FAC
5.			
6.			
7.			
	55	=Total Cover	
50% of total cover: 28	20% of total cover: 11		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus alba*	25	Yes	FACU
2. *Liriodendron tulipifera*	20	Yes	FACU
3. *Liquidambar styraciflua*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	55	=Total Cover	
50% of total cover: 28	20% of total cover: 11		
Herb Stratum (Plot size: 5 ft.)			
1. *Lonicera japonica*	30	Yes	FACU
2. *Vitis rotundifolia*	20	Yes	FAC
3. *Quercus alba*	5	No	FACU
4. *Acer rubrum*	2	No	FAC
5. *Smilax rotundifolia*	2	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	59	=Total Cover	
50% of total cover: 30	20% of total cover: 12		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	49	x 3 =	147
FACU species	110	x 4 =	440
UPL species	0	x 5 =	0
Column Totals:	169 (A)		607 (B)
Prevalence Index = B/A =			3.59

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-56C1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 4/2	95	7.5YR 3/4	5	C	PL	Loamy/Clayey	SiL
1-15	2.5Y 6/3	90	10YR 6/6	10	C	M	Loamy/Clayey	SiL
15-24	2.5Y 6/4	95	10YR 6/6	5	C	M	Loamy/Clayey	L

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-56C1-2



Photograph 1: FDS-56C1-2; Representative Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56C1-2; Representative Soils (08/27/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56F1-1
Investigator(s): K. Winklepleck, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.501903 Long: -77.688423 Datum: NAD83
Soil Map Unit Name: Edgehill very gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Swale with steep sides. Hydrology and soils show that water collects and sits here for prolonged periods.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-56F1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	20	Yes	FACU
2. *Quercus rubra*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	35	=Total Cover	
50% of total cover: 18		20% of total cover: 7	
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Clethra alnifolia*	30	Yes	FAC
2. *Fraxinus pennsylvanica*	15	Yes	FACW
3. *Viburnum recognitum*	15	Yes	FAC
4. *Acer rubrum*	10	No	FAC
5. *Alnus serrulata*	10	No	OBL
6.			
7.			
8.			
9.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover: 16	
Herb Stratum (Plot size: 5 ft.)			
1. *Juncus effusus*	15	Yes	FACW
2. *Athyrium asplenioides*	10	Yes	FAC
3. *Fraxinus pennsylvanica*	8	No	FACW
4. *Lonicera japonica*	5	No	FACU
5. *Chasmanthium laxum*	3	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	41	=Total Cover	
50% of total cover: 21		20% of total cover: 9	
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	38	x 2 =	76
FAC species	68	x 3 =	204
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	156 (A)		450 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-56F1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 5/3	90	10YR 5/8	10	C	M	Loamy/Clayey	SCL
5-24	2.5Y 4/2	92	10YR 4/6	8	C	M	Loamy/Clayey	SL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-56F1-1



Photograph 1: FDS-56F1-1; Hydrophytic Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56F1-1; Hydric Soils (08/27/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56F1-2
Investigator(s): K. Winklepleck, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of Swale Local relief (concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.501787 Long: -77.688411 Datum: NAD83
Soil Map Unit Name: Turbeville fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Top of swale on a sideslope. Next to an open staging area. Drainage patterns show water moves through this area, but soils and vegetation show water does not sit here.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-56F1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipfera*	20	Yes	FACU
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Ulmus rubra*	10	Yes	FAC
4.			
5.			
6.			
7.			
	40	=Total Cover	
50% of total cover: 20	20% of total cover: 8		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pyrus calleryana*	15	Yes	UPL
2. *Liriodendron tulipifera*	10	Yes	FACU
3. *Ulmus rubra*	10	Yes	FAC
4. *Albizia julibrissin*	8	No	UPL
5.			
6.			
7.			
8.			
9.			
	43	=Total Cover	
50% of total cover: 22	20% of total cover: 9		
Herb Stratum (Plot size: 5 ft.)			
1. *Kummerowia striata*	20	Yes	FACU
2. *Vitis rotundifolia*	20	Yes	FAC
3. *Chasmanthium laxum*	5	No	FAC
4. *Lespedeza cuneata*	5	No	FACU
5. *Lonicera japonica*	5	No	FACU
6. *Rosa multiflora*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
	60	=Total Cover	
50% of total cover: 30	20% of total cover: 12		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	65	x 4 =	260
UPL species	23	x 5 =	115
Column Totals:	143 (A)		540 (B)
Prevalence Index = B/A =			3.78

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-56F1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 5/6	100					Loamy/Clayey	SC
9-24	2.5Y 5/3	78	10YR 5/6	2	C	M	Loamy/Clayey	SiL
			2.5Y 4/1	20				Additional Matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-56F1-2



Photograph 1: FDS-56F1-2; Representative Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56F1-2; Representative Soils (08/27/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56I1-1
Investigator(s): K. Winklepleck, M.Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.502185 Long: -77.687667 Datum: NAD83
Soil Map Unit Name: Edgehill very gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Swale leads into intermittent stream. Lots of drainage patterns show water regularly moves through this area and hydric soils show water sits in this area for prolonged periods.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-56I1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	50 =Total Cover		
50% of total cover: 25	20% of total cover: 10		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Ligustrum sinense*	30	Yes	FACU
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Ilex opaca*	10	No	FACU
4. *Quercus rubra*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
	65 =Total Cover		
50% of total cover: 33	20% of total cover: 13		
Herb Stratum (Plot size: 5 ft.)			
1. *Toxicodendron radicans*	15	Yes	FAC
2. *Ligustrum sinense*	5	Yes	FACU
3. *Smilax rotundifolia*	5	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25 =Total Cover		
50% of total cover: 13	20% of total cover: 5		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Vitis rotundifolia*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15 =Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	155 (A)		520 (B)
Prevalence Index = B/A =			3.35

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-56I1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/2	90	7.5YR 4/4	10	C	M	Loamy/Clayey	SiCL
4-14	2.5Y 5/4	85	7.5YR 4/6	15	C	PL/M	Loamy/Clayey	SCL
14-24	2.5Y 5/4	85	2.5Y 5/3	10	D	M	Loamy/Clayey	CL
			7.5YR 4/6	5	C	PL/M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-56I1-1



Photograph 1: FDS-56I1-1; Hydrophytic Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56I1-1; Hydric Soils (08/27/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56I1-2
Investigator(s): K. Winklepleck, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.502195 Long: -77.687565 Datum: NAD83
Soil Map Unit Name: Edgehill very gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Top of swale, lots of drainage patterns coming from the nearby road. Water may sit here for a little while but not enough for upland vegetation to be affected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

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

Sampling Point: FDS-56I1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	40	Yes	FAC
2. *Liriodendron tulipifera*	15	Yes	FACU
3. *Ulmus rubra*	15	Yes	FAC
4.			
5.			
6.			
7.			
	70	=Total Cover	
50% of total cover: 35		20% of total cover:	14
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Ligustrum sinense*	35	Yes	FACU
2. *Pyrus calleryana*	10	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45	=Total Cover	
50% of total cover: 23		20% of total cover:	9
Herb Stratum (Plot size: 5 ft.)			
1. *Ligustrum sinense*	20	Yes	FACU
2. *Rosa multiflora*	15	Yes	FACU
3. *Smilax rotundifolia*	15	Yes	FAC
4. *Toxicodendron radicans*	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Toxicodendron radicans*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	=Total Cover	
50% of total cover: 8		20% of total cover:	3

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	85	x 4 =	340
UPL species	10	x 5 =	50
Column Totals:	190 (A)		675 (B)
Prevalence Index = B/A =			3.55

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-56I1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 4/2	95	7.5YR 4/6	5	C	M	Loamy/Clayey	SiCL
1-18	2.5Y 5/3	90	7.5YR 4/6	10	C	M	Loamy/Clayey	SiC
18-24	2.5Y 4/2	100					Loamy/Clayey	SCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-56I1-2



Photograph 1: FDS-56I1-2; Representative Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56I1-2; Representative Soils (08/27/2024, K. Winklepleck)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56U1-1
Investigator(s): K. Winklepleck, M. Norris Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.50157 Long: -77.690123 Datum: NAD83
Soil Map Unit Name: Edgehill very gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Roadside swale, likely an old roadside ditch. Drainage for water but vegetation and soils show water does not sit at this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-56U1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus phellos*	25	Yes	FAC
2. *Pinus taeda*	20	Yes	FAC
3. *Juniperus virginiana*	5	No	FACU
4.			
5.			
6.			
7.			
	50	=Total Cover	
50% of total cover: 25	20% of total cover: 10		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Pinus taeda*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	=Total Cover	
50% of total cover: 15	20% of total cover: 6		
Herb Stratum (Plot size: 5 ft.)			
1. *Leersia virginica*	30	Yes	FACW
2. *Microstegium vimineum*	20	Yes	FAC
3. *Juncus effusus*	15	No	FACW
4. *Lespedeza cuneata*	15	No	FACU
5. *Solidago rugosa*	15	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	95	=Total Cover	
50% of total cover: 48	20% of total cover: 19		
Woody Vine Stratum (Plot size: 30 ft.)			
1. N/A			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	110	x 3 =	330
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	175 (A)		500 (B)
Prevalence Index = B/A =			2.86

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-56U1-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/4	85	2.5Y 6/3	10	D	M	Loamy/Clayey	SCL
			7.5YR 5/8	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 5

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Auger rejection at 5 inches due to gravel.

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-56U1-1



Photograph 1: FDS-56U1-1; Representative Vegetation (08/27/2024, K. Winklepleck)



Photograph 2: FDS-56U1-1; Representative Soils (08/27/2024, K. Winklepleck)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 9/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56U3-1
Investigator(s): K. Winklepleck, A. Pletch Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 8
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.491603 Long: -77.694997 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16. Slight swale on sideslope. Water passes through, but hydrology is weak. Vegetation is upland while soils are hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

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

Sampling Point: FDS-56U3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liriodendron tulipifera*	85	Yes	FACU
2. *Liquidambar styraciflua*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	90	=Total Cover	
50% of total cover: 45		20% of total cover:	18
Herb Stratum (Plot size: 5 ft.)			
1. *Quercus alba*	30	Yes	FACU
2. *Polystichum acrostichoides*	12	Yes	FACU
3. *Liquidambar styraciflua*	10	No	FAC
4. *Fraxinus pennsylvanica*	8	No	FACW
5. *Parathelypteris noveboracensis*	8	No	FAC
6. *Rubus pensilvanicus*	5	No	FAC
7. *Vitis rotundifolia*	5	No	FAC
8. *Parthenocissus quinquefolia*	2	No	FACU
9.			
10.			
11.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	18	x 2 =	36
FAC species	33	x 3 =	99
FACU species	129	x 4 =	516
UPL species	0	x 5 =	0
Column Totals:	180 (A)		651 (B)
Prevalence Index = B/A =			3.62

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

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SOIL

Sampling Point: FDS-56U3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 3/2	100					Loamy/Clayey	SCL with organic material
1-16	2.5Y 4/2	97	5YR 4/6	3	C	PL	Loamy/Clayey	GrCL
16-24	2.5Y 5/2	85	7.5YR 5/8	15	C	PL/M	Loamy/Clayey	GrCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-56U3-1



Photograph 1: FDS-56U3-1; Representative Vegetation (09/03/2024, K. Winklepleck



Photograph 2: FDS-56U3-1; Representative Soils (09/03/2024, K. Winklepleck)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-56W2-1
Investigator(s): K. Winklepleck Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Closed depression Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.498666 Long: -77.687939 Datum: NAD83
Soil Map Unit Name: Mayodan-Creedmoor-Edgehill very gravelly sandy loams NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. Old stormwater basin that has not been maintained. Water collects here as evidenced by the hydric soils and hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Saturation present from the surface to 4 inches deep.

