

MVP Southgate Amendment Project

Docket No. CP25-XX-000

Resource Report 2

Appendix 2-F

Amendment Project Wetland Delineation Reports



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Amendment Project Wetland Delineation Reports

North Carolina

MOUNTAIN VALLEY PIPELINE, LLC

MVP Southgate Amendment Project Wetland Delineation Report Rockingham County, North Carolina

MVP Southgate Amendment Project DECEMBER 2, 2024

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List of Abbreviations

Abbreviation	Term/Phrase/Name				
87 Manual	1987 Corps of Engineers Wetlands Delineation Manual				
Amendment Project	MVP Southgate Amendment Project				
Amendment Project Area	Project layout with associated with MVP Southgate Amendment Project				
APT	Antecedent Precipitation Tool				
BMcD	BMCD EGS, P.C.				
HUC	Hydrologic Unit Code				
MVP	Mountain Valley Pipeline, LLC				
NAIP	National Agriculture Imagery Program				
NC	North Carolina				
NCDEQ	North Carolina Department of Environmental Quality				
NHD	National Hydrography Dataset				
NRCS	Natural Resources Conservation Service				
NWI	National Wetland Inventory				
OHWM	Ordinary High-Water Mark				
PEM	Palustrine Emergent				
PFO	Palustrine Forested				
PJD	Preliminary Jurisdictional Determination				
PSS	Palustrine Scrub-Shrub				
PUB	Palustrine Unconsolidated Bottom				
Regional Supplement	2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region – Version 2.0				
SSURGO	Soil Survey Geographic				
USACE	U.S. Army Corps of Engineers				
USDA	U.S. Department of Agriculture				
USGS	U.S. Geological Survey				



1.0 Introduction

Mountain Valley Pipeline LLC (MVP) is proposing a new 31.5 mile, 30-inch diameter natural gas pipeline initiating in Pittsylvania County, Virginia, and terminating in Rockingham County, North Carolina (NC). A total of five miles of pipeline would be constructed in North Carolina and the remaining 26.5 miles of pipeline in Virginia. MVP also proposes to construct three interconnection facilities in North Carolina and one interconnection facility in Virginia as part of the Amendment Project (Amendment Project). BMcD EGS P.C. (BMcD) was contracted to conduct a wetland delineation for the Amendment Project. The North Carolina portion of the Amendment Project begins northeast of Quesinberry Rd in Eden, NC (36°29'29.50"N, 79°40'58.21"W) and terminates at the North Carolina-Virginia border (36°32'29.87"N, 79°37'57.71"W) 0.18 miles northeast of the intersection of U.S. Highway 311 and Buffalo Road, approximately 2.33 miles northeast of Fitzgerald, NC. A corridor of variable width and access roads were surveyed along this route (Amendment Project Area). The North Carolina portion of the Amendment Project encompasses 139.3 acres (Amendment Project Area; Figure A-1). The Amendment Project Area consists primarily of broadleaf deciduous and mixed forests, pine plantations, current and former pastures, and planted row crops. This report encompasses only the North Carolina portion of the Amendment Project.BMcD conducted a wetland delineation for the Amendment Project to evaluate the presence of wetlands and other water resources, including streams, drainages, and ponds, that may fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and North Carolina Department of Environmental Quality (NCDEQ) as designated by Sections 404 and 401 of the Clean Water Act. The wetland delineation was conducted in accordance with the 1987 Corps of Engineers Wetland Delineation Manual (87 Manual; USACE 1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region - Version 2.0 (Regional Supplement; USACE 2010). BMcD employs experienced delineators and strives to achieve a high a degree of precision and accuracy in the delineation of aquatic feature boundaries. As noted in the 87 Manual and Regional Supplement, delineations conducted at different times and/or by different delineators may result in minor variations in area and boundaries due to several factors. Those factors may include (1) the exercise of professional judgment to evaluate site-specific conditions and indicators; (2) statistical variability inherent in the use of transects and sampling methods to map features; and (3) normal annual and seasonal variability.



2.0 Methods

2.1 Desktop Review

BMcD reviewed publicly available information in Geographic Information Systems to identify potential wetland and water body features in the Amendment Project Area prior to conducting a site visit. This information included U.S. Geological Survey (USGS) 7.5-minute topographic maps Southeast Eden and Northeast Eden, NC quadrangles (USGS 2022a, b), USGS National Hydrography Dataset (NHD; USGS 2016), U.S. Fish & Wildlife Service National Wetlands Inventory (NWI) maps (USFWS 2024), National Agriculture Imagery Program (NAIP) aerial photography (NAIP 2021), the Federal Emergency Management Agency (FEMA) floodplain and floodway data (FEMA 2007), and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) digital data for Rockingham County, North Carolina (USDA NRCS 2023). These maps are provided in Appendix A. The USACE Antecedent Precipitation Tool (APT) was reviewed to evaluate precipitation conditions and evaluate "normal conditions" as required as part of the wetland delineation (Appendix E; USACE 2023).

Data from the above sources were used to identify probable locations of wetlands within the Amendment Project Area. The USACE defines wetlands as areas that contain hydric soils, hydrophytic vegetation, and wetland hydrology. This desktop review used existing information to identify areas where these indicators are likely to be present, including overlapping areas of NWI and NHD features, hydric soils, lower elevations in the landscape, saturation or inundation visible on aerial imagery, etc. The onsite wetland delineation described below was conducted to verify and update the findings of the desktop review.

2.2 Wetland Delineation Field Survey

A wetland delineation was completed June 3 through 18, August 19 through September 4, September 26, and October 3, 2024, in accordance with the 87 Manual and the Regional Supplement. Boundaries were walked and recorded with sub-meter-accurate global positioning systems, including SXblue and Juniper Systems Geode. Sample plots were established at multiple locations, typically paired on either side of the wetland/upland boundary to demonstrate wetland and non-wetland conditions. The location and extent of wetlands, streams, and drainage ditches are shown with aerial imagery background on Figure A-2 in Appendix A.

Wetland Determination Data Forms from the Regional Supplement were completed to document representative conditions at each sample point location within the Amendment Project Area (Appendix B). Vegetation, soil conditions, and hydrologic indicators were recorded at each of these sample plots. The areal percent cover of each plant species was estimated by stratum, and the appropriate wetland indicator status from the USACE 2020 National Wetland Plant List was assigned to determine the presence or absence of hydrophytic vegetation. Soil color and texture were recorded using a Munsell Soil Color chart (Munsell 2021) and analyzed in accordance with the Field Indicators of Hydric Soils in the United States (USDA NRCS 2024a). Hydric soil indicators were noted on the data form when present. Observations of primary and secondary hydrology indicators were noted based on field observations and desktop data review. Representative photographs were taken at each sample plot location and are included in Appendix C.

Each wetland was evaluated using the North Carolina Wetland Assessment Method in accordance with the 2016 North Carolina Wetland Assessment Method (NC WAM) User Manual Version 5. Copies of the North Carolina Wetland Assessment Method Forms are included in Appendix D.



Each wetland was assigned a classification based on the Cowardin Classification System (Cowardin et al. 1979) and consisted of the following:

- Palustrine Emergent (PEM) characterized by a 30 percent or greater areal cover of emergent, herbaceous vegetation. Additionally, the combined areal cover of shrubs, saplings, and trees in these wetlands was less than 30 percent.
- Palustrine Forested (PFO) characterized by a 30 percent or greater areal cover in the tree stratum and an aerial cover of less than 30 percent in the shrub/sapling stratum.
- Palustrine Scrub-Shrub (PSS) characterized by a 30 percent or greater areal cover in the shrub/sapling stratum and an aerial cover of less than 30 percent in the tree stratum.
- Palustrine Unconsolidated Bottom (PUB) characterized by a combined areal cover of less than 30 percent of vegetation.

Stream channels were delineated, and characteristics were recorded including ordinary high-water mark (OHWM) width and depth as well as flow regime.

Flow regimes at each delineated stream were assigned based on observed flow at the time of the delineation and consisted of one of the following designations:

- Perennial characterized by the presence of a substantial volume of flow at the time of the site visit, indicating that water flows year-round.
- Intermittent characterized by the presence of a limited volume of flow at the time of the site visit, indicating that the stream is partially fed by groundwater, but that flow is not continuous year-round.
- Ephemeral characterized by a defined bed and bank but had limited or no flow during the site visit, indicating these streams largely carry water only during and after precipitation events.

Summary tables in Section 3.0 list the features identified and provide wetland acreage and linear feet of stream channels and drainage ditches within the Amendment Project Area.



3.0 Results

3.1 Desktop Review

The NCDEQ 8-digit Hydrologic Unit Code (HUC) Subbasins Map (2023) indicates the Amendment Project is situated within the Upper Dan (HUC 03010103) drainage basin, which is a sub-basin to the Roanoke River (HUC 0301001). The 2021 NAIP aerial photography indicates that the Amendment Project Area consists primarily of broadleaf deciduous and mixed forests, pine plantations, current and former pastures, and planted row crops.

A review of the USGS topographic maps (Figure A-2, Appendix A) indicates the Amendment Project Area consisted of varying terrain with elevations ranging from 474-650 feet above sea level, large portions of forested areas with scattered open areas, and numerous drainageways and stream channels flowing generally southeast into the Dan River, Dry Creek, and Cascade Creek and unnamed tributaries to these listed streams. Three named features, the Dan River, Dry Creek, and Cascade Creek, are located within the Amendment Project Area.

USDA NRCS SSURGO digital data indicates that portions of 13 soil map units are located in the Amendment Project Area (Figure A-3, Appendix A). Of the 13 soil map units, only one map unit (Leaksville silt loam, 0 to 4 percent slopes) is included in the NRCS Hydric Soils List (Figure A-4; USDA NRCS, 2024b).

NWI data indicates one PEM wetland, one PFO wetland, one PUB wetland, and 11 riverine features are located within the Amendment Project Area (Figure A-4, Appendix A).

NHD data indicates the Amendment Project Area crosses numerous streams, including Cascade Creek and the Dan River (Figure A-4, Appendix A).

The FIRM data indicates the Amendment Project Area crosses several floodplains as well as the floodway associated with the Dan River (Figure A-4, Appendix A).

The USACE APT indicates that the antecedent precipitation conditions that the site experienced fluctuated over time between drier than normal and normal. All days that surveys were conducted were under normal antecedent precipitation conditions except for June 10, 17, and 18, 2024, where conditions were drier than normal, and August 21 through 30, September 26, and October 3, 2024, where conditions were wetter than normal. A copy of the USACE APT results is provided in Appendix E.

3.2 Delineated Areas

From June 3 through 18, August 19 through September 4, September 26, and October 3, 2024, wetland scientists conducted a wetland delineation of the Amendment Project Area. The locations, boundaries, and characteristics of wetlands and streams were determined and recorded within the Amendment Project Area. The land cover and delineated wetlands and other waterbodies are discussed in detail below.

3.2.1 Vegetation

The Amendment Project Area primarily consisted of broadleaf deciduous forest, mixed forest, pine plantations, current and former pastures, and row crops. Dominant tree and shrub/sapling species within the Amendment Project Area include red maple (*Acer rubrum*), tuliptree (*Liriodendron tulipifera*), Persian silk tree (*Albizia julibrissin*), white oak (*Quercus alba*), black cherry (*Prunus serotina*), American hornbeam (*Carpinus*)



caroliniana), sweetgum (Liquidambar styraciflua), willow oak (Quercus phellos), and pignut hickory (Carya glabra). Dominant herbaceous species within the Amendment Project Area included white clover (Trifolium repens), Japanese stiltgrass (Microstegium vimineum), fowl mannagrass (Glyceria striata), rescue brome (Bromus catharticus), annual bluegrass (Poa annua), tall fescue (Schedonorus arundinaceus), false nettle (Boehmeria cylindrica), tall goldenrod (Solidago altissima), and deertongue (Dichanthelium clandestinum).

3.2.2 **Soils**

Typical soils within the Amendment Project Area ranged from dark grayish brown (10YR 4/2) to strong brown (7.5YR 4/6) and ranged from clay loam to sandy loam in texture. Redoximorphic features were typically present in wetland soils and absent from upland soils. Soils observed within delineated wetland areas are described below and are shown on the Data Forms in Appendix B.

3.2.3 Hydrology

The primary source of hydrology for wetland areas was retention of surface runoff in geomorphic positions with poor drainage and flooding from adjacent streams and groundwater. Typical indicators of hydrology within wetlands included Water-Stained Leaves, Geomorphic Position, and a positive FAC-Neutral Test.

3.2.4 Wetlands

The delineation identified a total of 32 wetlands, comprised of four wetland types: PEM, PFO, PUB, and PSS, encompassing a total of 12.79 acres within the Amendment Project Area. One wetland, W-B045, was delineated during field surveys but was determined to be located outside the Amendment Project Area. This feature is depicted on Figure A-5; however, it is not included in the summary of wetlands or Table 3-1. BMcD assumes a Preliminary Jurisdictional Request (PJD) will be submitted to USACE for the Amendment Project, therefore all wetlands within the Amendment Project Area are assumed to be under both USACE and NCDEQ jurisdiction. Table 3-1 below includes the Cowardin classification, acreage, and proposed jurisdictional status of each wetland delineated within the Amendment Project Area. The location and extent of the delineated wetlands are depicted in Figure A-5 in Appendix A. Data forms and color photographs from the wetland delineation are included in Appendices B and C, respectively.