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

Sampling Point: FDS-56W2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft.)			
1. *Carex lurida*	50	Yes	OBL
2. *Scirpus cyperinus*	50	Yes	FACW
3. *Rhexia nashii*	30	Yes	OBL
4. *Lespedeza cuneata*	20	No	FACU
5. *Mikania scandens*	20	No	FACW
6. *Solidago rigida*	20	No	UPL
7. *Juncus effusus*	15	No	FACW
8. *Cyperus strigosus*	10	No	FACW
9. *Liquidambar styraciflua*	10	No	FAC
10. *Salix nigra*	5	No	OBL
11.			
	230 =Total Cover		
50% of total cover: 115	20% of total cover: 46		
Woody Vine Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
FACW species	95	x 2 =	190
FAC species	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species	20	x 5 =	100
Column Totals:	230 (A)		485 (B)
Prevalence Index = B/A =			2.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-56W2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 5/2	80	7.5YR 5/6	20	C	M	Loamy/Clayey	SiL
2-4	2.5Y 6/2	80	7.5YR 5/6	20	C	M	Loamy/Clayey	SiL
4-8	5YR 4/3	80	N 8/	10	D	PL	Loamy/Clayey	SiCL
			7.5YR 5/8	10	C	PL		
8-24	5YR 4/3	95	N 8/	5	D	M	Loamy/Clayey	SiCL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-56W2-1



Photograph 1:

FDS-56W2-1; Hydrophytic Vegetation (08/29/2024, K. Winklepleck)



Photograph 2:

FDS-56W2-1; Hydric Soils (08/29/2024, K. Winklepleck)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58B2-1
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.493166 Long: -77.6873 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 9
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 2

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58B2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Platanus occidentalis*	30	Yes	FACW
2. *Salix nigra*	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45	=Total Cover	
50% of total cover: 23		20% of total cover:	9
Herb Stratum (Plot size: 5 ft.)			
1. *Juncus effusus*	40	Yes	FACW
2. *Eutrochium purpureum*	20	Yes	FAC
3. *Cyperus lancastriensis*	15	No	FAC
4. *Smilax rotundifolia*	10	No	FAC
5. *Boehmeria cylindrica*	10	No	FACW
6. *Dichanthelium clandestinum*	10	No	FAC
7.			
8.			
9.			
10.			
11.			
	105	=Total Cover	
50% of total cover: 53		20% of total cover:	21
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	=Total Cover	
50% of total cover: 5		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	80	x 2 =	160
FAC species	85	x 3 =	255
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	180 (A)		430 (B)
Prevalence Index = B/A =			2.39

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58B2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 5/1	75	2.5Y 6/3	15	C	M	Loamy/Clayey	Clay loam
			10YR 5/6	10	C	PL		
7-24	10YR 4/1	95	10YR 4/4	5	C	M	Loamy/Clayey	Clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-58B2-1



Photograph 1:

FDS-58B2-1; Representative Vegetation (08/29/2024, A. Leonard)



Photograph 2:

FDS-58B2-1; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58B2-2
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.493285 Long: 77.687324 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58B2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	25	Yes	FAC
2. *Fraxinus pennsylvanica*	15	Yes	FACW
3. *Acer rubrum*	10	Yes	FAC
4.			
5.			
6.			
7.			
	50	=Total Cover	
50% of total cover: 25	20% of total cover: 10		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Ilex opaca*	35	Yes	FAC
2. *Quercus alba*	20	Yes	FACU
3. *Quercus rubra*	10	No	FACU
4. *Liquidambar styraciflua*	5	No	FAC
5. *Vaccinium X marianum*	5	No	FAC
6.			
7.			
8.			
9.			
	75	=Total Cover	
50% of total cover: 38	20% of total cover: 15		
Herb Stratum (Plot size: 5 ft.)			
1. *Vaccinium X marianum*	10	Yes	FAC
2. *Quercus alba*	10	Yes	FACU
3. *Acer rubrum*	5	No	FAC
4. *Chasmanthium laxum*	5	No	FAC
5. *Ilex opaca*	3	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	33	=Total Cover	
50% of total cover: 17	20% of total cover: 7		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	100	x 3 =	300
FACU species	43	x 4 =	172
UPL species	0	x 5 =	0
Column Totals:	158 (A)		502 (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58B2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 6/3	100					Loamy/Clayey	Silty loam
3-24	2.5Y 6/6	100					Loamy/Clayey	Silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-58B2-2



Photograph 1:

FDS-58B2-2; Representative Vegetation (08/29/2024, A. Leonard)



Photograph 2:

FDS-58B2-2; Representative Soils (08/29/2024, A. Leonard)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 0/9/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58E2-1
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toe-slope Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.497229 Long: 77.689087 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58E2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft.)			
1. *Juncus effusus*	40	Yes	FACW
2. *Solidago rugosa*	25	Yes	FAC
3. *Rubus pensilvanicus*	20	Yes	FAC
4. *Andropogon gerardii*	15	No	FAC
5. *Scirpus cyperinus*	15	No	FACW
6. Eupatorium perfoliatum	15	No	FACW
7. *Asclepias incarnata*	10	No	OBL
8. *Acer rubrum*	10	No	FAC
9. *Vernonia noveboracensis*	10	No	FACW
10.			
11.			
	160 =Total Cover		
50% of total cover: 80	20% of total cover: 32		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	80	x 2 =	160
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	160 (A)		380 (B)
Prevalence Index = B/A =			2.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58E2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	93	10YR 4/4	7	C	PL	Loamy/Clayey	Sandy clay loam
12-24	10YR 6/1	85	10YR 5/6	15	C	PL/M	Loamy/Clayey	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10) **(LRR N)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
___ Thin Dark Surface (S9) **(MLRA 147, 148)**
___ Loamy Mucky Mineral (F1) **(MLRA 136)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
___ Umbric Surface (F13) **(MLRA 122, 136)**
___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(MLRA 147)**
___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-58E2-1



Photograph 1:

FDS-58E2-1; Representative Vegetation (09/03/2024, A. Leonard)



Photograph 2:

FDS-58E2-1; Representative Soils (09/03/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58E2-2
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toe-slope Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.497319 Long: 77.688967 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58E2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft.)			
1. *Rubus pensilvanicus*	30	Yes	FAC
2. *Solidago rugosa*	20	Yes	FAC
3. *Carya tomentosa*	15	Yes	UPL
4. *Andropogon gerardii*	15	Yes	FAC
5. *Carex spp**	12	No	FAC
6. *Dichanthelium acuminatum*	10	No	FAC
7.			
8.			
9.			
10.			
11.			
	102 =Total Cover		
50% of total cover: 51	20% of total cover: 21		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
*Carex spp could not be fully identified and assumed FAC.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58E2-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/3	100					Loamy/Clayey	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Auger refusal due to dense rock

Depth (inches): 8

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-58E2-2



Photograph 1:

FDS-58E2-2; Representative Vegetation (09/03/2024, A.Leonard)



Photograph 2:

FDS-58E2-2; Representative Soils (09/03/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58H1-1
Investigator(s): A. Leonard, A. Whitlock Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.489995 Long: 77.687753 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 20
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 7

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58H1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ilex opaca*	15	Yes	FACU
2. *Acer rubrum*	10	Yes	FAC
3. *Liriodendron tulipifera*	5	No	FACU
4.			
5.			
6.			
7.			
	30	=Total Cover	
50% of total cover: 15	20% of total cover: 6		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Ilex opaca*	20	Yes	FACU
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Lindera benzoin*	10	Yes	FAC
4. *Vaccinium X marianum*	7	No	FAC
5.			
6.			
7.			
8.			
9.			
	47	=Total Cover	
50% of total cover: 24	20% of total cover: 10		
Herb Stratum (Plot size: 5 ft.)			
1. *Parathelypteris noveboracensis*	15	Yes	FAC
2. *Osmundastrum cinnamomeum*	15	Yes	FACW
3. *Clethra alnifolia*	15	Yes	FAC
4. *Juncus effusus*	10	No	FACW
5. *Lonicera japonica*	7	No	FACU
6. *Carex lurida*	5	No	FACW
7.			
8.			
9.			
10.			
11.			
	67	=Total Cover	
50% of total cover: 34	20% of total cover: 14		
Woody Vine Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	67	x 3 =	201
FACU species	47	x 4 =	188
UPL species	0	x 5 =	0
Column Totals:	144 (A)		449 (B)

Prevalence Index = B/A = 3.12

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58H1-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/2	93	10YR 5/2	5	D	M	Loamy/Clayey	Course sandy clay loam
			10YR 5/8	2	C	M		
20-24	10YR 4/1						Loamy/Clayey	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-58H1-1



Photograph 1:

FDS-58H1-1; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2:

FDS-58H1-1; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58H1-2
Investigator(s): A. Leonard, A. Whitlock Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Footslope Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.489918 Long: 77.687753 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58H1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	40	Yes	FACU
2. *Quercus alba*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus rubra*	20	Yes	FACU
2. *Pinus taeda*	10	Yes	FAC
3. *Quercus phellos*	10	Yes	FAC
4. *Ilex opaca*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
	45	=Total Cover	
50% of total cover: 23		20% of total cover:	9
Herb Stratum (Plot size: 5 ft.)			
1. *Parathelypteris noveboracensis*	45	Yes	FAC
2. *Vitis rotundifolia*	20	Yes	FAC
3. *Ilex opaca*	10	No	FACU
4. *Pinus taeda*	10	No	FAC
5. *Juncus effusus*	10	No	FACW
6. *Potentilla indica*	7	No	FACU
7. *Eupatorium capillifolium*	5	No	FACU
8. *Arisaema triphyllum*	5	No	FACW
9.			
10.			
11.			
	112	=Total Cover	
50% of total cover: 56		20% of total cover:	23
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58H1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/3	100					Loamy/Clayey	Organic material sandy clay loam
3-24	2.5Y 5/3	95	10YR 5/8	5	C	M	Loamy/Clayey	Course sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-58H1-2



Photograph 1:

FDS-58H1-2; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2:

FDS-58H1-2; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58U1-1
Investigator(s): A. Leonard, A. Whitlock Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.486159 Long: -77.688232 Datum: NAD83
Soil Map Unit Name: Pinkston gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58U1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	20	Yes	FACU
2. *Carya tomentosa*	17	Yes	UPL
3.			
4.			
5.			
6.			
7.			
	37	=Total Cover	
50% of total cover: 19		20% of total cover:	8
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liriodendron tulipifera*	25	Yes	FACU
2. Liquidambar styraciflua	20	Yes	FAC
3. *Cercis canadensis*	15	No	FACU
4. *Carya tomentosa*	7	No	UPL
5. *Quercus alba*	7	No	FACU
6. *Ilex opaca*	5	No	FACU
7.			
8.			
9.			
	79	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Herb Stratum (Plot size: 5 ft.)			
1. *Vitis rotundifolia*	15	Yes	FAC
2. Liquidambar styraciflua	10	Yes	FAC
3. *Parthenocissus quinquefolia*	10	Yes	FACU
4. *Potentilla indica*	10	Yes	FACU
5. *Rubus pensilvanicus*	7	No	FAC
6. *Polystichum acrostichoides*	7	No	FACU
7. *Ilex opaca*	5	No	FACU
8. *Juniperus virginiana*	3	No	FACU
9.			
10.			
11.			
	67	=Total Cover	
50% of total cover: 34		20% of total cover:	14
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	52	x 3 =	156
FACU species	107	x 4 =	428
UPL species	24	x 5 =	120
Column Totals:	183 (A)		704 (B)
Prevalence Index = B/A =			3.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

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SOIL

Sampling Point: FDS-58U1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					Loamy/Clayey	Sandy loam
6-12	2.5Y 5/3	97	10YR 4/6	3	C	M	Loamy/Clayey	Sandy loam
12-24	2.5Y 6/4	80	2.5Y 5/3	20	C	M	Loamy/Clayey	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-58U1-1



Photograph 1:

FDS-58U1-1; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2:

FDS-58U1-1; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58U1-2
Investigator(s): A. Leonard, A. Whitlock Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.490632 Long: -77.688154 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58U1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	25	Yes	FACU
2. *Fraxinus americana*	20	Yes	FACU
3. *Liquidambar styraciflua*	10	No	FAC
4.			
5.			
6.			
7.			
	55	=Total Cover	
50% of total cover: 28	20% of total cover:	11	
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Cornus florida*	30	Yes	FACU
2. *Quercus alba*	20	Yes	FACU
3. *Vaccinium corymbosum*	10	No	FACW
4. *Hypericum hypericoides*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
	65	=Total Cover	
50% of total cover: 33	20% of total cover:	13	
Herb Stratum (Plot size: 5 ft.)			
1. *Querucs alba*	15	Yes	FACU
2. *Vaccinium corymbosum*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	=Total Cover	
50% of total cover: 10	20% of total cover:	4	
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	10	x 3 =	30
FACU species	115	x 4 =	460
UPL species	0	x 5 =	0
Column Totals:	140 (A)		520 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

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SOIL

Sampling Point: FDS-58U1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/4	80					Loamy/Clayey	Sandy loam
			10YR 5/8	20				Additional matrix
2-12	2.5Y 4/4	100					Loamy/Clayey	Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Auger refusal due to clay layer

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-58U1-2



Photograph 1:

FDS-58U1-2; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2:

FDS-58U1-2; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58U1-3
Investigator(s): A. Leonard, A. Whitlock Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Top of swale Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.492466 Long: -77.688402 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58U1-3

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus phellos*	30	Yes	FAC
2. *Pinus taeda*	20	Yes	FAC
3. *Quercus montana*	20	Yes	UPL
4. *Fraxinus americana*	15	No	FACU
5.			
6.			
7.			
	85	=Total Cover	
50% of total cover: 43		20% of total cover:	17
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Cornus florida*	15	Yes	FACU
2. *Fraxinus americana*	15	Yes	FACU
3. *Ulmus americana*	10	Yes	FACW
4. *Liquidambar styraciflua*	10	Yes	FAC
5. *Liriodendron tulipifera*	7	No	FACU
6. *Quercus alba*	5	No	FACU
7. *Ilex opaca*	3	No	FACU
8.			
9.			
	65	=Total Cover	
50% of total cover: 33		20% of total cover:	13
Herb Stratum (Plot size: 5 ft.)			
1. *Vitis rotundifolia*	30	Yes	FAC
2. *Chasmanthium laxum*	15	Yes	FAC
3. *Liquidambar styraciflua*	7	No	FAC
4. *Acer rubrum*	5	No	FAC
5. *Pinus taeda*	3	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58U1-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					Loamy/Clayey	Organic material with sandy loam
2-12	2.5Y 5/3	95	2.5Y 6/8	5	C	M	Loamy/Clayey	Sandy loam
12-24	2.5Y 7/1	98	2.5Y 6/8	2	C	M	Loamy/Clayey	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-58U1-3



Photograph 1:

FDS-58U1-3; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2:

FDS-58U1-3; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58U2-1
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Tope of slope Local relief (concave, convex, none): Flat Slope (%): 0
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.492848 Long: 77.688562 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58U2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	20	Yes	FAC
2. *Pinus taeda*	15	Yes	FAC
3. *Liquidambar styraciflua*	15	Yes	FAC
4. *Acer rubrum*	15	Yes	FAC
5. *Fraxinus americana*	10	No	FACU
6. *Quercus alba*	5	No	FACU
7.			
	80	=Total Cover	
50% of total cover: 40	20% of total cover: 16		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Pinus taeda*	25	Yes	FAC
3. *Liriodendron tulipifera*	15	No	FACU
4. *Vaccinium corymbosum*	15	No	FACW
5. *Ilex opaca*	10	No	FACU
6. *Viburnum dentatum*	10	No	FAC
7.			
8.			
9.			
	105	=Total Cover	
50% of total cover: 53	20% of total cover: 21		
Herb Stratum (Plot size: 5 ft.)			
1. *Liriodendron tulipifera*	7	Yes	FACU
2. *Acer rubrum*	5	Yes	FAC
3. *Rubus pensilvanicus*	5	Yes	FAC
4. *Quercus phellos*	3	No	FAC
5. *Chasmanthium laxum*	3	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	23	=Total Cover	
50% of total cover: 12	20% of total cover: 5		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88.9% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58U2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	2.5Y 6/2	100					Loamy/Clayey	Silty loam
1-24	2.5Y 6/6	100					Loamy/Clayey	Silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-58U2-1



Photograph 1:

FDS-58U2-1; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2:

FDS-58U2-1; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58U2-2
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495623 Long: -77.688253 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58U2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Acer rubrum*	15	Yes	FAC
2. *Liriodendron tulipifera*	15	Yes	FACU
3. *Pinus taeda*	7	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	37 =Total Cover		
50% of total cover: 19	20% of total cover: 8		
Herb Stratum (Plot size: 5 ft.)			
1. *Lycopus uniflorus*	20	Yes	OBL
2. *Chasmanthium laxum*	20	Yes	FAC
3. *Panicum virgatum*	15	Yes	FAC
4. *Viola sororia*	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65 =Total Cover		
50% of total cover: 33	20% of total cover: 13		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58U2-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/3	97	10YR 6/2	3	D	M	Loamy/Clayey	Silty clay loam
12-24	10YR 6/3	95	10YR 4/6	5	C	M	Loamy/Clayey	Silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-58U2-2



Photograph 1:

FDS-58U2-2; Representative Vegetation (08/29/2024, A. Leonard)



Photograph 2:

FDS-58U2-2; Representative Soils (08/29/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58U3-1
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): Concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496132 Long: -77.687619 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 14. The Palmer Drought Severity Index indicates the area was under "Incipient Drought" conditions. FDS point was just taken out

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58U3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Acer rubrum*	20	Yes	FAC
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Quercus alba*	12	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	47 =Total Cover		
50% of total cover: 24	20% of total cover: 10		
Herb Stratum (Plot size: 5 ft.)			
1. *Smilax rotundifolia*	20	Yes	FAC
2. *Quercus alba*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30 =Total Cover		
50% of total cover: 15	20% of total cover: 6		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	40	Yes	FAC
2.			
3.			
4.			
5.			
	40 =Total Cover		
50% of total cover: 20	20% of total cover: 8		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	22	x 4 =	88
UPL species	0	x 5 =	0
Column Totals:	117 (A)		373 (B)
Prevalence Index = B/A =			3.19

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-58U3-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	2.5Y 7/6	80	2.5Y 5/3	20	C	M	Loamy/Clayey	Silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-58U3-1



Photograph 1: FDS-58U3-1; Representative Vegetation (09/03/2024, A. Leonard)



Photograph 2: FDS-58U3-1; Representative Soils (09/03/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-58W2-1
Investigator(s): A. Leonard Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495695 Long: 77.688494 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-58W2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
50% of total cover: 8		20% of total cover:	3
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	25	Yes	FAC
2. *Acer rubrum*	10	Yes	FAC
3. *Carpinus caroliniana*	7	No	FAC
4. *Liriodendron tulipifera*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
	47	=Total Cover	
50% of total cover: 24		20% of total cover:	10
Herb Stratum (Plot size: 5 ft.)			
1. *Juncus effusus*	25	Yes	FACW
2. *Chasmanthium laxum*	20	Yes	FAC
3. *Liquidambar styraciflua*	15	No	FAC
4. *Rubus pensilvanicus*	10	No	FAC
5. *Quercus phellos*	7	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	77	=Total Cover	
50% of total cover: 39		20% of total cover:	16
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	109	x 3 =	327
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	139 (A)		397 (B)
Prevalence Index = B/A =			2.86

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-58W2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	95	10YR 3/3	5	C	M	Loamy/Clayey	Silty loam
3-18	10YR 6/2	85	7.5YR 6/6	15	C	PL/M	Loamy/Clayey	Silty clay loam
18-24	10YR 7/1	85	10YR 6/6	15	C	M	Loamy/Clayey	Silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-58W2-1



Photograph 1:

FDS-58W2-1; Representative Vegetation (09/03/2024, A. Leonard)



Photograph 2:

FDS-58W2-1; Representative Soils (09/03/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60A4-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3-10
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496807 Long: -77.698848 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. FDS located at a seep where high water table and surface water were present within an erosional feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Surface water was present at the location of the FDS.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60A4-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ilex opaca*	15	Yes	FACU
2. *Pinus taeda*	15	Yes	FAC
3. *Liriodendron tulipifera*	10	Yes	FACU
4.			
5.			
6.			
7.			
	40	=Total Cover	
50% of total cover: 20		20% of total cover:	8
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus nigra*	25	Yes	FAC
2. *Ilex opaca*	20	Yes	FACU
3. *Liquidambar styraciflua*	10	No	FAC
4. *Quercus alba*	10	No	FACU
5. *Viburnum dentatum*	10	No	FAC
6.			
7.			
8.			
9.			
	75	=Total Cover	
50% of total cover: 38		20% of total cover:	15
Herb Stratum (Plot size: 5 ft.)			
1. *Woodwardia areolata*	7	Yes	FACW
2. *Carex blanda*	7	Yes	FAC
3. *Polystichum acrostichoides*	5	Yes	FACU
4. *Viburnum dentatum*	5	Yes	FAC
5. *Microstegium vimineum*	3	No	FAC
6. *Viola primulifolia*	3	No	FAC
7.			
8.			
9.			
10.			
11.			
	30	=Total Cover	
50% of total cover: 15		20% of total cover:	6
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	5	Yes	FACU
2. *Smilax rotundifolia*	2	Yes	FAC
3.			
4.			
5.			
	7	=Total Cover	
50% of total cover: 4		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 54.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	7	x 2 =	14
FAC species	80	x 3 =	240
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	152 (A)		514 (B)
Prevalence Index = B/A =			3.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60A4-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-24	10Y 7/1	90	7.5YR 4/6	10	C	M	Loamy/Clayey	Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60A4-1



Photograph 1:

FDS-60A4-1; Representative Vegetation (09/04/2024, T. Biskup)



Photograph 2:

FDS-60A4-1; Representative Soils (09/04/2024, T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/04/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60A4-2
Investigator(s): Aeris Investments LLC Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3-5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496869 Long: -77.698786 Datum: NAD83
Soil Map Unit Name: Mayodan sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. FDS located at the top of an erosional drainage feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60A4-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
50% of total cover: 8		20% of total cover:	3
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Ilex opaca*	20	Yes	FACU
2. *Acer rubrum*	10	Yes	FAC
3. *Carya glabra*	10	Yes	FAC
4. *Liquidambar styraciflua*	10	Yes	FAC
5. *Liriodendron tulipifera*	7	No	FACU
6. *Pinus taeda*	7	No	FAC
7. *Vaccinium fuscatum*	5	No	FAC
8.			
9.			
	69	=Total Cover	
50% of total cover: 35		20% of total cover:	14
Herb Stratum (Plot size: 5 ft.)			
1. *Toxicodendron radicans*	10	Yes	FAC
2. *Polystichum acrostichoides*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	=Total Cover	
50% of total cover: 10		20% of total cover:	4
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	6	Yes	FACU
2. *Smilax rotundifolia*	2	Yes	FAC
3.			
4.			
5.			
	8	=Total Cover	
50% of total cover: 4		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60A4-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 4/3	98	2.5Y 5/6	2	C	M	Loamy/Clayey	SiL
10-24	2.5Y 4/2	95	10YR 5/8	5	C	M	Loamy/Clayey	SiL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-60A4-2



Photograph 1: FDS-60A4-2; Representative Vegetation (09/04/2024, T. Biskup)



Photograph 2: FDS-60A4-2; Representative Soils (09/04/2024, T. Biskup)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60B1-1
Investigator(s): A. Leonard, A. Whitlock Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.486642 Long: -77.687661 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60B1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liquidambar styraciflua	20	Yes	FAC
2. *Quercus alba*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
50% of total cover: 20		20% of total cover:	8
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liriodendron tulipifera*	15	Yes	FACU
2. *Vaccinium fuscatum*	15	Yes	FAC
3. *Ilex opaca*	12	Yes	FACU
4. *Quercus alba*	7	No	FACU
5. *Fraxinus pennsylvanica*	7	No	FACW
6.			
7.			
8.			
9.			
	56	=Total Cover	
50% of total cover: 28		20% of total cover:	12
Herb Stratum (Plot size: 5 ft.)			
1. *Chasmanthium laxum*	15	Yes	FAC
2. *Smilax rotundifolia*	10	Yes	FAC
3. *Arisaema triphyllum*	10	Yes	FACW
4. *Juncus effusus*	10	Yes	FACW
5. *Lonicera japonica*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	50	=Total Cover	
50% of total cover: 25		20% of total cover:	10
Woody Vine Stratum (Plot size: 30 ft.)			
1. None			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	27	x 2 =	54
FAC species	60	x 3 =	180
FACU species	59	x 4 =	236
UPL species	0	x 5 =	0
Column Totals:	146 (A)		470 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60B1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/1	80	7.5YR 4/6	20	C	M	Loamy/Clayey	Sandy clay loam
10-24	5Y 6/1	85	7.5YR 5/8	15	C	M	Loamy/Clayey	Sandy clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60B1-1



Photograph 1: FDS-60B1-1; Representative Vegetation (08/27/2024, A. Leonard)