Seventeen PEM wetlands encompassing 5.57 acres were delineated. Common vegetation within PEM wetlands included trumpet vine (*Campsis radicans*), lamp rush (*Juncus effusus*), small carpet grass (*Arthraxon hispidus*), poison ivy (*Toxicodendron radicans*), deertongue, globe flatsedge (*Cyperus echinatus*), marsh seedbox (*Ludwigia palustris*), foxtail sedge (*Carex vulpinoidea*), and Frank's sedge (*Carex frankii*). Wetland hydrology was commonly indicated by Saturation being Visible on Aerial Imagery, Drainage Patterns, Geomorphic Position, and a positive FAC-Neutral Test. Hydric soil was mainly indicated by Depleted Matrix.

Ten PFO wetlands encompassing 5.56 acres were delineated. Dominant woody vegetation in PFO wetlands tuliptree, red maple, willow oak, loblolly pine (*Pinus taeda*), sweetgum, American hornbeam, box elder (*Acer negundo*), and American sycamore (*Platanus occidentalis*). Dominant herbaceous vegetation in PFO wetlands included Japanese stiltgrass, jumpseed (*Persicaria virginiana*) fowl mannagrass, straw-colored flatsedge (*Cyperus strigosus*), velvety rosette panic-grass (*Dichanthelium scoparium*), marsh seedbox, drooping sedge (*Carex prasina*), round-leaved greenbrier (*Smilax rotundifolia*), and jack-in-the-pulpit (*Arisaema triphylla*). Wetland hydrology was mainly indicated by High Water Table, Saturation, Saturation Visible on Aerial Imagery, Inundation Visible on Aerial Imagery, Drainage Patterns, Geomorphic Position, and a positive FAC-Neutral Test. Hydric soil was mainly indicated by Depleted Matrix.



Four PSS wetlands encompassing 1.65 acres were delineated. Dominant woody vegetation in PSS wetlands included green ash (Fraxinus pennsylvanica), buttonbush (Cephalanthus occidentalis), common persimmon (Diospyros virginiana), swamp rose (Rosa palustris), and American sycamore. Dominant herbaceous vegetation in PSS wetlands included pointed broomsedge (Carex scoparia), swamp rose mallow (Hibiscus moscheutos), lamp rush, tall goldenrod, and velvety rosette panic-grass. Wetland hydrology was mainly indicated by Oxidized Rhizospheres, Geomorphic Position, and a positive FAC-Neutral Test. Hydric soil was commonly indicated by Depleted Matrix.

One PUB wetland encompassing 0.01 acres was delineated. Vegetation was largely absent due to the presence of open water. Vegetation adjacent to the PUB wetland included red maple, sweetgum, pignut hickory, American sycamore, broomsedge (*Andropogon virginicus*), Allegheny blackberry, tuliptree, and poison ivy. Soil sampling was prevented by the presence of open water, but hydric soil conditions are assumed due to inundation creating anaerobic conditions. Hydrology was indicated by Surface Water, Inundation Visible on Aerial Imagery, and Geomorphic Position.

Table 3-1: Type and Size of Delineated Wetlands

Wetland Number	Wetland Type ^a	Area of Wetland Delineated (acre) ^b	Proposed Federal and State Jurisdiction ^c	Figure A-5 Page Number
OW-B001	PUB	0.01	Yes	28
W-B001	PEM	0.41	Yes	29
W-B002	PFO	2.51	Yes	28, 29, 30, 31
W-B003	PFO	0.07	Yes	28
W-B004	PEM	0.02	Yes	31
W-B004a	PSS	0.04	Yes	28, 31
W-B005	PFO	2.52	Yes	23, 24, 26
W-B006	PFO	0.07	Yes	18, 20
W-B007	PEM	0.01	Yes	15
W-B008	PFO	0.01	Yes	16
W-B009a	PFO	0.25	Yes	15
W-B009b	PEM	0.06	Yes	14, 15
W-B010	PEM	0.06	Yes	10, 14
W-B011	PEM	0.03	Yes	2
W-B012	PEM	0.21	Yes	1, 2
W-B013b ^d	PFO	0.02	Yes	1
W-B027	PFO	0.05	Yes	6
W-B027a	PEM	>0.01	Yes	6
W-B028	PEM	0.85	Yes	5, 6
W-B029	PEM	1.59	Yes	5, 6
W-B030	PSS	0.52	Yes	6
W-B031a	PEM	2.00	Yes	5
W-B031b	PSS	1.04	Yes	5
W-B032	PEM	0.11	Yes	4
W-B034	PEM	0.01	Yes	13



Wetland Number	Wetland Type ^a	Area of Wetland Delineated (acre) ^b	Proposed Federal and State Jurisdiction ^c	Figure A-5 Page Number
W-B051	PFO	0.02	Yes	28
W-B052a	PFO	0.04	Yes	18
W-B052b	PEM	0.01	Yes	18
W-B053	PEM	0.02	Yes	7, 8
W-B055	PEM	0.10	Yes	31
W-B056	PEM	0.08	Yes	28, 31
W-B056a	PSS	0.05	Yes	6
	Total	12.79		

- (a) Symbols for wetland type: PEM = palustrine emergent, PFO = palustrine forested, PSS = palustrine scrubshrub, PUB = palustrine unconsolidated bottom
- (b) Acreage within the Amendment Project Area, rounded to the nearest tenth of an acre.
- (c) All delineated wetland features within the Amendment Project Area are assumed to be under USACE and NCDEQ jurisdiction.
- (d) W-B013b is located within North Carolina and Virginia. The delineated area of W-B013b includes the portion within North Carolina.

3.3 Streams

A total of 24 streams, for a combined length of 2,759 feet, were identified during the site evaluation. Three streams were delineated during field surveys but were determined to be located outside the Amendment Project Area. These features, S-B037, S-B-48, and S-B049, are depicted on Figure A-5; however, they are not included in the summary of streams or Table 3-2. Streams were classified into ephemeral, intermittent, or perennial categories. BMcD assumes all streams identified will fall under the jurisdiction of the USACE and NCDEQ. Table 3-2 below includes the length of each stream delineated within the Amendment Project Area. The location and extent of the delineated streams are depicted in Figure A-5 in Appendix A. Color photographs from the wetland delineation are located in Appendix C.

Three perennial streams extending for a delineated length of 220 feet were identified. These perennial streams ranged from 25 to 200 feet wide and a depth of one foot or more at the OHWM. The depth of the Dan River could not be safely assessed.

Nine intermittent streams extending for a delineated length of 1,385 feet were identified. Intermittent streams were characterized by the presence of a limited volume of flow at the time of the site visit, indicating that the stream is partially fed by groundwater but that the stream may not flow during dry periods. These intermittent streams ranged from three to five feet wide and 0.25 to one foot deep at the OHWM.

Twelve ephemeral streams extending for a delineated length of 1,154 feet were identified. Ephemeral streams were characterized by a defined bed and bank but had limited or no flow during the site visit, indicating these streams largely carry water only during and after precipitation events. These ephemeral streams ranged from one to five feet wide 0.1 to one foot deep at the OHWM.



Table 3-2 Type and Length of Delineated Streams

Stream Number	Stream Type	Length of Stream (linear feet) ^a	OHWM Width (ft)	OHWM Depth (ft)	Proposed Federal and State Jurisdiction ^b	Figure A-5 Page Number
S-B001	Ephemeral	130	2.0	0.5	Yes	28
S-B002	Intermittent	570	5.0	0.5	Yes	28, 31
S-B003	Intermittent	58	3.5	0.5	Yes	28
S-B004	Ephemeral	55	4.0	0.1	Yes	28
S-B005	Perennial	9	200.0	N/A	Yes	27
S-B006	Intermittent	10	3.0	0.5	Yes	28
S-B007	Intermittent	14	3.0	0.5	Yes	24
S-B008	Intermittent	95	3.0	0.5	Yes	23
S-B009	Ephemeral	100	2.0	0.25	Yes	20, 21
S-B010	Ephemeral	209	2.0	0.25	Yes	18, 20
S-B011	Intermittent	73	4.0	0.5	Yes	17
S-B012	Ephemeral	13	3.0	0.25	Yes	11, 14
S-B013	Intermittent	5	4.0	0.25	Yes	14
S-B014	Ephemeral	96	2.0	0.25	Yes	15
S-B015	Intermittent	460	5.0	1.0	Yes	15
S-B015a	Ephemeral	15	1.0	0.2	Yes	15
S-B016	Ephemeral	355	2.0	0.25	Yes	15
S-B017	Ephemeral	81	1.0	0.25	Yes	16
S-B018	Ephemeral	47	1.5	0.25	Yes	2
S-B019	Ephemeral	16	1.0	0.25	Yes	2
S-B034	Perennial	124	30.0	1.0	Yes	6
S-B035	Perennial	87	25.0	1.0	Yes	6
S-B036	Intermittent	100	5.0	0.5	Yes	6
S-B057	Ephemeral	37	4.0	0.5	Yes	6
	Total	2,759				

⁽a) Linear feet of jurisdictional streams within the Amendment Project area, rounded to the nearest foot. Three streams were delineated during field surveys but were determined to no be located within the Amendment Project Area. These features, S-B037, S-B-48, and S-B049 are depicted on Figure A-5, however they are not included in Table 3-2.



⁽b) All delineated stream features within the Amendment Project Area are assumed to be under USACE and NCDEQ jurisdiction.

4.0 Conclusions

BMcD conducted a wetland delineation of the Amendment Project Area from June 3 through 18, August 19 through September 4, September 26, and October 3, 2024, to identify wetlands and other aquatic resources. A total of 32 wetlands and 24 streams were identified. BMcD assumes a PJD submittal to the USACE, therefore all wetlands and streams are assumed to be under the jurisdiction of the USACE and NCDEQ. The jurisdiction of all features identified is subject to change pending a jurisdictional determination by the USACE and NCDEQ.



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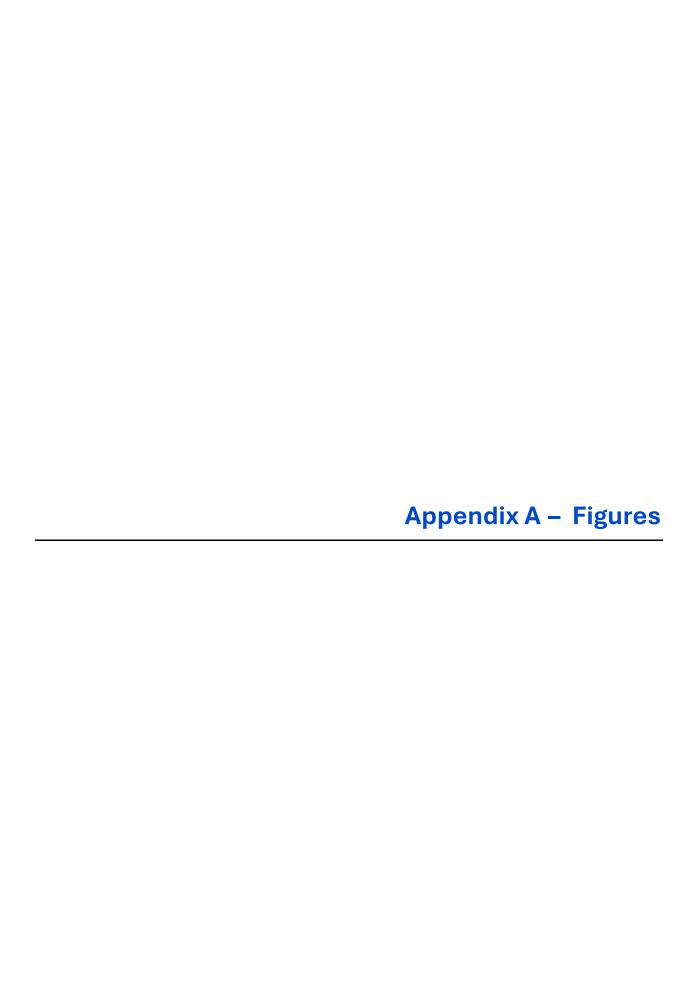
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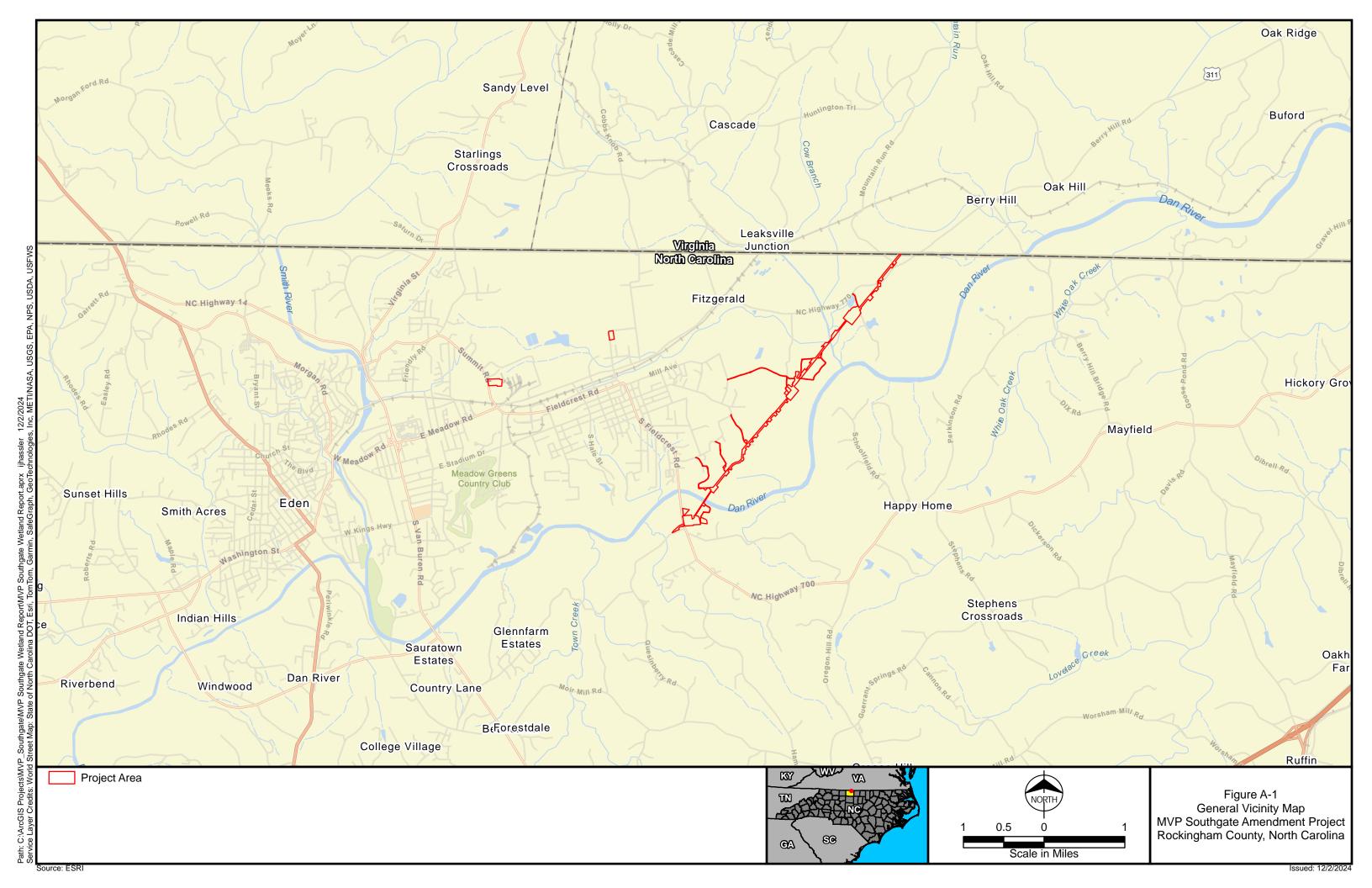
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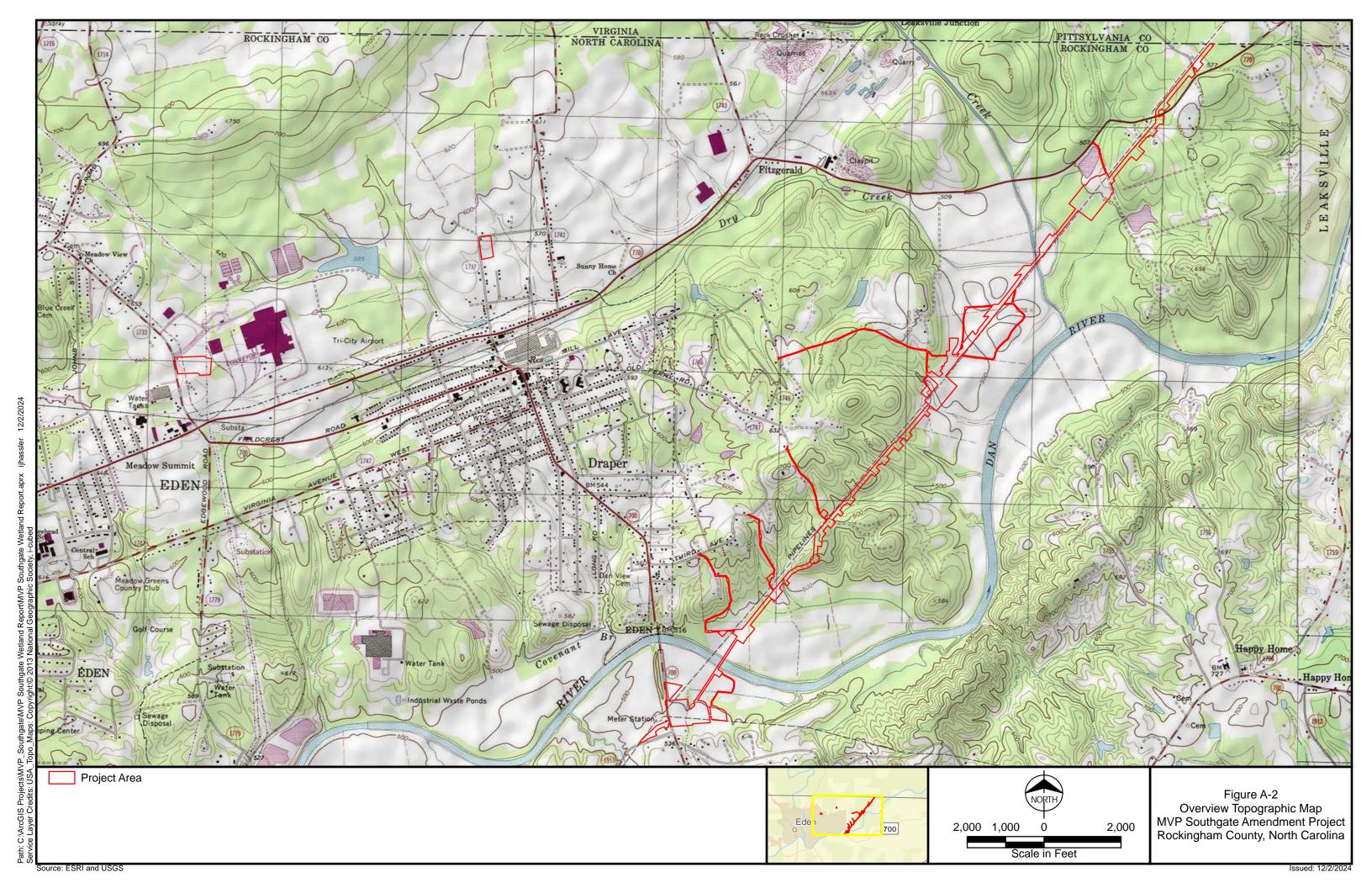
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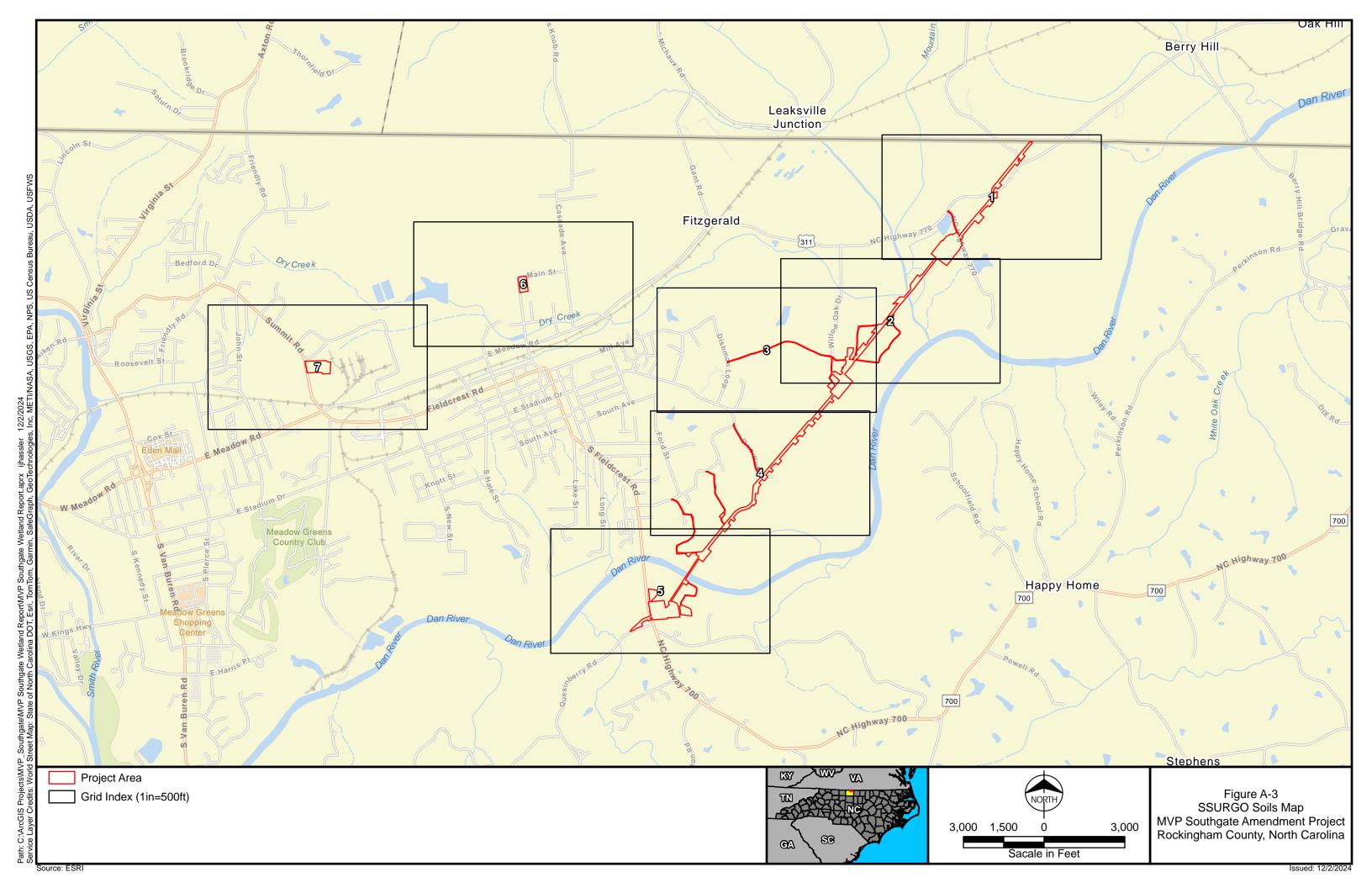
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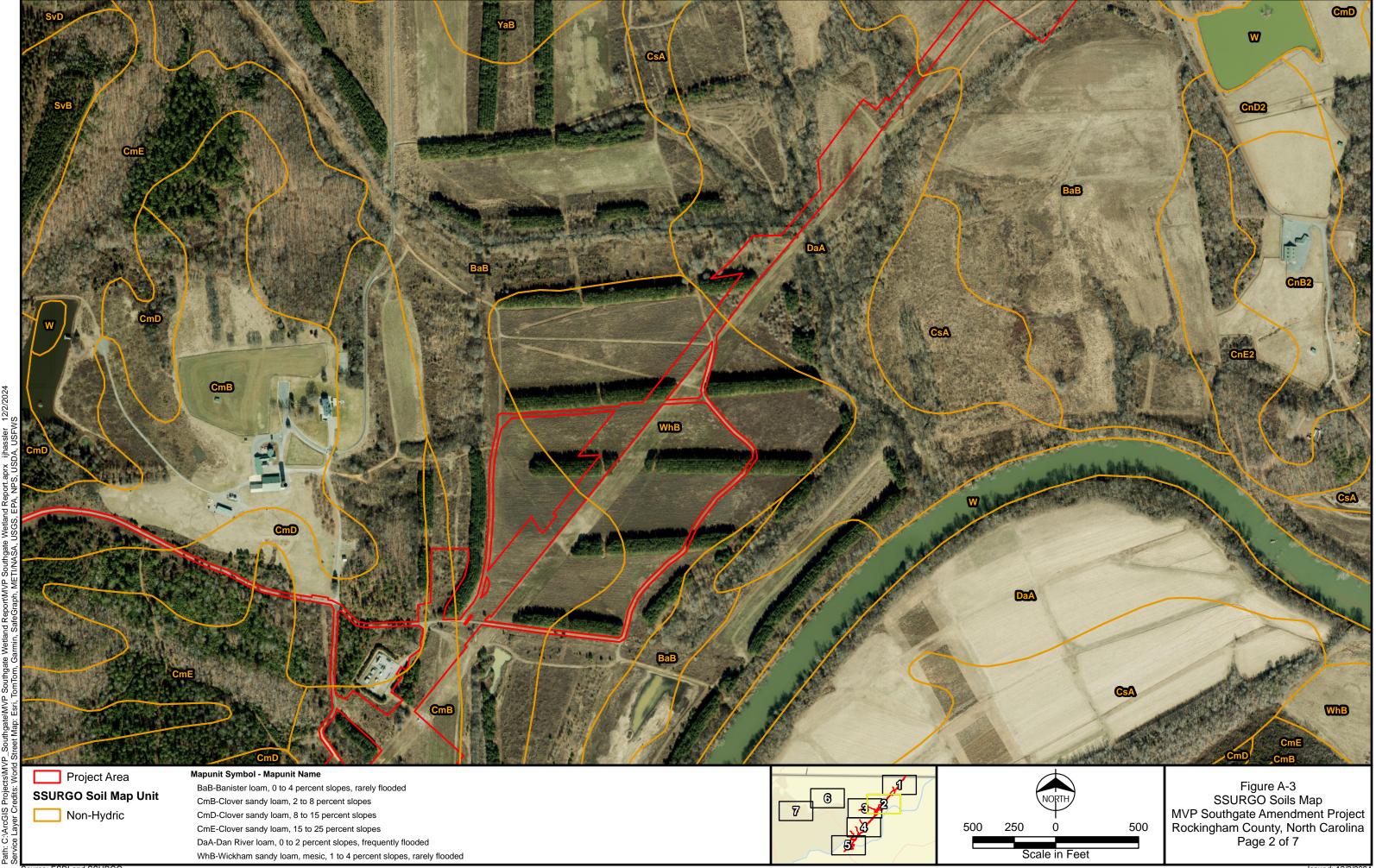