Photograph 2: FDS-60B1-1; Representative Soils (08/27/2024, A. Leonard)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60B1-2
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.486676 Long: -77.687559 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60B1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya glabra*	15	Yes	FACU
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Quercus alba*	15	Yes	FACU
4.			
5.			
6.			
7.			
	45	=Total Cover	
50% of total cover: 23		20% of total cover:	9
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Clethra alnifolia*	20	Yes	FAC
2. *Quercus alba*	20	Yes	FACU
3. *Eubotrys racemosa*	15	Yes	FACW
4. *Carya glabra*	10	No	FACU
5. *Ilex opaca*	10	No	FACU
6. *Salix nigra*	5	No	OBL
7.			
8.			
9.			
	80	=Total Cover	
50% of total cover: 40		20% of total cover:	16
Herb Stratum (Plot size: 5 ft.)			
1. *Thelypteris noveboracensis*	30	Yes	FAC
2. *Clethra alnifolia*	7	No	FAC
3. *Euonymus americanus*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	42	=Total Cover	
50% of total cover: 21		20% of total cover:	9
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Parthenocissus quinquefolia*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	=Total Cover	
50% of total cover: 3		20% of total cover:	1

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	15	x 2 =	30
FAC species	77	x 3 =	231
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	172 (A)		566 (B)
Prevalence Index = B/A =			3.29

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60B1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/3	100					Loamy/Clayey	SiL
2-16	10YR 4/4	84	10YR 5/3	15			Loamy/Clayey	SiL, Co-matrix
			7.5YR 3/4	1	C	M		
16-24	2.5Y 6/2	97	2.5YR 5/4	3	C	M	Loamy/Clayey	SiC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60B1-2



Photograph 1: FDS-60B1-2; Representative Vegetation (08/27/2024, T. Biskup)



Photograph 2: FDS-60B1-2; Representative Soils (08/27/2024, T. Biskup)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60C3-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Toe-slope Local relief (concave, convex, none): Concave Slope (%): 3-5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495419 Long: -77.68551 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 2

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60C3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Rubus pensilvanicus*	8	Yes	FAC
2. *Liquidambar styraciflua*	5	Yes	FAC
3. *Liriodendron tulipifera*	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	16	=Total Cover	
50% of total cover: 8	20% of total cover:	4	
Herb Stratum (Plot size: 5 ft.)			
1. *Juncus effusus*	30	Yes	FACW
2. *Solidago altissima*	20	Yes	FACU
3. *Solidago rugosa*	20	Yes	FAC
4. *Andropogon virginicus*	10	No	FACU
5. *Euthamia graminifolia*	7	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	87	=Total Cover	
50% of total cover: 44	20% of total cover:	18	
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Campsis radicans*	15	Yes	FAC
2. *Lonicera japonica*	8	Yes	FACU
3.			
4.			
5.			
	23	=Total Cover	
50% of total cover: 12	20% of total cover:	5	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	55	x 3 =	165
FACU species	41	x 4 =	164
UPL species	0	x 5 =	0
Column Totals:	126 (A)		389 (B)
Prevalence Index = B/A =			3.09

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60C3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/3	100					Loamy/Clayey	Silty clay loam
2-24	2.5Y 6/2	90	10YR 5/8	10	C	PL/M	Loamy/Clayey	Silty clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60C3-1



Photograph 1:

FDS-60C3-1; Representative Vegetation (09/03/2024, T. Biskup)



Photograph 2:

FDS-60C3-1; Representative Soils (09/03/2024, T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60C3-2
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2-5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495351 Long: 77.685447 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60C3-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Rubus pensilvanicus*	15	Yes	FAC
2. *Liquidambar styraciflua*	5	No	FAC
3. *Liriodendron tulipifera*	3	No	FACU
4. *Pinus taeda*	3	No	FAC
5.			
6.			
7.			
8.			
9.			
	26 =Total Cover		
50% of total cover: 13	20% of total cover: 6		
Herb Stratum (Plot size: 5 ft.)			
1. *Solidago altissima*	30	Yes	FACU
2. *Solidago rugosa*	27	Yes	FAC
3. *Euthamia graminifolia*	20	Yes	FAC
4. *Dichanthelium scoparium*	20	Yes	FACW
5. *Dichanthelium dichotomum*	15	No	FAC
6. *Andropogon virginicus*	10	No	FACU
7. *Apocynum cannabinum*	7	No	FACU
8. *Prunella vulgaris*	5	No	FACU
9. *Eupatorium perfoliatum*	5	No	FACW
10. *Bidens aristosa*	5	No	FACW
11.			
	144 =Total Cover		
50% of total cover: 72	20% of total cover: 29		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	12	Yes	FACU
2. *Campsis radicans*	8	Yes	FAC
3.			
4.			
5.			
	20 =Total Cover		
50% of total cover: 10	20% of total cover: 4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60C3-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 4/3	100					Loamy/Clayey	Silty clay loam
3-6	2.5Y 5/4	85	10YR 5/8	15	C	M	Loamy/Clayey	Silty Clay
6-12	2.5Y 6/3	45	10YR 5/8	10	C	M	Loamy/Clayey	Silty clay loam
			7.5YR 5/8	45				Additional matrix
12-24	7.5YR 5/8	100					Loamy/Clayey	Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60C3-2



Photograph 1: FDS-60C3-2; Representative Vegetation (09/03/2024, T. Biskup)



Photograph 2: FDS-60C3-2; Representative Soils (09/03/2024, T. Biskup)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60D3-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2-3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496316 Long: -77.685978 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60D3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Rubus pensilvanicus*	10	Yes	FAC
2. *Liquidambar styraciflua*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	15 =Total Cover		
50% of total cover: 8	20% of total cover: 3		
Herb Stratum (Plot size: 5 ft.)			
1. *Solidago altissima*	20	Yes	FACU
2. *Solidago rugosa*	20	Yes	FAC
3. *Dichanthelium scoparium*	15	Yes	FACW
4. *Rhexia virginica*	12	Yes	OBL
5. *Andropogon virginicus*	10	No	FACU
6. *Phragmites australis*	10	No	FACW
7. *Rubus pensilvanicus*	10	No	FAC
8. *Vernonia noveboracensis*	10	No	FACW
9. *Bidens aristosa*	7	No	FACW
10. *Tridens flavus*	5	No	FACU
11.			
	119 =Total Cover		
50% of total cover: 60	20% of total cover: 24		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	7	Yes	FACU
2.			
3.			
4.			
5.			
	7 =Total Cover		
50% of total cover: 4	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	12	x 1 =	12
FACW species	42	x 2 =	84
FAC species	45	x 3 =	135
FACU species	42	x 4 =	168
UPL species	0	x 5 =	0
Column Totals:	141 (A)		399 (B)
Prevalence Index = B/A =			2.83

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60D3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/3	95	7.5YR 5/8	5	C	PL/M	Loamy/Clayey	Silty clay loam
2-14	2.5Y 6/1	90	7.5YR 5/8	10	C	PL/M	Loamy/Clayey	Silty clay loam
14-24	2.5Y 6/1	80	7.5YR 5/8	20	C	M	Loamy/Clayey	Silty clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-60D3-1



Photograph 1:

FDS-60D3-1; Representative Vegetation (09/03/2024,T. Biskup)



Photograph 2:

FDS-60D3-1; Representative Soils (09/03/2024,T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60D3-2
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2-3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.496386 Long: -77.685937 Datum: NAD83
Soil Map Unit Name: Creedmoor gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60D3-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus alba*	15	Yes	FACU
2. *Liriodendron tulipifera*	15	Yes	FACU
3. *Pinus taeda*	10	Yes	FAC
4. *Nyssa sylvatica*	7	No	FAC
5.			
6.			
7.			
8.			
9.			
	47	=Total Cover	
50% of total cover: 24	20% of total cover:	10	
Herb Stratum (Plot size: 5 ft.)			
1. *Phragmites australis*	25	Yes	FACW
2. *Solidago altissima*	20	Yes	FACU
3. *Solidago rugosa*	20	Yes	FAC
4. *Dichanthelium scoparium*	15	No	FACW
5. *Andropogon virginicus*	7	No	FACU
6. *Dichanthelium dichotomum*	7	No	FAC
7.			
8.			
9.			
10.			
11.			
	94	=Total Cover	
50% of total cover: 47	20% of total cover:	19	
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Lonicera japonica*	7	Yes	FACU
2.			
3.			
4.			
5.			
	7	=Total Cover	
50% of total cover: 4	20% of total cover:	2	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	44	x 3 =	132
FACU species	64	x 4 =	256
UPL species	0	x 5 =	0
Column Totals:	148 (A)		468 (B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60D3-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3						Loamy/Clayey	Silty clay loam
4-24	2.5Y 6/4	45	10YR 5/8	10	C	M	Loamy/Clayey	Silty clay loam
			2.5Y 6/3	45				Additional matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60D3-2



Photograph 1: FDS-60D3-2; Representative Vegetation (09/03/2024,T. Biskup)



Photograph 2: FDS-60D3-2; Representative Soils (09/03/2024,T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60I1-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1-3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.492188 Long: 77.686925 Datum: NAD83
Soil Map Unit Name: Water NWI classification: PUBHh
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60I1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	30	Yes	FAC
2. *Nyssa sylvatica*	20	Yes	FAC
3. *Quercus alba*	15	Yes	FACU
4. *Liriodendron tulipifera*	10	No	FACU
5.			
6.			
7.			
	75	=Total Cover	
50% of total cover: 38		20% of total cover:	15
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	30	Yes	FAC
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Nyssa sylvatica*	10	Yes	FAC
4. *Vaccinium fuscatum*	10	Yes	FAC
5.			
6.			
7.			
8.			
9.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Herb Stratum (Plot size: 5 ft.)			
1. *Microstegium vimineum*	10	Yes	FAC
2. *Clethra alnifolia*	7	Yes	FAC
3. *Carex spp.*	7	Yes	FAC
4. *Juncus effusus*	3	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	27	=Total Cover	
50% of total cover: 14		20% of total cover:	6
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	10	Yes	FAC
2. *Parthenocissus quinquefolia*	7	Yes	FACU
3.			
4.			
5.			
	17	=Total Cover	
50% of total cover: 9		20% of total cover:	4

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	144	x 3 =	432
FACU species	32	x 4 =	128
UPL species	0	x 5 =	0
Column Totals:	179 (A)		566 (B)
Prevalence Index = B/A =			3.16

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)
Carex species not flowering and therefore unable to identify.

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60I1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 4/2	65	10YR 5/8	5	C	M	Loamy/Clayey	SiC
			2.5Y 5/3	30				Additional matrix
8-24	2.5Y 5/3	80	10YR 5/8	10	C	M	Loamy/Clayey	SiC
			2.5Y 4/2	10				Additional matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-60I1-1



Photograph 1:

FDS-60I1-1; Hydrophytic Vegetation (08/27/2024, T. Biskup)



Photograph 2:

FDS-60I1-1; Hydric Soils (08/27/2024, T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60I1-2
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1-3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.492249 Long: -77.686658 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam, clayey substratum NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60I1-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	10	Yes	FACU
2. *Pinus taeda*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
50% of total cover: 8		20% of total cover: 3	

Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Pinus taeda*	70	Yes	FAC
2. *Liquidambar styraciflua*	35	Yes	FAC
3. *Quercus alba*	30	No	FACU
4. *Fraxinus americana*	10	No	FACU
5. *Nyssa sylvatica*	10	No	FAC
6.			
7.			
8.			
9.			
	155	=Total Cover	
50% of total cover: 78		20% of total cover: 31	

Herb Stratum (Plot size: 5 ft.)			
1. *Microstegium vimineum*	12	Yes	FAC
2. *Eragrostis pectinacea*	10	Yes	FAC
3. *Dichanthelium scoparium*	7	Yes	FACW
4. *Eupatorium serotinum*	5	No	FAC
5. *Panicum oligosanthes*	5	No	FACU
6. *Scutellaria integrifolia*	5	No	FACW
7. *Liriodendron tulipifera*	3	No	FACU
8. *Vaccinium pallidum*	3	No	UPL
9.			
10.			
11.			
	50	=Total Cover	
50% of total cover: 25		20% of total cover: 10	

Woody Vine Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-60I1-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 4/3	97	10YR 5/8	3	C	M	Loamy/Clayey	SiC
8-24	2.5Y 5/4	75	10YR 5/8	5	C	M	Loamy/Clayey	SiC
			2.5YR 5/4	20				Additional matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-60I1-2



Photograph 1: FDS-60I1-2; Representative Vegetation (08/27/2024, T. Biskup)



Photograph 2: FDS-60I1-2; Representative Soils (08/27/2024, T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60J2-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2-3
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.494900 Long: -77.686845 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. FDS located in a relatively flat area located within swale where geomorphology allows for the development of wetland indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Relatively flat local topography within swale.