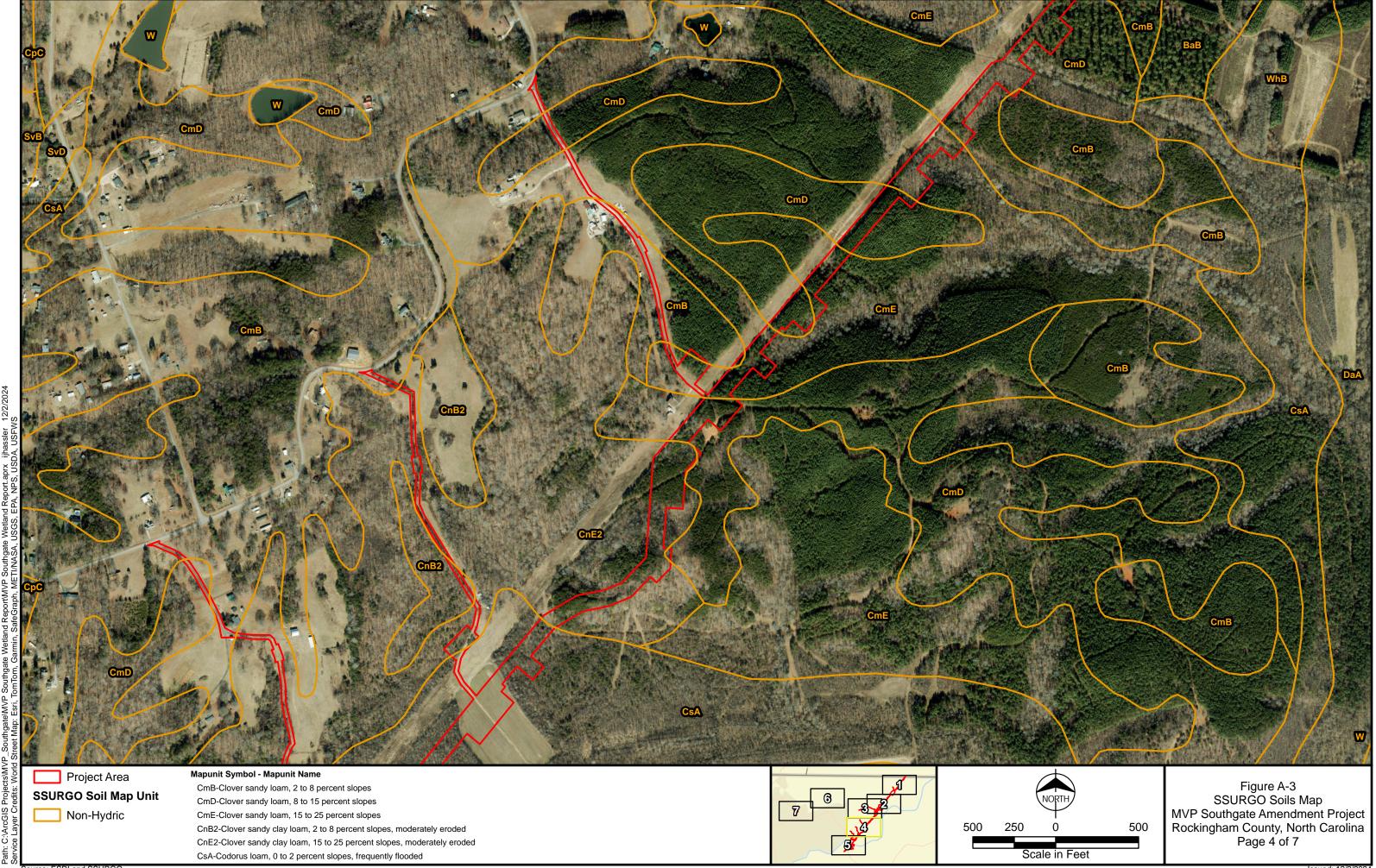


Source: ESRI and SSURGO Issued: 12/2



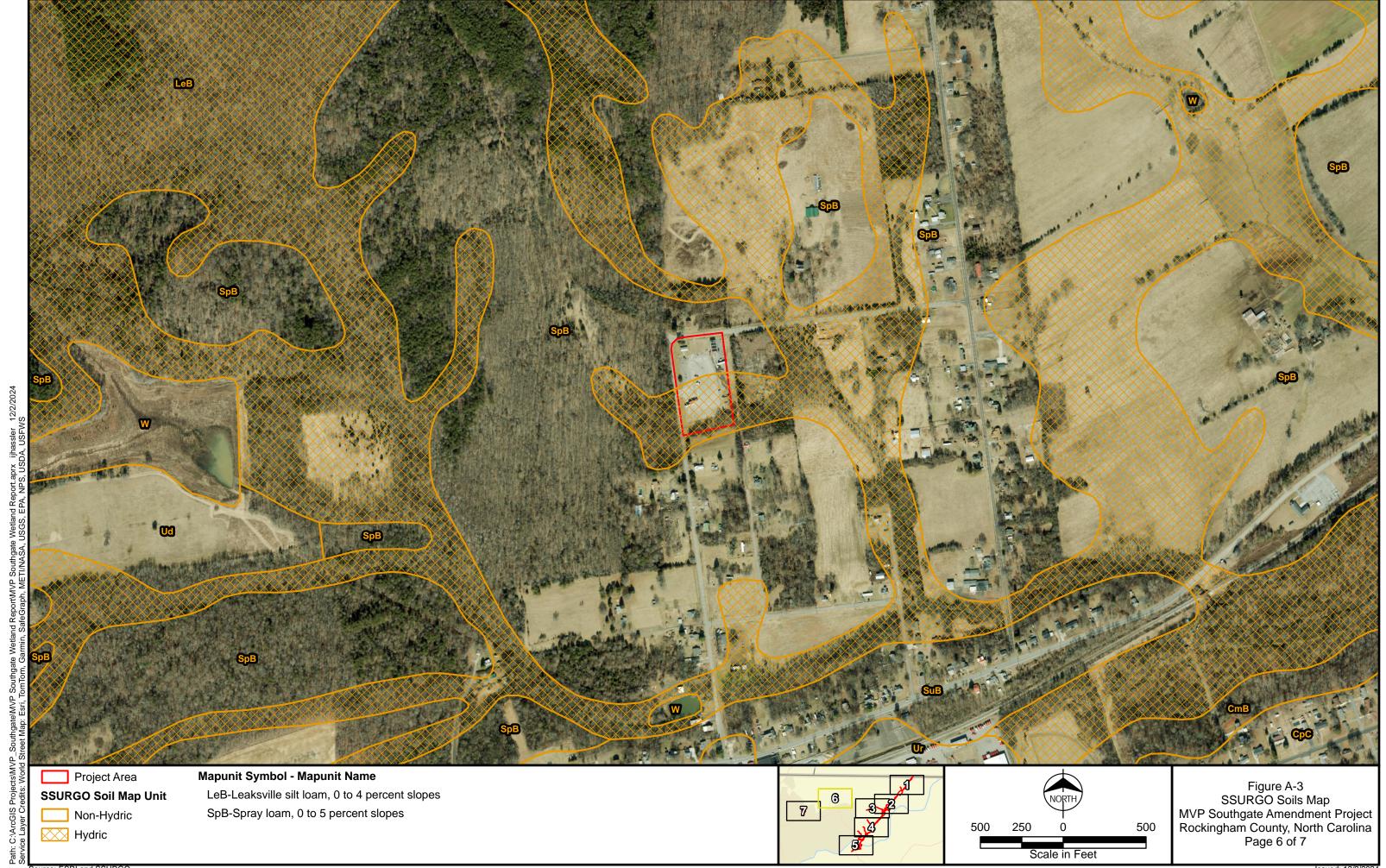
Source: ESRI and SSURGO Issued: 12/2/

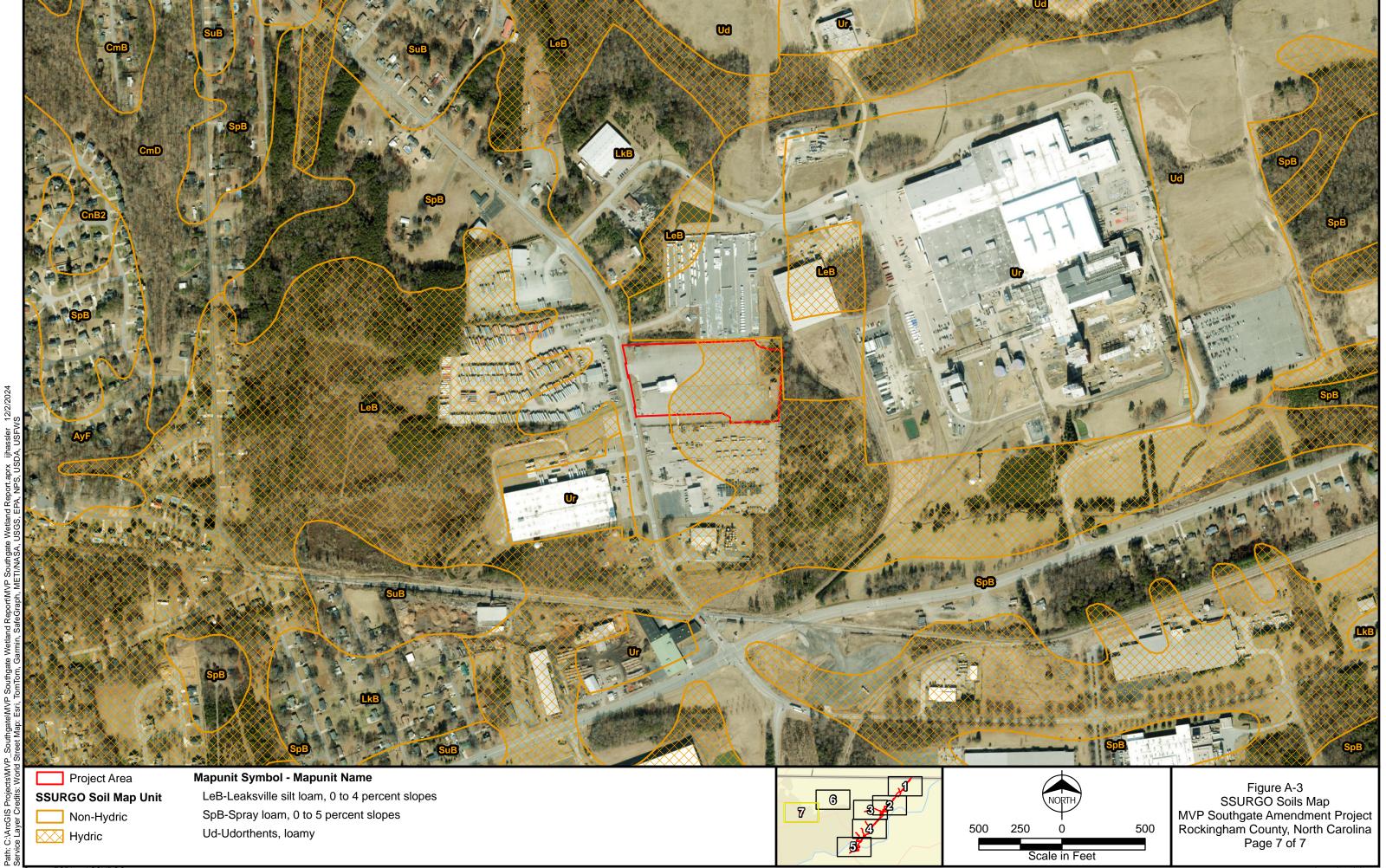