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60J2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liquidambar styraciflua*	15	Yes	FAC
2. *Quercus nigra*	12	Yes	FAC
3. *Carya glabra*	10	Yes	FACU
4. *Ulmus alata*	8	No	FACU
5. *Nyssa sylvatica*	5	No	FAC
6.			
7.			
8.			
9.			
	50 =Total Cover		
50% of total cover: 25	20% of total cover: 10		
Herb Stratum (Plot size: 5 ft.)			
1. *Arisaema triphyllum*	20	Yes	FACW
2. *Glyceria striata*	7	Yes	OBL
3. *Potentilla simplex*	7	Yes	FACU
4. *Lonicera japonica*	5	No	FACU
5. *Solidago rugosa*	3	No	FAC
6. *Trichostema dichotomum*	3	No	UPL
7.			
8.			
9.			
10.			
11.			
	45 =Total Cover		
50% of total cover: 23	20% of total cover: 9		
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Vitis rotundifolia*	7	Yes	FAC
2.			
3.			
4.			
5.			
	7 =Total Cover		
50% of total cover: 4	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	7	x 1 =	7
FACW species	20	x 2 =	40
FAC species	42	x 3 =	126
FACU species	30	x 4 =	120
UPL species	3	x 5 =	15
Column Totals:	102 (A)		308 (B)
Prevalence Index = B/A =			3.02

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60J2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/3	100					Loamy/Clayey	SiC
6-24	2.5Y 6/2	95	10YR 5/8	5	C	M	Loamy/Clayey	SiC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Received by VMRC January 29, 2026 / lra

PHOTOGRAPHS **Sampling Point:** FDS-60J2-1



Photograph 1: FDS-60J2-1; Representative Vegetation (08/29/2024, T. Biskup)



Photograph 2: FDS-60J2-1; Representative Soils (08/29/2024, T. Biskup)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60J2-2
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2-5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495014 Long: -77.686925 Datum: NAD83
Soil Map Unit Name: Creedmoor fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. FDS located above a relatively flat area located within swale where soils are draining too quickly for development of wetland indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60J2-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. None in plot			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Quercus nigra*	60	Yes	FAC
2. *Carya glabra*	45	Yes	FACU
3. *Liquidambar styraciflua*	10	No	FAC
4. *Acer rubrum*	5	No	FAC
5. *Ulmus alata*	5	No	FACU
6.			
7.			
8.			
9.			
	125 =Total Cover		
50% of total cover: 63	20% of total cover: 25		
Herb Stratum (Plot size: 5 ft.)			
1. *Glyceria striata*	10	Yes	OBL
2. *Lonicera japonica*	7	Yes	FACU
3. *Campsis radicans*	5	No	FAC
4. *Lycopus virginicus*	5	No	OBL
5. *Dioscorea villosa*	3	No	FAC
6. *Toxicodendron radicans*	3	No	FAC
7.			
8.			
9.			
10.			
11.			
	33 =Total Cover		
50% of total cover: 17	20% of total cover: 7		
Woody Vine Stratum (Plot size: 30 ft.)			
1. None in plot			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	0	x 2 =	0
FAC species	86	x 3 =	258
FACU species	57	x 4 =	228
UPL species	0	x 5 =	0
Column Totals:	158 (A)		501 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60J2-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 5/3	99	10YR 5/8	1	C	M	Loamy/Clayey	SiC
8-24	2.5Y 6/3	97	10YR 5/8	3	C	M	Loamy/Clayey	SiC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10) **(LRR N)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
___ Thin Dark Surface (S9) **(MLRA 147, 148)**
___ Loamy Mucky Mineral (F1) **(MLRA 136)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
___ Umbric Surface (F13) **(MLRA 122, 136)**
___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(MLRA 147)**
___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-60J2-2



Photograph 1: FDS-60J2-2; Representative Vegetation (08/29/2024, T. Biskup)



Photograph 2: FDS-60J2-2; Representative Soils (08/29/2024, T. Biskup)

Received by VMRC January 29, 2026 / lra

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/27/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60U1-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2-5
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.487952 Long: -77.687781 Datum: NAD83
Soil Map Unit Name: Pinkston gravelly sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60U1-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya glabra*	30	Yes	FACU
2. *Quercus alba*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
50% of total cover: 30		20% of total cover:	12
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Liriodendron tulipifera*	70	Yes	FACU
2. *Liquidambar styraciflua*	50	Yes	FAC
3. *Quercus alba*	10	No	FACU
4. *Rubus pensilvanicus*	7	No	FAC
5. *Prunus serotina*	5	No	FACU
6.			
7.			
8.			
9.			
	142	=Total Cover	
50% of total cover: 71		20% of total cover:	29
Herb Stratum (Plot size: 5 ft.)			
1. *Dichanthelium clandestinum*	15	Yes	FAC
2. *Carex pensylvanica*	10	Yes	UPL
3. *Lespedeza bicolor*	3	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	28	=Total Cover	
50% of total cover: 14		20% of total cover:	6
Woody Vine Stratum (Plot size: 30 ft.)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	72	x 3 =	216
FACU species	145	x 4 =	580
UPL species	13	x 5 =	65
Column Totals:	230 (A)		861 (B)
Prevalence Index = B/A =			3.74

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

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SOIL

Sampling Point: FDS-60U1-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					Loamy/Clayey	SiC
4-24	10YR 5/6	100					Loamy/Clayey	SiC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-60U1-1



Photograph 1:

FDS-60U1-1; Representative Vegetation (08/27/2024, T. Biskup)



Photograph 2:

FDS-60U1-1; Representative Soils (08/27/2024, T. Biskup)

Received by VMRC January 29, 2026 / Ira

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 08/29/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60U2-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5-10
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.493361 Long: -77.685524 Datum: NAD83
Soil Map Unit Name: Mayodan gravelly sandy loam NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Normal Conditions" conditions during the dry season with a precipitation normalcy index of 13. The Palmer Drought Severity Index indicates the area was under "Mild Drought" conditions. FDS located in an erosional feature with no wetland vegetation or soil present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Remarks:
Erosional feature

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

Sampling Point: FDS-60U2-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya glabra*	60	Yes	FACU
2. *Acer rubrum*	10	No	FAC
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
50% of total cover: 35		20% of total cover:	14
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Carya glabra*	35	Yes	FACU
2. *Quercus alba*	30	Yes	FACU
3. *Liquidambar styraciflua*	25	Yes	FAC
4. *Quercus nigra*	7	No	FAC
5.			
6.			
7.			
8.			
9.			
	97	=Total Cover	
50% of total cover: 49		20% of total cover:	20
Herb Stratum (Plot size: 5 ft.)			
1. *Leersia virginica*	15	Yes	FACW
2. *Polystichum acrostichoides*	5	No	FACU
3. *Rubus pensilvanicus*	5	No	FAC
4. *Smilax rotundifolia*	3	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	28	=Total Cover	
50% of total cover: 14		20% of total cover:	6
Woody Vine Stratum (Plot size: 30 ft.)			
1. None in plot			
2.			
3.			
4.			
5.			
		=Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	50	x 3 =	150
FACU species	130	x 4 =	520
UPL species	0	x 5 =	0
Column Totals:	195 (A)		700 (B)
Prevalence Index = B/A =			3.59

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

Received by VMRC January 29, 2026 / Ira

SOIL

Sampling Point: FDS-60U2-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/4	100					Loamy/Clayey	SiC
6-20	2.5Y 5/4	90	10YR 5/8	10	C	M	Loamy/Clayey	SiC
20-24	2.5Y 6/3	90	10YR 5/8	10	C	M	Loamy/Clayey	SiC

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Received by VMRC January 29, 2026 / Ira

PHOTOGRAPHS **Sampling Point:** FDS-60U2-1



Photograph 1: FDS-60U2-1; Representative Vegetation (08/29/2024, T. Biskup)



Photograph 2: FDS-60U2-1; Representative Soils (08/29/2024, T. Biskup)

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U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Project Loch City/County: Chesterfield County Sampling Date: 09/03/2024
Applicant/Owner: Aeris Investments LLC State: VA Sampling Point: FDS-60U3-1
Investigator(s): T. Biskup Section, Township, Range: N/A
Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): 0-2
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat: 37.495539 Long: -77.699937 Datum: NAD83
Soil Map Unit Name: Fluvaquents NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
The USACE Antecedent Precipitation Tool indicates the Site was within "Wetter than Normal Conditions" conditions during the dry season with a precipitation normalcy index of 16.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

Received by VMRC January 29, 2026 / lra

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

Sampling Point: FDS-60U3-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	20	Yes	FAC
2. *Liriodendron tulipifera*	7	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	27	=Total Cover	
50% of total cover: 14		20% of total cover:	6
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *Lindera benzoin*	12	Yes	FAC
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Liriodendron tulipifera*	5	No	FACU
4. *Ilex opaca*	5	No	FACU
5. *Juniperus virginiana*	5	No	FACU
6. *Quercus phellos*	3	No	FAC
7.			
8.			
9.			
	40	=Total Cover	
50% of total cover: 20		20% of total cover:	8
Herb Stratum (Plot size: 5 ft.)			
1. *Parathelypteris noveboracensis*	30	Yes	FAC
2. *Carex blanda*	12	Yes	FAC
3. *ranunculus abortivus*	7	No	FACW
4. *Ilex opaca*	5	No	FACU
5. *Viburnum dentatum*	5	No	FAC
6. *Carya glabra*	3	No	FACU
7. *Passiflora lutea*	3	No	UPL
8.			
9.			
10.			
11.			
	65	=Total Cover	
50% of total cover: 33		20% of total cover:	13
Woody Vine Stratum (Plot size: 30 ft.)			
1. *Smilax rotundifolia*	5	Yes	FAC
2. *Parthenocissus quinquefolia*	3	Yes	FACU
3.			
4.			
5.			
	8	=Total Cover	
50% of total cover: 4		20% of total cover:	2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	7	x 2 =	14
FAC species	97	x 3 =	291
FACU species	33	x 4 =	132
UPL species	3	x 5 =	15
Column Totals:	140 (A)		452 (B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

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SOIL

Sampling Point: FDS-60U3-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/4	100					Loamy/Clayey	Silty loam
7-24	2.5Y 7/4	85	10YR 7/1	10	D	M	Loamy/Clayey	Silty clay loam
			10YR 5/6	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Mucky Mineral (F1) **(MLRA 136)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 122, 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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PHOTOGRAPHS **Sampling Point:** FDS-60U3-1



Photograph 1: FDS-60U3-1; Representative Vegetation (09/03/2024, T. Biskup)



Photograph 2: FDS-60U3-1; Representative Soils (09/03/2024, T. Biskup)

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PREPARED FOR:
GOOGLE, LLC
251 LITTLE FALLS DRIVE
WILMINGTON, DE 19808

PROJECT LOCH
PERMIT REQUEST

JANUARY 2026

PREPARED BY:
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TIMMONS GROUP PROJECT NO. 72865.002

CIVIL ENGINEERING | ENVIRONMENTAL | SURVEYING | GIS | LANDSCAPE ARCHITECTURE | CONSTRUCTION SERVICES

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EXECUTIVE SUMMARY

On behalf of Google, LLC, Timmons Group is requesting Individual Permit authorizations from the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality. This request is being submitted for unavoidable impacts to jurisdictional surface waters necessary to construct the Project Loch project.

The purpose of this project is to develop a mission-critical data center campus in Central Virginia, comprising three data center buildings, associated substations, and supporting infrastructure. This facility will address the growing regional and national demand for high-capacity digital infrastructure while fostering local economic development. The campus will be located in Chesterfield County, Virginia; a site chosen for its unique convergence of essential utilities, including reliable electrical power, robust fiber connectivity, and adequate water supply. All components have been strategically positioned within the property to meet operational, safety, and security requirements while minimizing environmental impact to the greatest extent possible.

In order to identify the extent and location of onsite surface waters, a wetland delineation of the 349.3-acre project study limits was conducted by Timmons Group in September 2025. The delineation was performed based upon the methodology outlined in the 1987 Army Corps of Engineers Wetland Delineation Manual; the Regional Supplement to the USACE Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0); and subsequently issued USACE regulatory guidance regarding the identification of stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features. The delineation will accompany the permit application upon submission.

To achieve the goals of the Project, impacts to jurisdictional waters are unavoidable. As proposed, the Project will permanently impact approximately 0.44 acres (19,091 square feet) of palustrine emergent (PEM) wetlands, 3.61 acres (157,426 square feet) of palustrine forested (PFO) wetlands, 2,825 linear feet of intermittent (R4) stream, and 220 linear feet of ephemeral (R6) stream.

Compensatory mitigation for these impacts will be provided through a combination of off-site stream credits purchased from a mitigation bank approved for use in the Appomattox watershed (HUC 02080207) and Permittee-Responsible Mitigation (PRM). PRM has been identified as the ecologically preferred approach for addressing wetland mitigation requirements. Based on standard mitigation ratios, proposed compensation would include 7.67 credits and 3,565 stream credits.

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PROJECT LOCH
PERMIT REQUEST

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1.0 PROJECT INFORMATION SHEET

Anticipated Permit Authorizations

- U.S. Army Corps of Engineers: **Individual Permit**
- Virginia Department of Environmental Quality: **VWP Individual Permit**
- Virginia Marine Resources Commission: **No Permit Required**. The Project, as proposed, does not involve impacts to subaqueous/bottomlands, coastal primary sand dunes, or waters with a drainage area of >5 square miles.
- Local Wetlands Board: **No Permit Required**

General

Project Name:	Project Loch
State:	Virginia
Location:	Chesterfield County
Latitude:	37.4930427
Longitude:	-77.6926332
Project Study Limits:	349.3 acres
Limits of Disturbance:	221.3 acres (Project Area)
HUC Code:	02080207 (Appomattox)
Waterbodies on Property:	Palustrine Forested (PFO) Wetlands, Palustrine Emergent (PEM) Wetlands, Palustrine Unconsolidated Bottom (PUB), Perennial (R3) Stream, Intermittent (R4) Stream, Ephemeral (R6) Stream

Corresponding Information

USGS Quad:	Hallsboro, 2022
USDA Soils Map:	http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
County:	Chesterfield County, VA

Applicant

Name:	Google, LLC
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2.0 INTRODUCTION

On behalf of Google, LLC, (Applicant), Timmons Group is requesting Individual Permit authorizations from the U.S. Army Corps of Engineers (USACE) and the Virginia Department of Environmental Quality (DEQ). This request is being submitted for unavoidable impacts to jurisdictional surface waters necessary to construct Project Loch (Project).

3.0 SITE LOCATION AND DESCRIPTION

The project area encompasses 349.3 acres in Chesterfield County, Virginia (Figure 1: Vicinity Map). The Project is located within the Appomattox watershed (HUC 02080207) in the Southern Piedmont physiographic province. Surface waters onsite drain southwest towards Tomahawk Creek (Figure 2: Hydrologic Unit Code Map).

The project area consists primarily of forest in various stages of early succession due to historic silvicultural activities. The Project site is bound by Watkins Center Parkway (continuing as Otterdale Road) followed by Route 288 to the east, Tomahawk Creek to the west, a Norfolk Southern Railroad corridor to the north, and forested land and residential properties to the south (Figure 3: Environmental Inventory Map).

In order to identify the extent and location of onsite surface waters, a wetland delineation of the 349.3-acre project study limits was conducted by Timmons Group in September 2025. The delineation was performed based upon the methodology outlined in the 1987 Army Corps of Engineers Wetland Delineation Manual; the Regional Supplement to the USACE Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0); and subsequently issued USACE regulatory guidance regarding the identification of stream channels through the recognition of field indicators of an ordinary high-water mark within drainage features. Delineation mapping in support of these requests are included as Appendix B: Waters Delineation Information. Concurrent with this permit request, Timmons Group is requesting a Preliminary Jurisdictional Determination from USACE and a State Surface Water Determination from DEQ.

According to the FEMA National Flood Hazard Layer (Figure 6: FEMA Map), the majority of the project area is located within Zone X, identified as an area of minimal flood hazard located outside of the 100-year floodplain. A portion of the western project area along Tomahawk Creek is located within Zone A, identified as an area of 1% annual chance of flood hazard. The Project has been designed to comply with applicable FEMA-approved state and local floodplain management requirements. No increase in the 100-year flood elevations is anticipated as a result of project implementation. Additionally, there are no known wetlands, open water, stream, or associated upland buffers within the project area that are under a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument.

4.0 PURPOSE AND NEED

The purpose of this project is to develop a mission-critical data center campus in Central Virginia, comprising three data center buildings, associated substations, and supporting infrastructure. This facility will address the growing regional and national demand for high-capacity digital infrastructure while fostering local economic development. The campus will be located in Chesterfield County, Virginia; a site chosen for its unique convergence of essential utilities, including reliable electrical power, robust fiber connectivity, and adequate water supply. All components have been strategically positioned within the property to meet operational, safety, and security requirements while minimizing environmental impact to the greatest extent possible.

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The need for the Project is driven by documented increases in regional and national demand for data processing, cloud computing, artificial intelligence, and other data-intensive applications. These trends have resulted in sustained demand for modern data center infrastructure across the United States. Virginia, particularly Northern Virginia, has served as a primary hub for national data center development for more than a decade; however, the region now faces limited available land, rising development costs, and utility-capacity constraints that affect future large-scale expansion. These factors have shifted data center growth to other areas of the Commonwealth that can support continued investment and operational reliability.

Chesterfield County has emerged as a favorable location due to its central position in the mid-Atlantic region, a strong transportation network with direct access to Interstates 95 and 295, and proximity to I-85 and I-64. The County maintains a well-developed infrastructure system with established capacity for utility-intensive uses. Chesterfield also offers a stable workforce pipeline and a regulatory and tax environment supportive of large-scale technology and industrial development. These conditions align with the siting requirements typically associated with modern data center facilities, including land availability, infrastructure readiness, and long-term operational viability.

Within the region, Chesterfield County provides a unique combination of geographic positioning, transportation access, infrastructure capability, and land suitability required for large-scale data center development. Alternative locations outside Chesterfield County would not provide the same combination of physical siting characteristics and infrastructure factors necessary to support the proposed development.

In addition to addressing the regional need for expanded digital-infrastructure capacity, the Project is expected to contribute to local economic stimulus and opportunity. The Project will provide long-term capital investment, tax revenue, and employment opportunities associated with construction, operations, and supporting services.

The Applicant has recently highlighted a $9 billion investment in Virginia through 2026. Amber Tillman, head of data center public affairs for Google, recently noted Chesterfield is well suited for portions of that investment:

"When we look for new sites, we look for a strong talent pool, both for construction and operations, as well as available infrastructure and land," She would go on to say "Lastly, but most importantly, great community partners who want to work with us and who will help advance our projects quickly and we found all of that in Chesterfield."

The influx of funds provides direct economic benefit to the county residents through infrastructure upgrades, new schools, and expanded municipal services that otherwise would not be possible.

5.0 PROJECT DESCRIPTION

The Project incorporates several essential site components and auxiliary structures. The proposed development includes three (3) data center buildings, three (3) electrical substations, high-voltage radial feeds, and associated equipment yards, each of which is necessary to provide reliable, redundant power delivery. Additional components include secured site entrances, a security guardhouse, and a central operations hub to support round-the-clock monitoring and facility management. Fire protection will be supported by a dedicated fire tank and pump house, designed to meet applicable code and life-safety requirements. Stormwater onsite will be collected via roof drains, drop inlets, and curb and gutter, and routed to one of eight stormwater basins located along the development perimeter. Stormwater will be released from the basins via energy-dissipating devices to

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unimpacted portions of existing waters compliant with state and local stormwater regulations. All components have been sited to minimize environmental disturbance while meeting the operational, safety, and spatial needs of the campus.

Electrical power for the campus will be delivered via the existing 200-foot VEPCO high-voltage transmission easement that runs through the northern portion of the site. Supporting electric utility infrastructure will include overhead power lines within this easement and substations to distribute power to the various components of the campus.

6.0 ALTERNATIVES ANALYSIS

6.1 Introduction

In accordance with the "Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR Part 230." Section (a) of 40 CFR Part 230 Subpart B, known as the Clean Water Act Section 404(b)(1) Guidelines, states that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." An alternative is considered practicable "if it is capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purposes."

Alternatives evaluated to determine the Least Environmentally Damaging Practicable Alternative (LEDPA) include: (a) The no-action alternative, (b) off-site alternatives, and (c) on-site alternatives. After consideration of available alternatives to meet the needs of the project, the Preferred Alternative as proposed is considered the LEDPA.

Considering the highly specific infrastructure needs of data center campuses, proper site selection is critical to ensuring success and viability of the Project. The criteria used in identifying the Preferred Alternative included the following:

- Ability to support three 300,000 square foot data center building pads
- Access to fiber optic
- Access to high voltage transmission
- Access to public water/sewer
- Site owned or available for purchase from seller
- Zoned or planned for industrial use
- Wetland and stream impacts

The Preferred Alternative for the proposed Project was determined to be the LEDPA as it meets the site requirements while minimizing impacts to environmental resources compared to other alternatives. Details of each considered alternative are described below.

6.2 No-Action Alternative

The No-Action Alternative, which would avoid all impacts to aquatic resources, is not a viable option given the purpose and need of the Project. Under the No Action Alternative, the proposed data center development would not require impacts to Jurisdictional Waters of the U.S. and would not require the issuance of Section 401/404 Individual Permits. The Applicant evaluated the possibility of not constructing a new data center campus. However, it was determined that the increased need for cloud storage space to meet industry demand necessitates development.

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6.3 Offsite Alternatives

The Applicant evaluated three off-site parcels as potential locations for large-scale industrial development. Each site was reviewed for its ability to support the overall project purpose, which requires sufficient contiguous acreage for a multi-building data center campus, proximity to high-voltage electric transmission, access to high-capacity fiber, adequate water and wastewater availability for cooling, compatible zoning or realistic entitlements, feasible roadway access for construction and long-term operations, and minimal unavoidable impacts to Waters of the U.S. (WOTUS).

None of the three off-site alternatives can meet these combined requirements without significantly greater impacts to aquatic resources, major infrastructure extensions, or fatal logistical constraints. The following narrative summarizes the findings for each. A comparison of the four sites is provided in Table 1 below and includes the minimum criteria for site selection.

The requisite size for a data center campus to meet the Project's purpose and need was determined to be approximately 220 acres. Therefore, a roughly 220-acre area was delineated within each alternative site, and this smaller area (depicted as Limits of Disturbance on attached mapping) was used to estimate surface water impacts. The location of each 220-acre development area within each alternative site was selected to minimize impacts to surface waters to the greatest extent practicable while maintaining feasibility for site design and layout. A consolidated summary of the selection criteria is outlined below in Table 1.

Table 1: Criteria Evaluated for Offsite Alternatives

Criteria	Preferred Alternative (LEDPA)	Hickory Hill Road (Alternative 1)	Dragway (Alternative 2)	Sauer Industrial Center (Alternative 3)
Parcel Size	349	507.5	91.2	490.3
Cost (2024 Assessment)	$6,752,644	$15,226,500	$3,200,00	$22,989,400
Can support three 300k sq ft. data center buildings	Yes	Yes	No	No
Proximity to Fiber	Onsite	Onsite	No	Yes
Proximity to high voltage	Onsite	Onsite	No	Yes
Parcel ownership/control by applicant	Owned by Applicant	Not owned; four parcels, multiple owners	Not owned; two parcels	Not owned; 28 parcels, multiple parcel owners
Zoned or planned for industrial use	Yes - Light Industrial	Yes - Light Industrial	Heavy Industrial (Requires PUP)	Light Industrial (Requires PUP)
Proximity to major transportation corridors	Direct access	Nearest interstate ~5.9 miles via narrow rural roads	Nearest interstate ~3.6 miles away	Nearest interstate ~3.9 miles away
Wetland Impacts	3.61 acres	131 acres	27 acres	103.7 acres
Stream Impacts	2,825 linear feet	6,126 linear feet	2,968 linear feet	5,204 linear feet
Cultural Resources Onsite	Yes	Yes	Yes	Yes
Threatened & Endangered	TCB, MB	TCB, GF, DW, AS, YL	NLEB, TCB, SP	NLEB, TCB, BE

MB= Monarch butterfly, TCB= Tricolored bat, GF= Green floater, DW= Dwarf wedgemussel, AS= Atlantic sturgeon, Y:= Yellow lance, SP= Swamp pink, BE= Bald eagle

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A detailed narrative evaluating Purpose, Surface Water Impacts, Cost, Technology, Logistics, Threatened and Endangered Species, and Cultural Resources is included below.

Offsite Alternative 1: Hickory Hill Road Technology Park Site

Purpose: The Hickory Hill Road Technology Park Alternative is located at the intersection of Hickory Hill Road (State Route 646) and Old Ridge Road (State Route 738) in Hanover County, Virginia. The site consists of a largely undeveloped 507.5-acre tract characterized by flat topography and a mix of open land and lightly managed areas. The property is zoned Light Industrial and offers significant contiguous acreage that would be suitable for large-scale industrial users. This site meets the Project's purpose and need by providing sufficient land area and appropriate zoning to accommodate a multi-building data center campus.