Source: ESRI and SSURGO



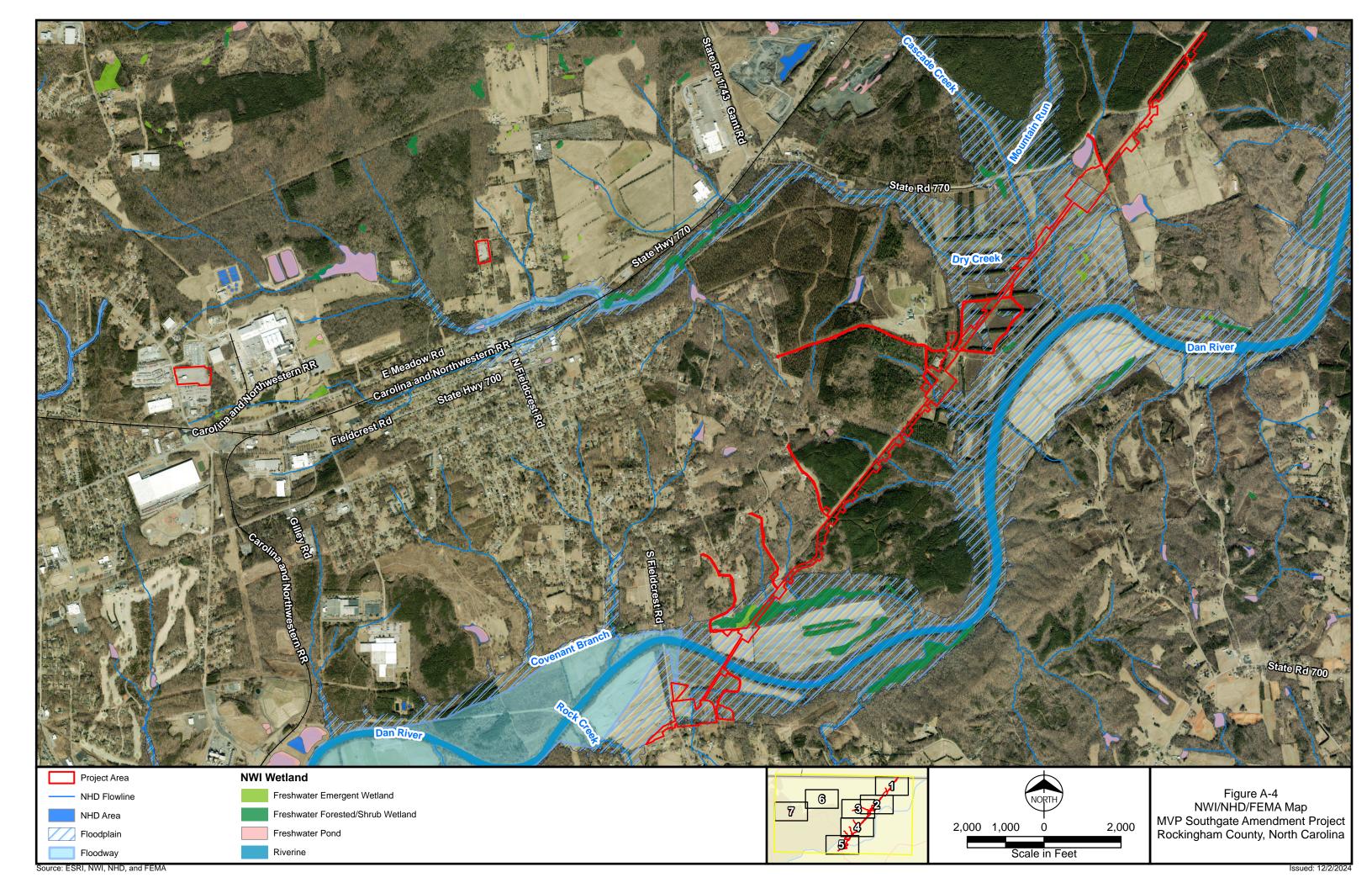
Source: ESRI and SSURGO Issued: 12/2/

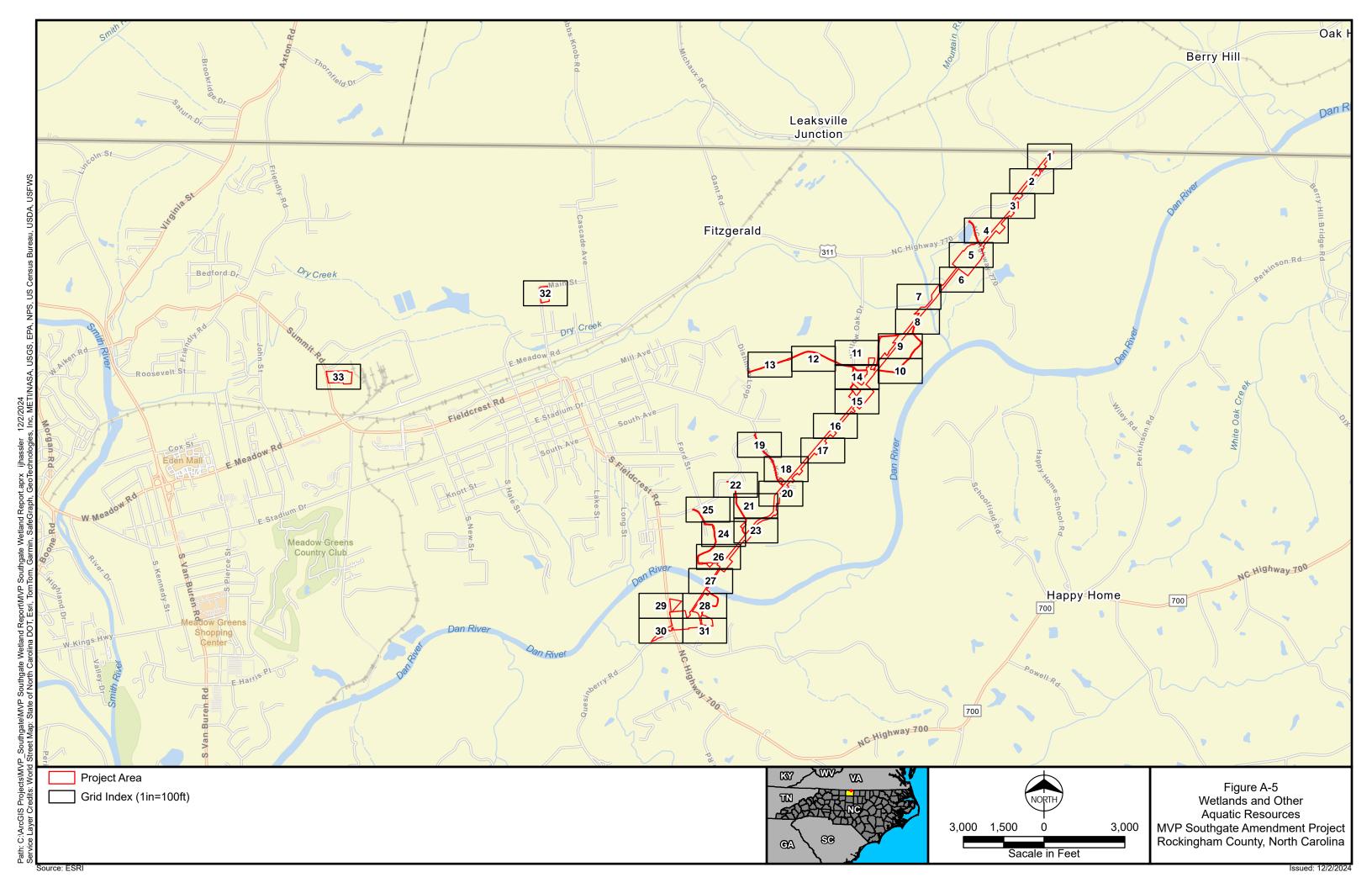
Source: ESRI and SSURGO

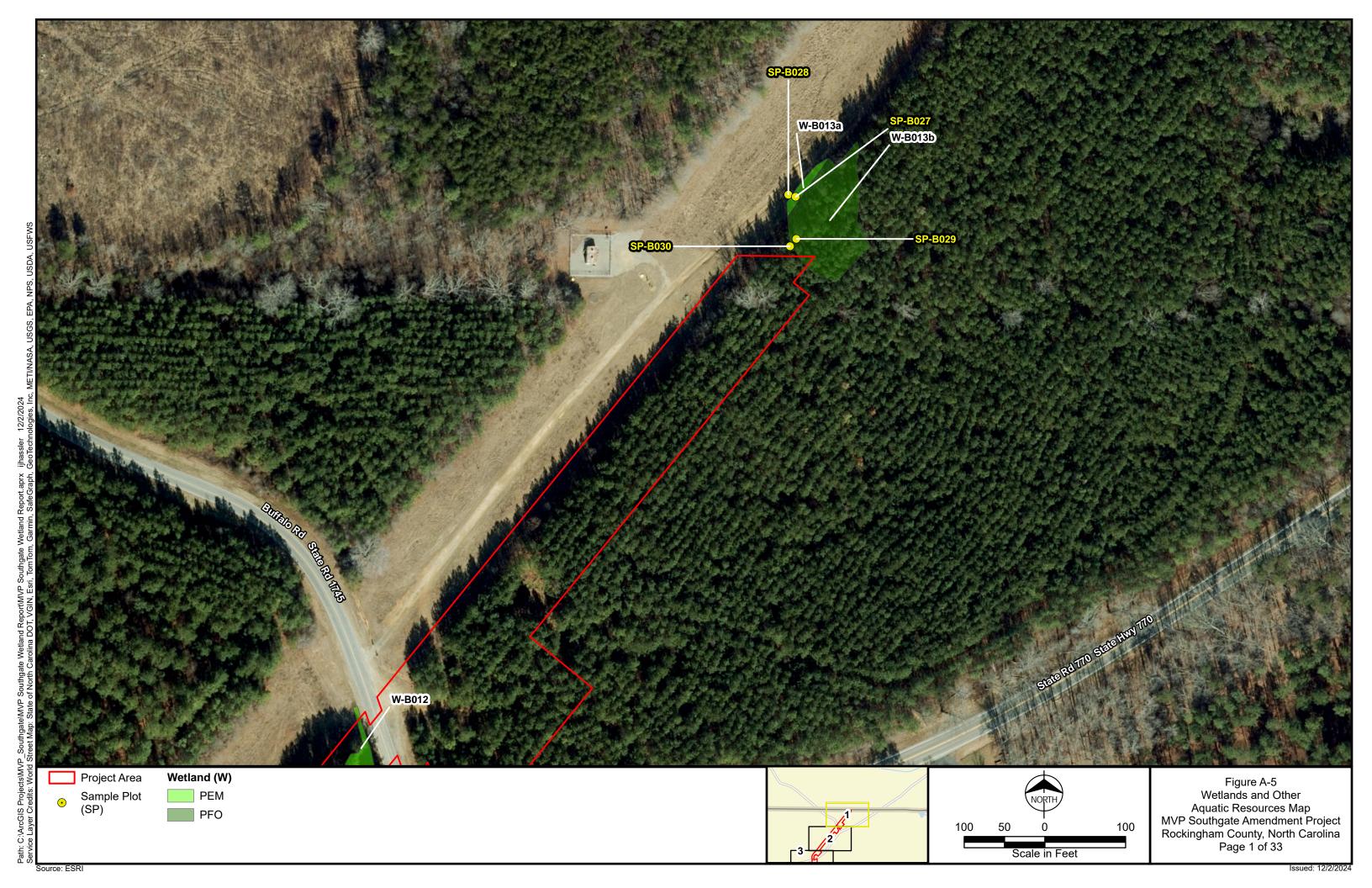