Surface Water Impacts: Development of this site would require impacts to surface waters. USGS mapping indicates unnamed tributaries of the South Anna River running along and through the southern portion of the property. Additionally, the USFWS National Wetlands Inventory (NWI) identifies several forested wetlands within the central portion of the site. To construct a multi-building data center campus, impacts to approximately 6,126 linear feet of stream channel and 131 acres of wetlands would be required. Please see Attachment C: Offsite Alternative 1- Hickory Hill Road Technology Park for maps depicting the desktop delineated resources and projected impacts at the site.

Cost: Cost is a major limiting factor for developing the Hickory Hill Road Technology Park Alternative compared to the Preferred Alternative. This site consists of four separate parcels, none of which are owned by the Applicant. Property acquisition - based solely on assessed land values and not what a willing seller may require - would cost approximately $15,226,500. In addition to acquisition costs, the site lacks direct internal access and would require substantial investment in constructing new internal roadways and extending utilities across a large, undeveloped tract to support a data-center campus of comparable scale. Given that the Preferred Alternative is already owned by the Applicant, the Hickory Hill Road Technology Park Alternative is considerably less economically viable.

Furthermore, the magnitude of surface water impacts associated with development of this site would result in mitigation costs that are prohibitive for the Project relative to the cost of the preferred alternative.

Technology: The site has access to all relevant technology to meet the purpose and need of the Project.

Logistics. Logistical considerations present significant limitations for developing the Hickory Hill Road Technology Park Alternative compared to the Preferred Alternative. This site is accessed only by Hickory Hill Road (Route 646) and Old Ridge Road (Route 738), both of which are two-lane secondary roads not designed to accommodate the sustained construction traffic, heavy-haul deliveries, or long-term operational demands associated with a multi-building data-center campus. The nearest interstate connection (I-95, approximately 5.9 miles away) requires all traffic to traverse narrow rural corridors before reaching the site, creating constraints for oversized equipment transport and emergency response access.

While Hanover County provides public water and sewer in the general area, the scale of infrastructure required for a multi-building data center campus would require major off-site extensions and capacity upgrades.

Lastly, the surrounding land uses are predominantly low-density and rural. A large technology campus at this location would require significant coordination with the County and likely additional

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approvals to ensure compatibility with community planning objectives. Collectively, these factors make the Hickory Hill Road Technology Park Alternative considerably less logistically feasible than the Preferred Alternative.

T&E Species: According to IPaC and VAFWIS database searches, the tricolored bat, green floater, dwarf wedgemussel, Atlantic sturgeon, and the yellow lance have the potential to occur within two miles of the Hickory Hill alternative. No specific capture records within the project limits were listed within the Hickory Hill alternative.

Cultural Resources: According to VCRIS database searches, there is one (1) recorded architectural resource (VDHR # 042-0777) and two archaeological resources (44HN0506 & 44HN0507) located within the Hickory Hill alternative. None of the onsite resources are eligible for listing in the National Historic Register of Historic Places (NRHP) or the Virginia Landmarks Register (VLR). Additionally, two (2) architectural and three (3) archaeological resources are within 0.25 miles of the Hickory Hill alternative. Both architectural and two (2) archaeological resources have not been formally evaluated. One (1) remaining archaeological resource is not eligible for listing in the NRHP or VLR.

Offsite Alternative 2: Dragway Site

Purpose: The Dragway Site Alternative consists of two adjoining parcels totaling approximately 93 acres along Portugee Road in eastern Henrico County, Virginia. Although the site is relatively flat and partially cleared, only about 70 acres are considered developable, which is not sufficient to support the Project's overall development program. As a result, the Dragway Site would not support the proposed programming for a multi-building data center campus. Nevertheless, the Applicant evaluated this alternative further due to its industrial zoning, relatively flat condition, and access to existing public utilities.

Surface Water Impacts: Surface water impacts would be required to develop this site and are the primary factors excluding this site from development. USGS mapping depicts portions of White Oak Swamp and White Oak Swamp Creek running along the eastern and southern property boundaries. Additionally, NWI mapping displays potential forested wetlands adjacent to these systems. Constructing a multi-building data center campus would require approximately 2,968 linear feet of stream channel and 27 acres of wetlands. Please see Attachment D: Offsite Alternative 2-Dragway Site for maps depicting the desktop delineated resources and projected impacts at the site.

Cost: Cost is a consideration for the Dragway Site Alternative, although the estimated $3.2 million in land acquisition (based solely on assessed values) is not prohibitive for a project of this scale. The limiting factor is not the cost of the land itself, but rather the consequences of attempting to develop the Project on a property with such limited usable acreage. With only approximately 70 developable acres available across the two parcels, the Applicant would be forced to significantly compress the site layout and make substantial design compromises that would undermine the functionality, efficiency, and long-term viability of the overall campus. These tradeoffs would also drive additional site preparation expenses, utility modifications, and engineering requirements far beyond what would otherwise be necessary. As a result, even though the acquisition cost alone is not prohibitive, the development inefficiencies created by the restricted parcel size render the Dragway Site economically and operationally infeasible when compared to the Preferred Alternative.

Additionally, in 2025, Henrico County eliminated by-right data center approval and now requires a Provisional Use Permit. The additional approval process would incur substantial additional cost to the Applicant, relative to the Preferred Alternative.

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Technology: The site has access to all relevant technology to meet the purpose and need of the Project.

Logistics: Logistical constraints at the Dragway Site are driven foremost by its limited size. The property contains approximately 70 usable acres, which is insufficient to accommodate the applicant's required program elements, including multiple data center buildings, on-site electrical substations, stormwater management facilities, required security buffers and setbacks, internal circulation roadways, equipment storage areas, and fire protection infrastructure. Accommodating these components within the available acreage would necessitate reductions in safety clearances, security separation, and operational spacing that are fundamental to safe and reliable facility function and are not reasonably subject to modification. In addition, the constrained site size limits the ability to provide adequate ingress and egress, emergency response access, internal access circulation, and construction staging areas necessary for both the construction phase and long-term operation. Accordingly, even without consideration of external utility or transportation constraints, the physical size of the Dragway Site renders it logistically impracticable and therefore not a practicable alternative when compared to the Preferred Alternative.

T&E Species: According to IPaC and VAFWIS database searches, the northern long-eared bat, tricolored bat, and swamp pink have the potential to occur within two miles of the Hickory Hill alternative. No specific capture records within the project limits were listed within the Hickory Hill alternative.

Cultural Resources: According to VCRIS database searches, there are two (2) recorded architectural resources, the Savage Station Battlefield (043-0308) and the CSX Railroad (121-5134), that intersect the Dragway alternative project area. Both resources are eligible for listing in the NRHP or VLR. Additionally, two (2) architectural resources are within 0.25 miles of the Dragway alternative. Of these, the Second Deep Battlefield (043-5080) is potentially eligible for listing and is directly southeast of the project. The remaining resource is a cemetery that has not been formally evaluated. There are no recorded archaeological resources located within the project area or within 0.25-mile of the project area.

Offsite Alternative 3: Sauer Industrial Center Site

Purpose: The Sauer Industrial Center Site Alternative is located along Laburnum Avenue in Henrico County, Virginia, and consists of approximately 28individual parcels totaling 490.3 acres.. The property is characterized by gently rolling topography and a mix of cleared and lightly developed industrial land. Zoned Light Industrial, the site offers significant total acreage and the potential for several large-format building layouts that may be suitable for a variety of industrial or logistics users. This site meets the Project's purpose and need due to its overall size, industrial zoning, existing due diligence, and its general compatibility with broader regional economic development objectives.

Surface Water Impacts: Surface water impacts would be required to develop this site. USGS mapping depicts multiple unnamed tributaries of Fourmile Creek running along the eastern property boundary and extending into the central portion of the site. USGS mapping also depicts an unnamed tributary of Cornelius Creek bisecting the western half of the site. NWI mapping depicts forested wetlands in the floodplains of these systems as well as additional isolated features throughout the site. To construct a multi-building data center of requisite size would require impacts to approximately 5,204 linear feet of stream channel and 103.7 acres of wetlands. Please see Attachment E: Offsite Alternative 3- Sauer Industrial Center Site for maps depicting the desktop delineated resources and projected impacts at the site.

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Cost: Cost is a major limiting factor for developing this site over the Preferred Alternative. This site is made up of multiple parcels which are not owned by the Applicant. Property acquisition, solely based on assessed land values and not what a willing seller would require, would cost approximately $22,989,400. Given that the Preferred Alternative is owned by the Applicant, acquisition alone makes this Alternative less economically viable compared to the Preferred. Additional costs would include due diligence, PUP approval, site design, increased compensatory mitigation, and additional infrastructure upgrades.

Technology: The site has access to all relevant technology to meet the purpose and need of the Project.

Logistics: Logistical considerations substantially limit the suitability of the Sauer Industrial Center Site as an alternative for the proposed project. Although the overall site boundary encompasses approximately 490.5 acres, the property is divided into 28 separate parcels, with only 105 acres forming the largest contiguous development block. This fragmented structure presents a significant constraint, as a mission-critical data center campus requires a consolidated development footprint to achieve coordinated building placement, efficient internal circulation, and secure perimeter controls. The presence of two large distribution buildings in the southeastern portion of the site further reduces the usable area and complicates efforts to establish a cohesive campus layout.

Assimilating numerous individual parcels into a unified development area would introduce substantial planning, entitlement, and construction challenges. The level of coordination required across parcel boundaries, combined with the inherent limitations of the site's fragmented configuration, makes it difficult to accommodate the functional and security needs of a multi-building hyperscale data center campus.

Based on these factors, the Sauer Industrial Center Site presents logistical obstacles that render it less feasible than the Preferred Alternative for supporting a development of this scale and complexity.

Based on these factors, the Sauer Industrial Center Site presents logistical challenges that make it less feasible than the Preferred Alternative for accommodating a development of this scale.

T&E Species: According to IPaC and VAFWIS database searches, the northern long-eared bat, tricolored bat, and bald eagle nests have the potential to occur within two miles of the Hickory Hill alternative. No specific capture records within the project limits were listed within the Hickory Hill alternative. The bald eagle nesting site is recorded approximately 844 feet west of the site across South Laburnum Avenue along Cornelius Creek.

Cultural Resources: According to VCRIS database searches, there are six (6) recorded architectural and twenty-four (24) archaeological resources within the Sauer Industrial Center alternative project area. One (1) architectural resource, the Savage Station Battlefield (043-0308) runs along the west and southwest boundary of the alternative and is eligible for listing in the NRHP or VLR. Two (2) archaeological resources, the 895 Airport Connector farmstead (44HE0969) and Civil War earthworks (44HE1246) are also eligible. Four (4) architectural resources; New Market Heights Battlefield (043-0307), Darbytown and New Market Roads Battlefield (043-5071), Darbytown Battlefield (043-5072), and Fair Oaks and Darbytown Road Battlefield (043-5073); are all potentially eligible for listing in the NRHP or VLR. The latter three battlefields encompass the entirety of the alternative. Three (3) archaeological resources; artifact deposits (44HE1265 and 44HE1266) and an unnamed potential battlefield site (44HE1268); are also potentially eligible. The final architectural resource within the alternative, Montague cemetery (043-6418), and eleven (11) archaeological resources have not been formally evaluated. Seven (7) archaeological resources are not eligible for

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listing in the NRHP or VLR. The final archaeological resource within the alternative, 44HE0972, is no longer extant.

Additionally, six (6) recorded architectural and nine (9) archaeological resources are within 0.25 miles of the Sauer Industrial Center alternative. Of these, one (1) architectural and six (6) archaeological resources have not been formally evaluated, four (4) architectural and three (3) archaeological resources are not eligible for listing in the NRHP or VLR, and one (1) architectural resource is no longer extant.

Preferred Alternative

Purpose: The Preferred Alternative is located southwest of the intersection of Watkins Center Parkway and the Norfolk Southern Railroad corridor in Chesterfield County, Virginia. The location provides sufficient contiguous acreage to support all required components of the proposed data center campus, including three data center buildings, three electrical substations, internal access roads, utilities, stormwater management facilities, security infrastructure, and associated support facilities.

Importantly, the site is immediately adjacent to the Midlothian Community Special Area Plan (MC-SAP), an area designated by Chesterfield County for coordinated growth, future infrastructure investment, and employment-oriented development (please see Figure 8: Preferred Alternative and Existing Midlothian Community Special Area Plan). The site's proximity to this planning area supports land-use compatibility and aligns the Project with established County planning objectives. This adjacency helps reduce potential secondary or growth-inducing impacts because the Project is located within a broader area already planned for higher-intensity uses and public infrastructure improvements. For these reasons, the Preferred Alternative is the only location evaluated that fully meets the Project purpose and need to construct a data center campus while aligning with County planning policies.

Surface Water Impacts: Surface water impacts would be required to develop this site. However, the Preferred Alternative results in substantially fewer impacts to wetlands and streams compared to the offsite alternatives evaluated. Development of the data center campus at this location would require impacts to approximately 3,045 linear feet of stream channel and 4.05 acres of wetlands, which is the lowest practicable level of aquatic resource disturbance capable of meeting the project's operational and siting requirements.

Cost: The site is owned by the Applicant. Therefore, there would be no required cost of property acquisition associated with this alternative.

Technology: The site has access to all relevant technology to meet the purpose and need of the Project.

Logistics: The logistical considerations of the Preferred Alternative support the development of the Project at this location. The property has direct access to existing public water and sewer infrastructure, reducing the need for extensive off-site utility extensions and minimizing the potential for secondary environmental impacts. The site is bordered by established transportation corridors, including Route 288 and Watkins Center Parkway/Otterdale Road, both of which are capable of accommodating construction traffic, oversized equipment deliveries, emergency response access, and long-term operational needs associated with a multi-building data center campus.

A high-voltage utility corridor crosses the site, providing an advantageous location for siting the three proposed electrical substations and associated high-voltage radial feeds required to support

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reliable facility operations. The presence of this existing utility corridor limits the need for new transmission easements and reduces the potential for off-site impacts compared to other locations evaluated.

Although the parcel is bisected by an existing public roadway, the site remains under single ownership and still provides a large and cohesive development footprint capable of accommodating all required project components. The roadway does not hinder coordinated site design; instead, it can be integrated into the internal circulation system to facilitate logical separation of access control points, emergency response routes, service vehicle movements, and construction staging areas. The overall site layout offers sufficient area for the placement of data center buildings, substations, stormwater management facilities, equipment yards, fire protection infrastructure, parking, and required security buffers, all without necessitating encroachment into sensitive resource areas.

Collectively, the site's access to utilities, presence of an on-site high-voltage corridor, proximity to regional transportation infrastructure, and the availability of a cohesive development footprint under single ownership make the Preferred Alternative logistically practicable and more suitable than the offsite alternatives evaluated.

6.3 Onsite Alternatives

The Applicant evaluated one alternative layout for the proposed data center campus associated with the Preferred Alternative. Site design was primarily constrained by the presence and location of onsite surface waters. Initial layouts focused on minimizing grading and earthwork. While this alternative configuration resulted in a marginal reduction in stream impacts, it caused a corresponding increase in wetland impacts. Additionally, the alternative layout is economically infeasible and does not meet the Project's purpose and need.

Beyond surface water constraints, the developable area of the site is further limited by fixed environmental and cultural features, including Tomahawk Creek, associated RPA buffers, and the Dry Bridge Cemetery with its required 7.5-meter buffer. These features restrict construction to narrow, discontinuous areas, leaving little flexibility to shift or reorient buildings, utilities, or internal circulation without encroaching into regulated resources.

A summary of impacts associated with each alternative is provided in Table 2. The alternative layout was developed to minimize impacts to onsite surface waters and informed selection of the Preferred Alternative. The number and arrangement of data center buildings in the Preferred Alternative were optimized to avoid surface waters to the maximum extent practicable while maintaining the minimum building program necessary for economic viability. Given the cumulative site constraints, the only feasible way to further reduce impacts would be to remove one of the proposed buildings, which would render the Project economically infeasible and unable to meet its stated purpose and need.

Accordingly, the current design represents both the minimum number of buildings required to maintain viability and the configuration that results in the least overall impact to regulated resources. The Preferred Alternative, therefore, constitutes the LEDPA based on site constraints and the Project's purpose and need. See Appendix F for alternative site layouts and wetland impact mapping.

Table 2: Impacts Associated with Onsite Alternatives

Criteria	Preferred Alternative (LEDPA)	Onsite Alternative

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Wetland Impacts	4.05 acres	4.47 acres
Stream Impacts	3,045 linear feet	2,732 linear feet

7.0 AVOIDANCE AND MINIMIZATION

Impacts to jurisdictional features were avoided and minimized to the maximum extent practicable by incorporating resourceful site selection, several design iterations, and strategic site planning. This includes the utilization of a wetland delineation to ensure all jurisdictional features within the project area were accurately depicted.

The primary constraints of site development were the location of jurisdictional features and Resource Protection Area (RPA) buffers. The Applicant has configured the proposed campus to maximize development within onsite upland areas while avoiding all impacts to perennial streams and RPA buffers. The overall site layout was designed to make efficient use of upland terrain while accommodating existing topography and grading requirements. While impacts to intermittent and ephemeral streams and headwater wetlands are necessary to support grading and stormwater conveyance, these impacts have been minimized to the greatest extent practicable. Additionally, the portion of the project located north of Watkins Center Parkway was specifically designed to avoid all wetland impacts. The Applicant has positioned the proposed stormwater basins to capture receiving drainage areas and discharge downstream waterbodies while avoiding direct impacts to jurisdictional surface waters. This strategic placement ensures downstream waterbodies receive adequate hydrology to avoid secondary impacts from hydrologic losses or water quality/quantity impacts. The location of the stormwater basins will ensure that the downstream waters will receive similar inputs as pre-construction conditions. Where crossings or stormwater outfalls are unavoidable, culverts have been proposed at appropriate locations to maintain flow continuity and prevent secondary impacts to downstream perennial systems. Culvert sizing and placement were designed to preserve hydrologic inputs and minimize alteration of natural drainage patterns.

Collectively, these measures demonstrate the Applicant's commitment to avoiding and minimizing impacts to jurisdictional waters and RPAs to the maximum extent practicable while meeting the functional requirements of the proposed development.

In order to avoid secondary impacts, a project-specific Erosion and Sediment Control (ESC) plan will be prepared in accordance with local and state regulations. All regulated land-disturbing activities associated with the Project, including on and off-site access roads, staging areas, borrow areas, stockpiles, and soil intentionally transported from the project area will be covered by the project-specific ESC plan. During construction activities, these measures will be inspected and maintained throughout the life of the construction activity providing for enhanced protection of the jurisdictional areas.

8.0 JURISDICTIONAL IMPACTS

In order to achieve the goals of the Project, impacts to jurisdictional surface waters are unavoidable. The locations of the proposed impacts are depicted on Figure 4: Wetlands and Waters Impacts Map. As proposed, approximately 3.61 acres of palustrine forested (PFO) wetlands, 0.44 acres of palustrine emergent (PEM), 2,825 linear feet of intermittent (R4) stream, and 220 linear feet of ephemeral (R6) stream channel would be permanently impacted. Details regarding impacts are outlined in Appendix G – Wetlands and Waters Impact Table and in the narrative description below.

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Impacts 2 and 19- If approved, will result in permanent impacts to 0.01 acres (463 square feet) of PFO wetlands and 0.14 acres (5,971 square feet) of PEM wetland for the grading and construction of internal access roads, data center building pad, and stormwater conveyance.

Impact 5- If approved, will result in permanent impacts to 1.10 acres (47,761 square feet) of PFO wetlands. This impact is unavoidable due to site topography and the need to maintain functional campus layout.

Impacts 1, 3, 4, and 22- If approved, will result in permanent impacts to 0.11 acres (4,996 square feet) of PFO wetlands and 144 linear feet of R4 stream. These impacts are necessary to accommodate grading for internal access roads, stormwater conveyance systems, and utility connections that support the overall site layout and functionality.

Impact 8- If approved, will result in permanent impacts to 0.65 acres (28,387 square feet) of PFO wetlands for the grading and construction of the data center laydown yard.

Impacts 7, 10, 11, 18, 24, 27- If approved, will result in permanent impacts to 0.10 acres (4,449 square feet) of PFO wetlands and 2,290 linear feet of R4 stream. These impacts are necessary to accommodate grading for internal access roads, stormwater conveyance systems, and utility corridors that provide site functionality.

Impact 12 and 13- If approved, will result in permanent impacts to 0.99 acres (42,994 square feet) of PFO wetlands for the grading and construction of the data center office building and associated parking area.

Impact 16 and 17- If approved, will result in permanent impacts to 0.38 acres (16,722 square feet) of PFO wetlands and 0.30 acres (13,120 square feet) of PEM wetlands. These impacts are necessary to accommodate grading for internal access roads, stormwater conveyance systems, and utility connections that support the overall site layout and functionality.

Impacts 6, 9, 22, 25, and 26- If approved, will result in permanent impacts to 0.16 acres (7,157) square feet) of PFO wetlands, 144 linear feet of R4 stream, and 220 linear feet of R6 stream for the construction and grading of a data center building.

Impact 15- If approved, will result in permanent impacts to 0.06 acres (2,706 square feet) of PFO wetlands for the construction and grading of a data center building.

These impacts are unavoidable and the minimum necessary based on the needs of the Project. The Applicant will adhere to county and state mandate erosion and sediment control measures to minimize the possibility of downstream impacts.

9.0 COMPENSATORY MITIGATION

Compensatory mitigation for unavoidable impacts to jurisdictional surface waters necessary to construct the Project Loch Site will be achieved through a combination of Permittee Responsible Mitigation (PRM) and the purchase of off-site mitigation credits from Mitigation Banks authorized to service the project area. Wetland compensation requirements were determined using the standard mitigation ratio of 2:1 for PFO and 1:1 for PEM wetlands. The Unified Stream Methodology (USM) was used to determine stream mitigation ratios for impacted stream reaches, which included intermittent and ephemeral channels. The corresponding scores and USM forms are included in Appendix H: USM Forms. Based on the ratios and scores, the proposed impacts would require compensation of 7.67 wetland credits and 3,565 stream credits. A detailed accounting of the mitigation requirements is

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included in Appendix I: Compensatory Mitigation Table with summary and narrative descriptions below.

Available information indicates that wetland credits in the applicable service area are limited, while stream credits are currently available from one or more mitigation banks authorized to service the Project watershed. Consistent with federal and state compensatory mitigation policies, the Project will therefore satisfy the stream mitigation requirement through the purchase of off-site stream credits from approved mitigation banks. Supporting credit availability information is included in Appendix J: Credit Availability Information.

The uncertainty regarding wetland credit availability, combined with limited credit reserves needed to support future development within the watershed, led to consideration of alternative mitigation strategies. In addition, the Applicant maintains an organizational commitment to stewardship and conservation, which further supports the evaluation of mitigation options that provide long-term ecological benefit within the same watershed. Considering these factors, Permittee-Responsible Mitigation (PRM) has been identified as the ecologically preferred approach for addressing the wetland compensatory mitigation requirement. The full PRM plan, including the ecological rationale, anticipated functional lift, performance standards, monitoring requirements, and long-term protection mechanisms, is currently under development and will be submitted once available.

10.0 SUPPORTING SITE INFORMATION

10.1 Threatened and Endangered Species

A protected species review was conducted to gain insight regarding the potential presence of Endangered Species Act (ESA) listed species within or in the vicinity of the project study limits. In addition, a summer mist-net survey for federally listed bat species was conducted by Apogee, Inc. over fourteen nights in June 2025. This survey will be submitted to the U.S. Fish and Wildlife Services concurrently with this report. The following agencies and associated databases were also reviewed for likely populations of threatened and endangered (T&E) species within the project study limits and within a two-mile radius:

- U.S. Fish and Wildlife Services (USFWS) – Information, Planning and Consultations system (IPaC)
- Virginia Department of Wildlife Resources (VDWR) - Virginia Fish and Wildlife Information Service (VaFWIS)
- VDWR Northern Long-eared Bat (NLEB), Tricolored Bat (TCB), and Little Brown Bat (LBB) Consultation Tool mapper
- Virginia Department of Conservation and Recreation (VDCR) – Division of Natural Heritage (DNH) subwatershed search
- The Center for Conservation Biology – VA Eagles Nest Locator
- USFWS - Bald Eagle Concentration Area Mapping

The results of this review are provided in Appendix K: Threatened & Endangered Species Information. Based on the results of the review, there is one (1) listed species identified as potentially present within the project study limits or within the 2-mile search radius. The following summarizes the results of the review:

- USFWS IPaC – Tricolored bat (*Perimyotis subflavus*) PESE

Tricolored Bat:

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