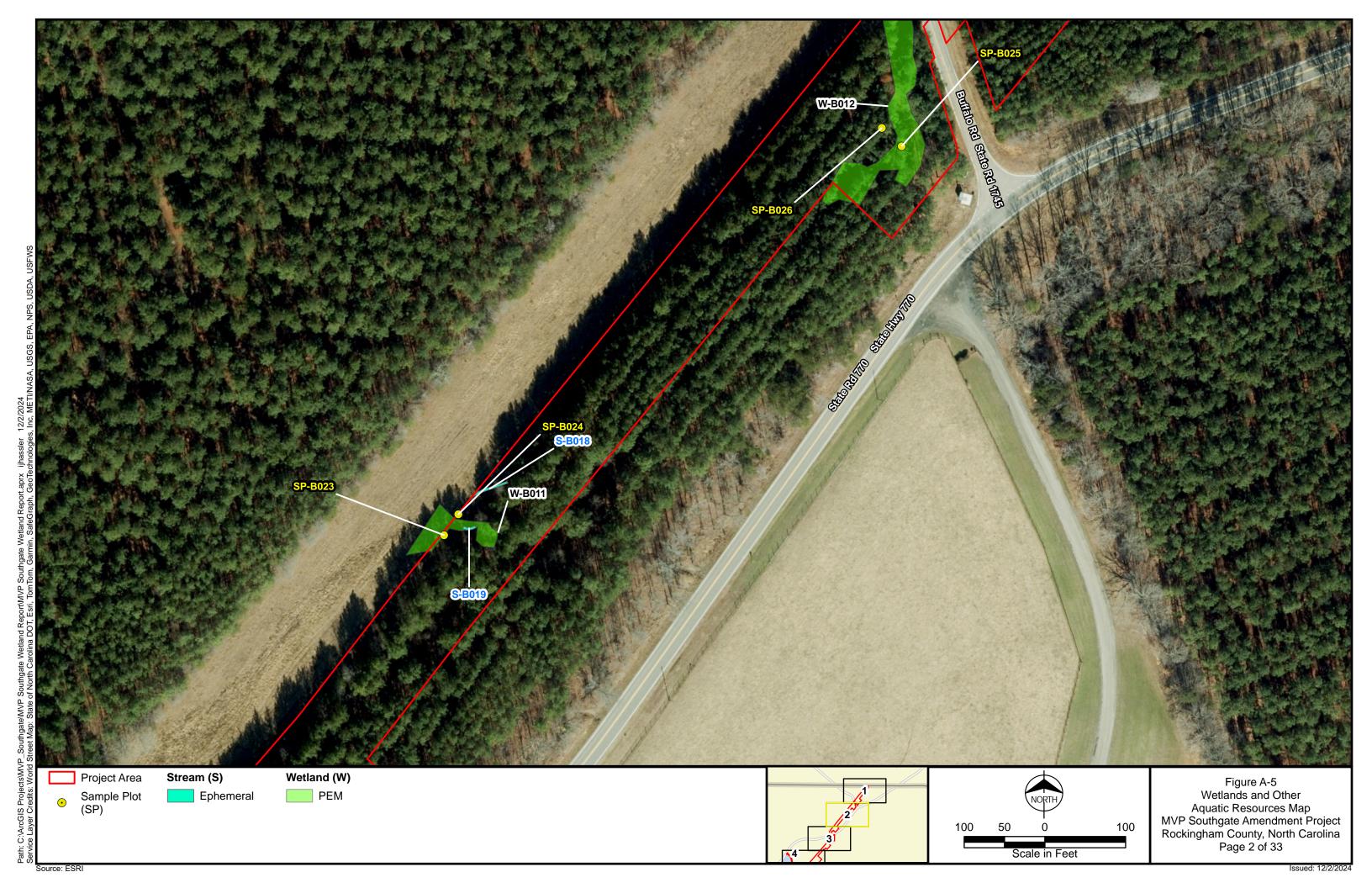


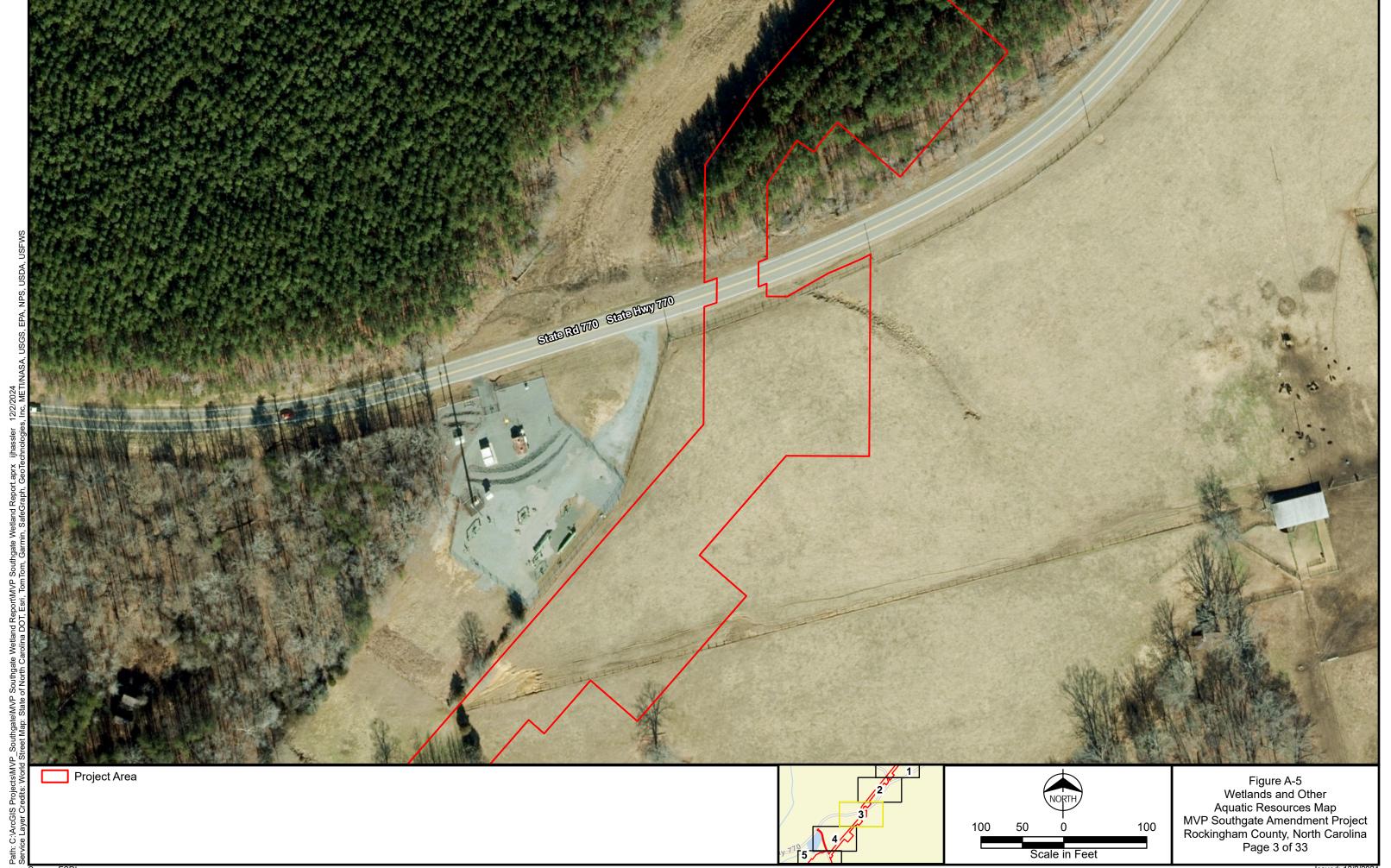
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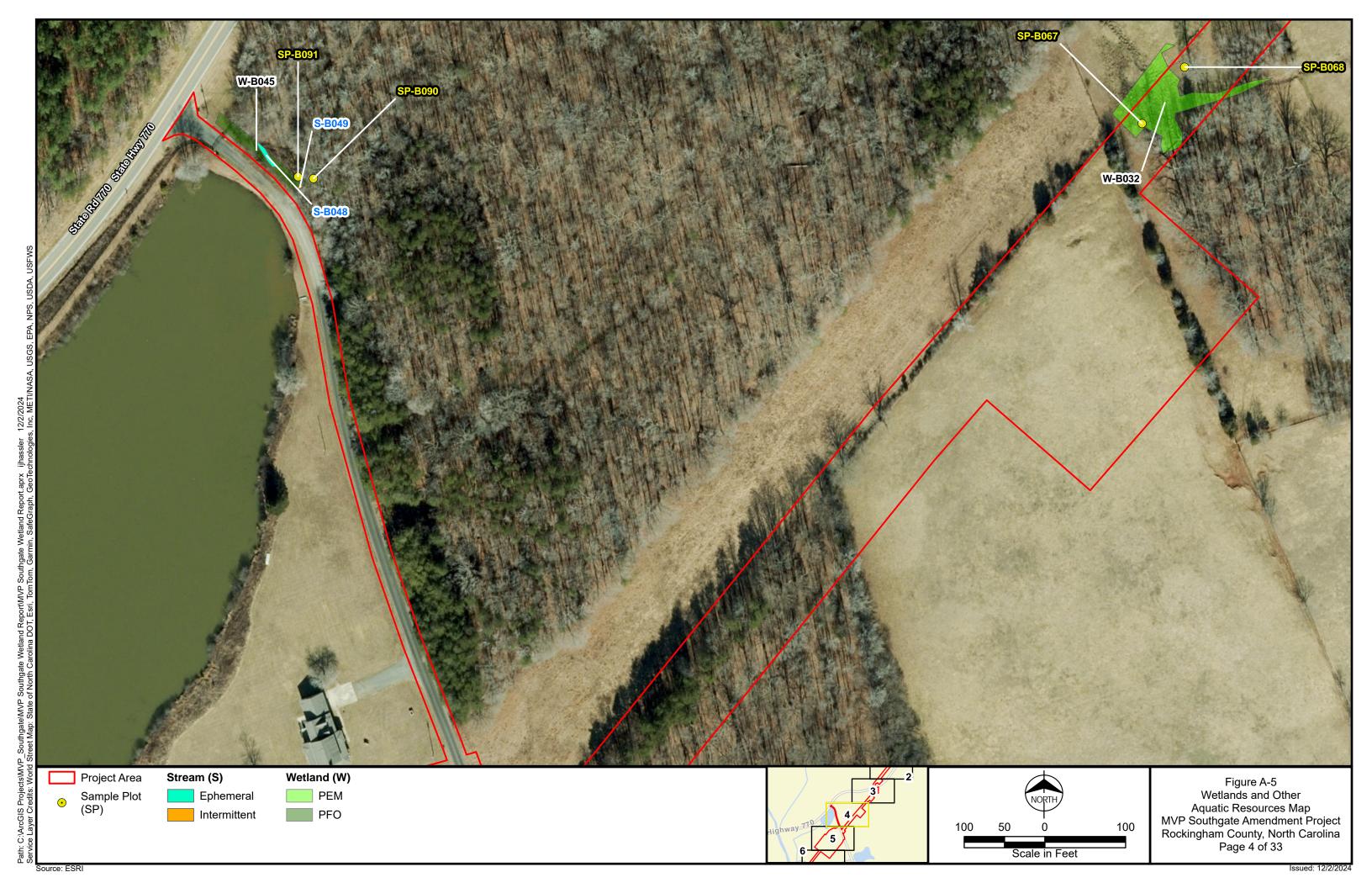


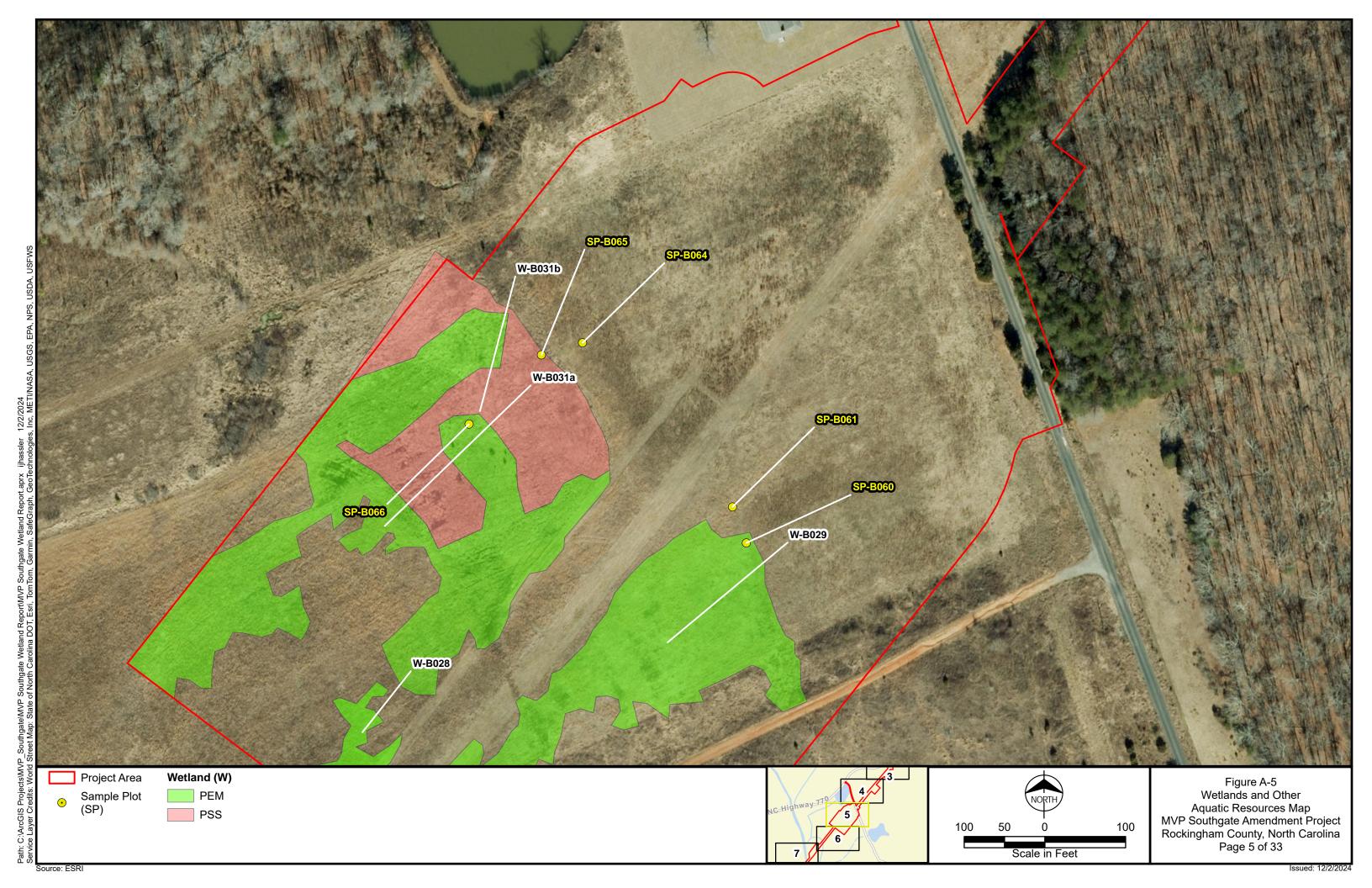


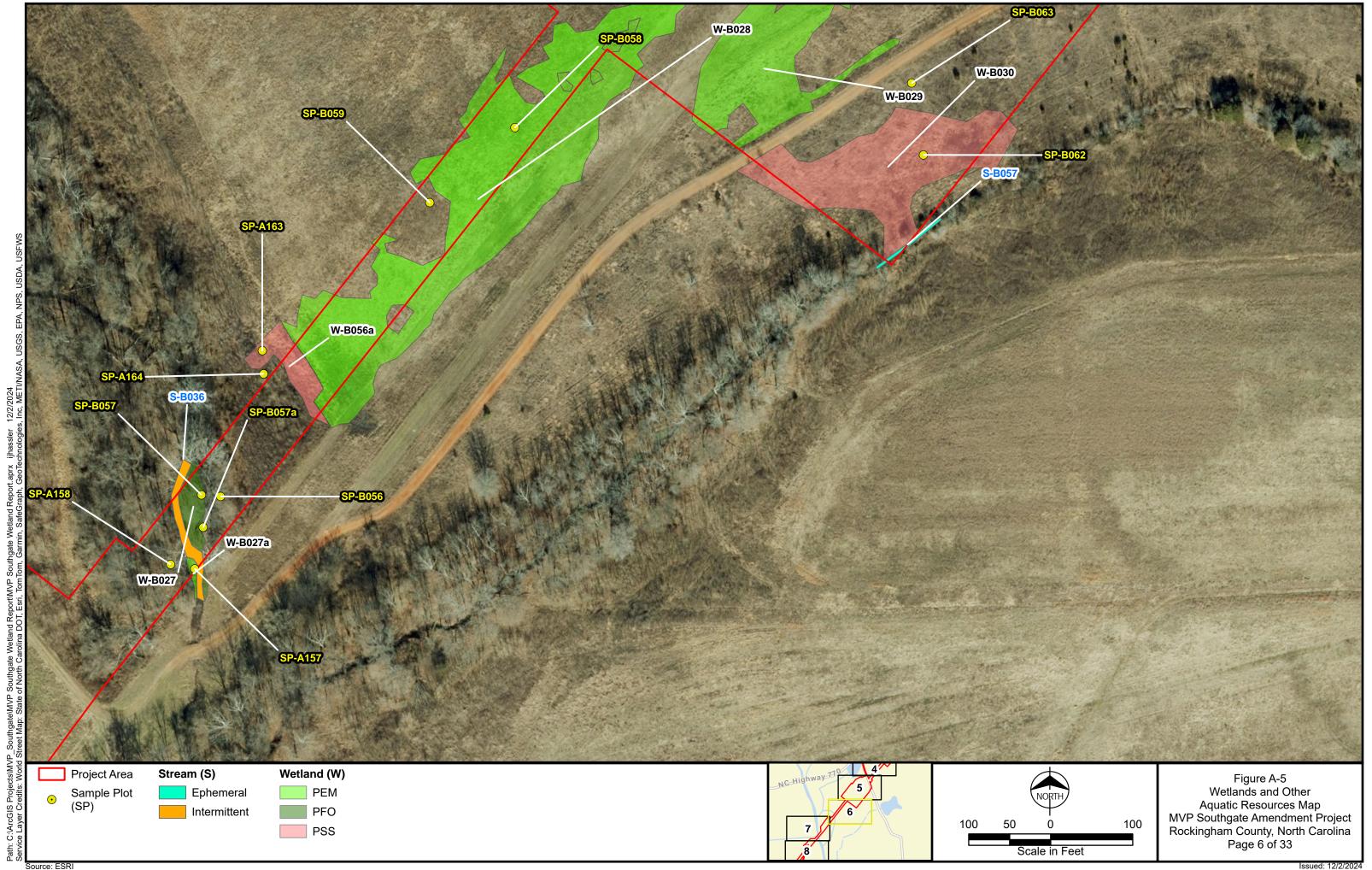


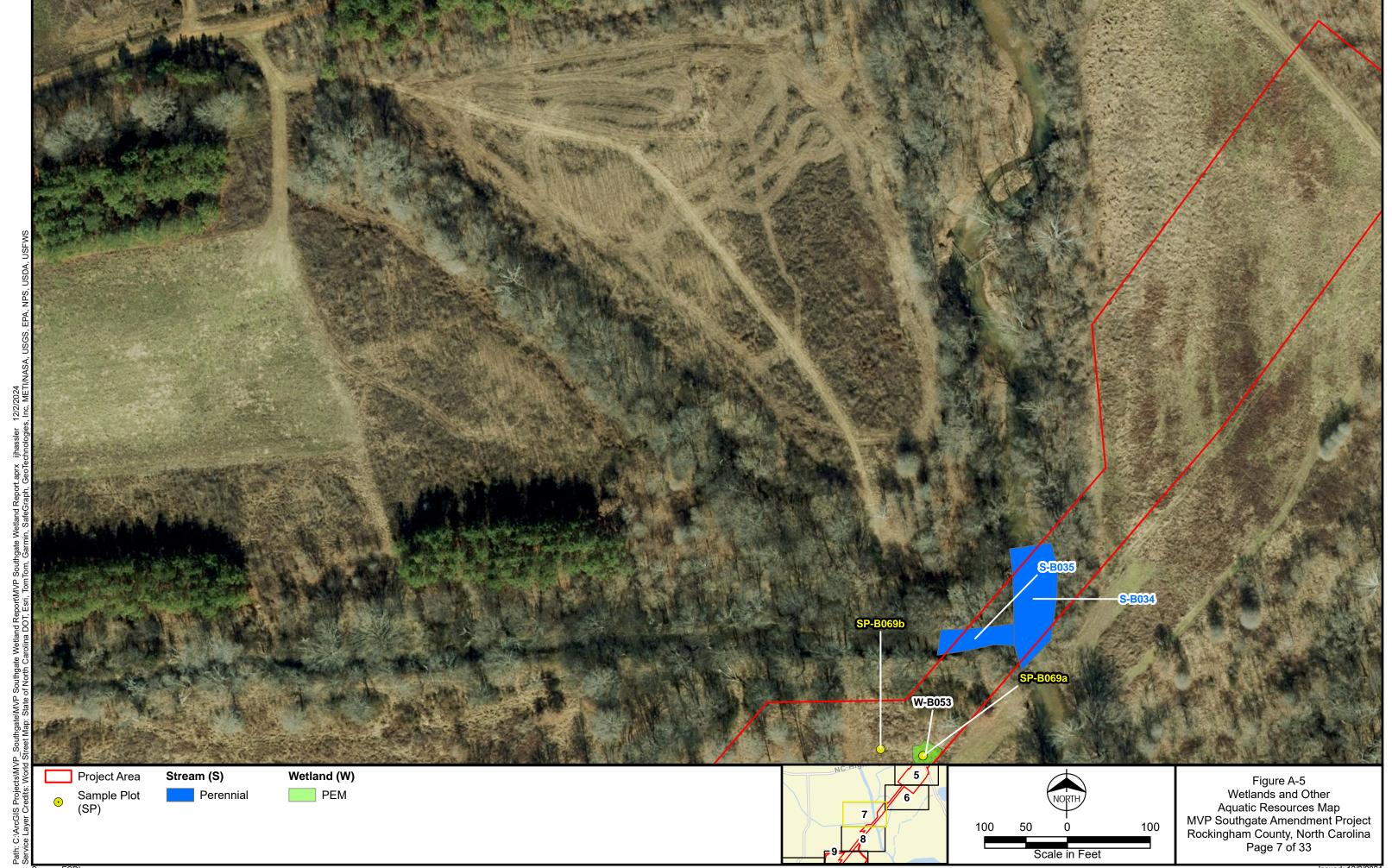




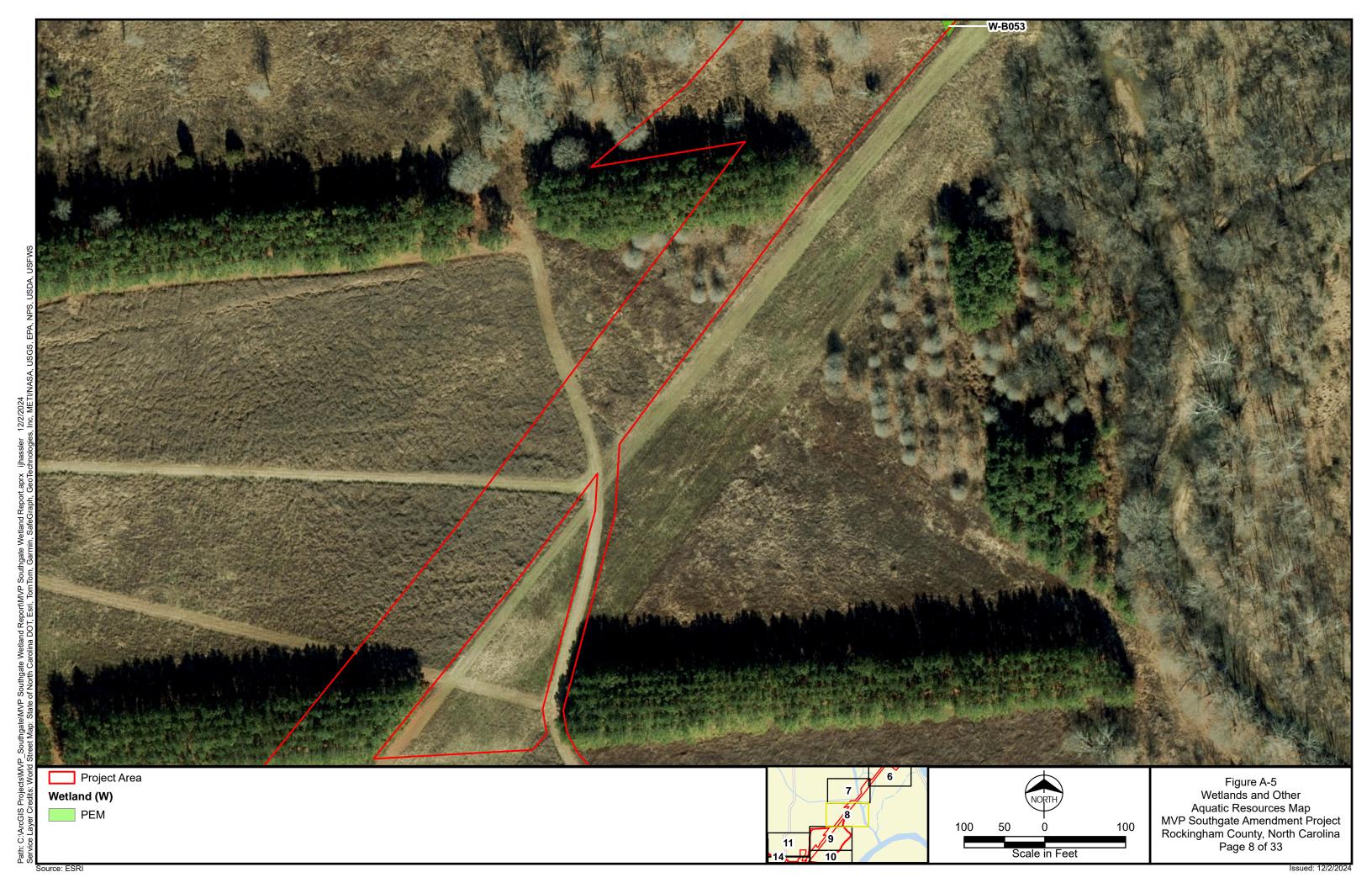


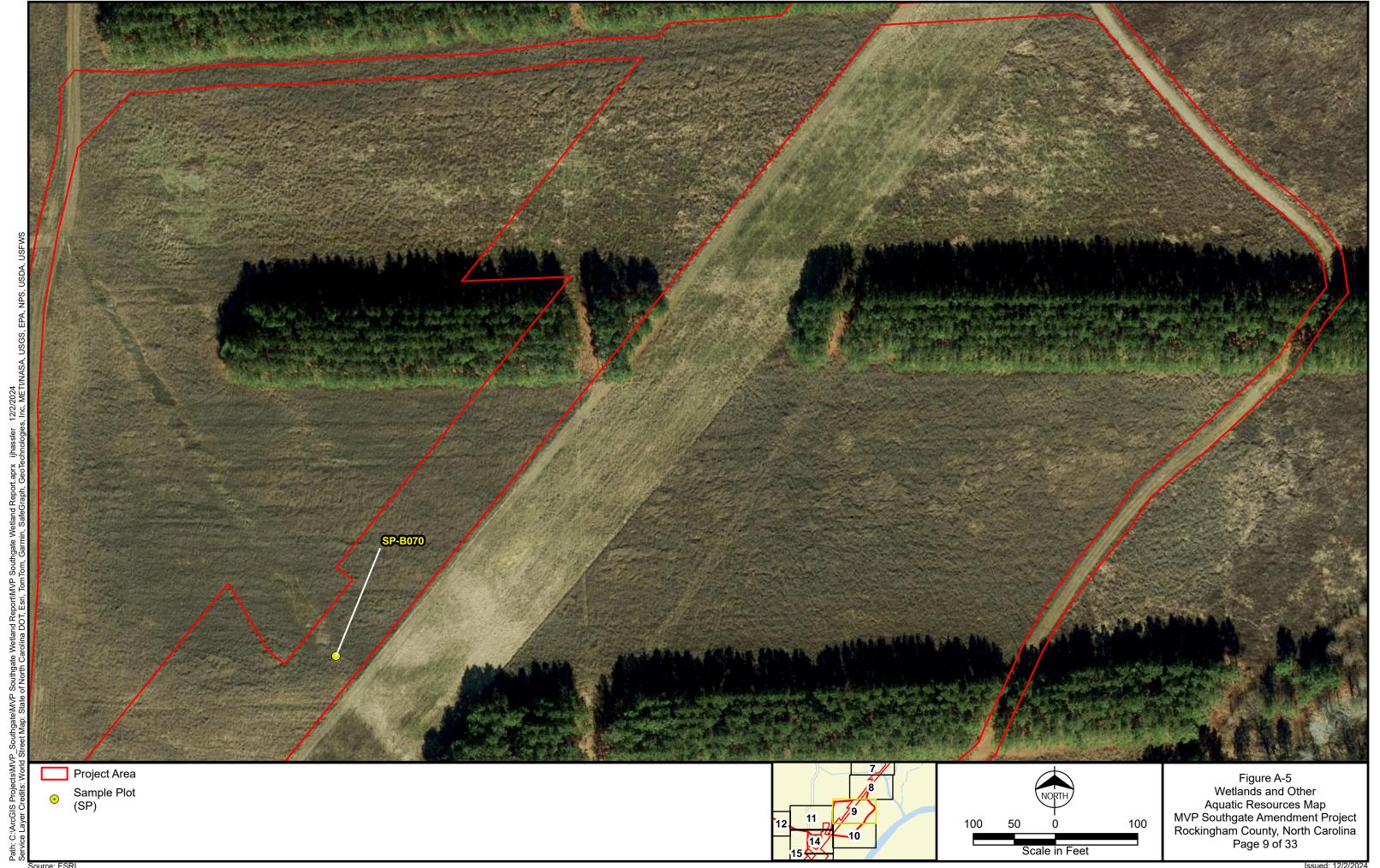


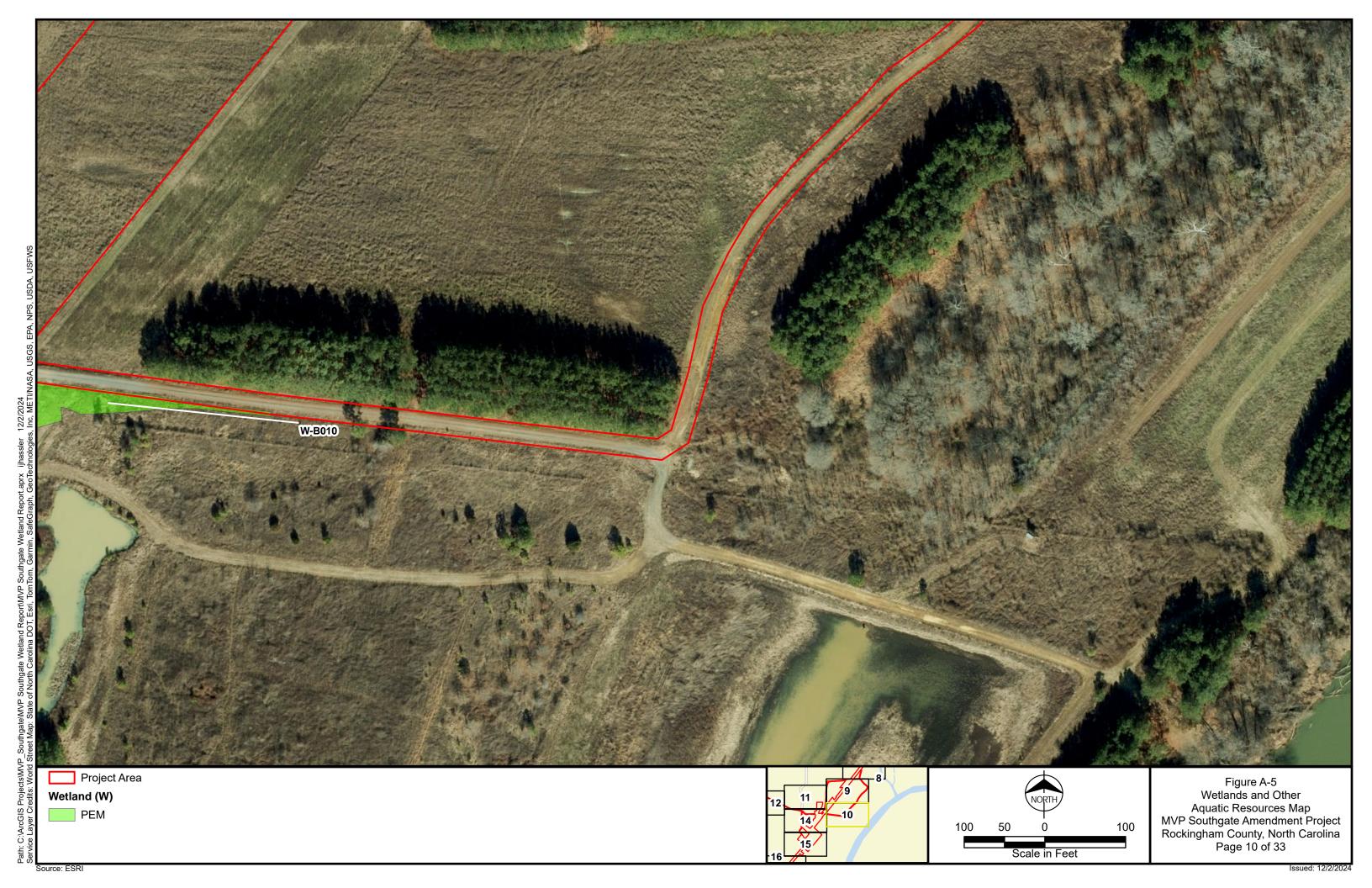


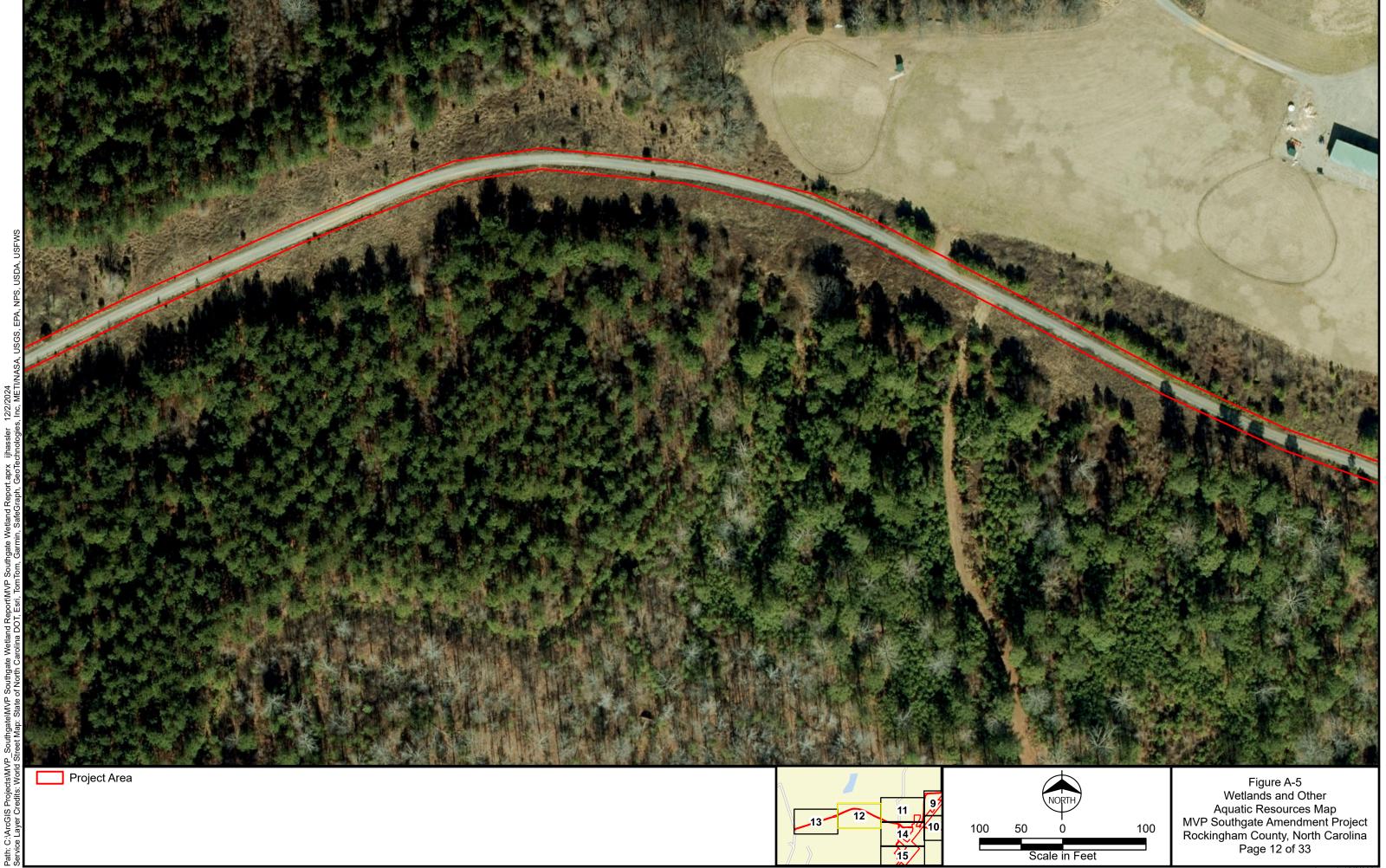


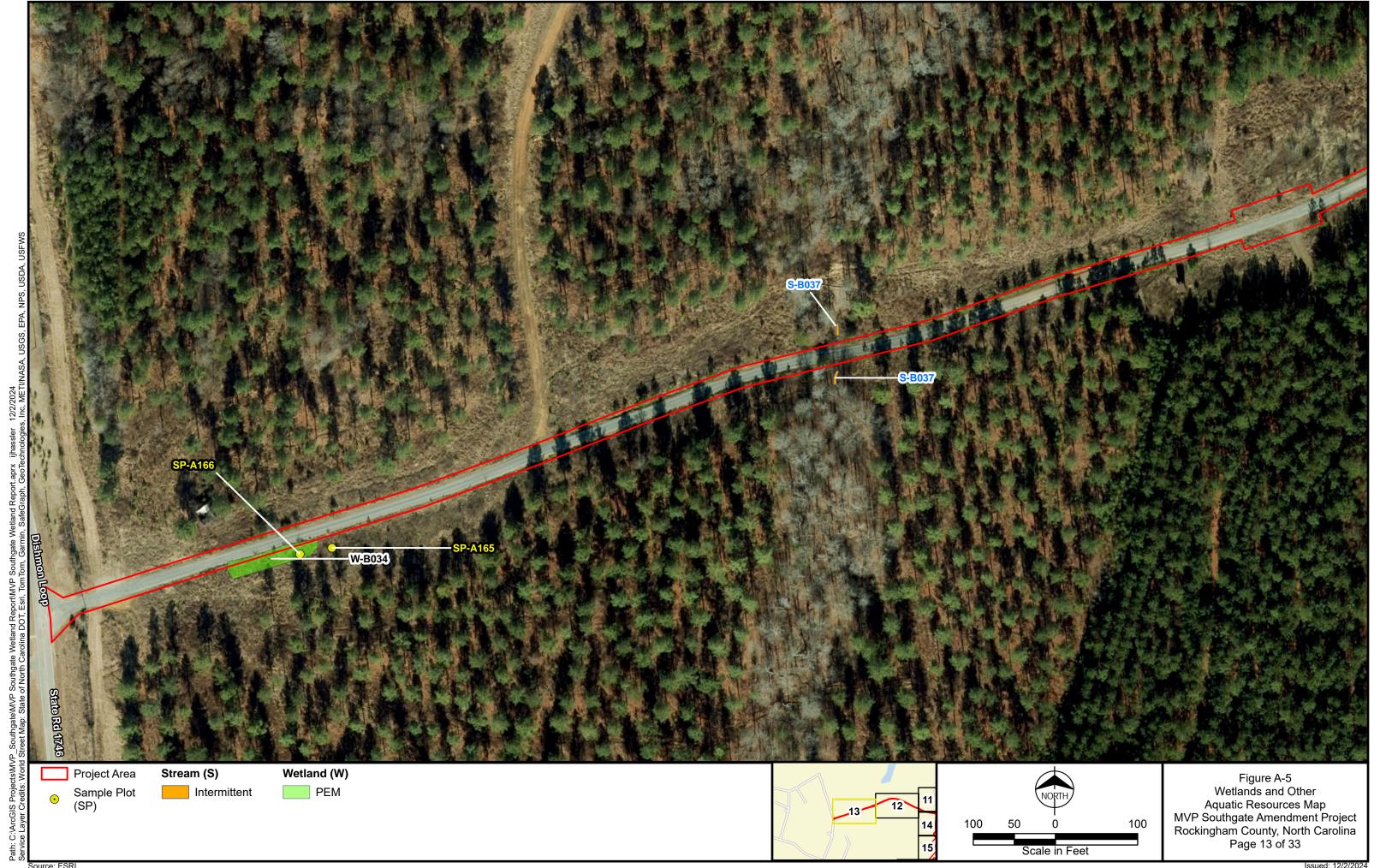
ESRI Issued: 12/2/20

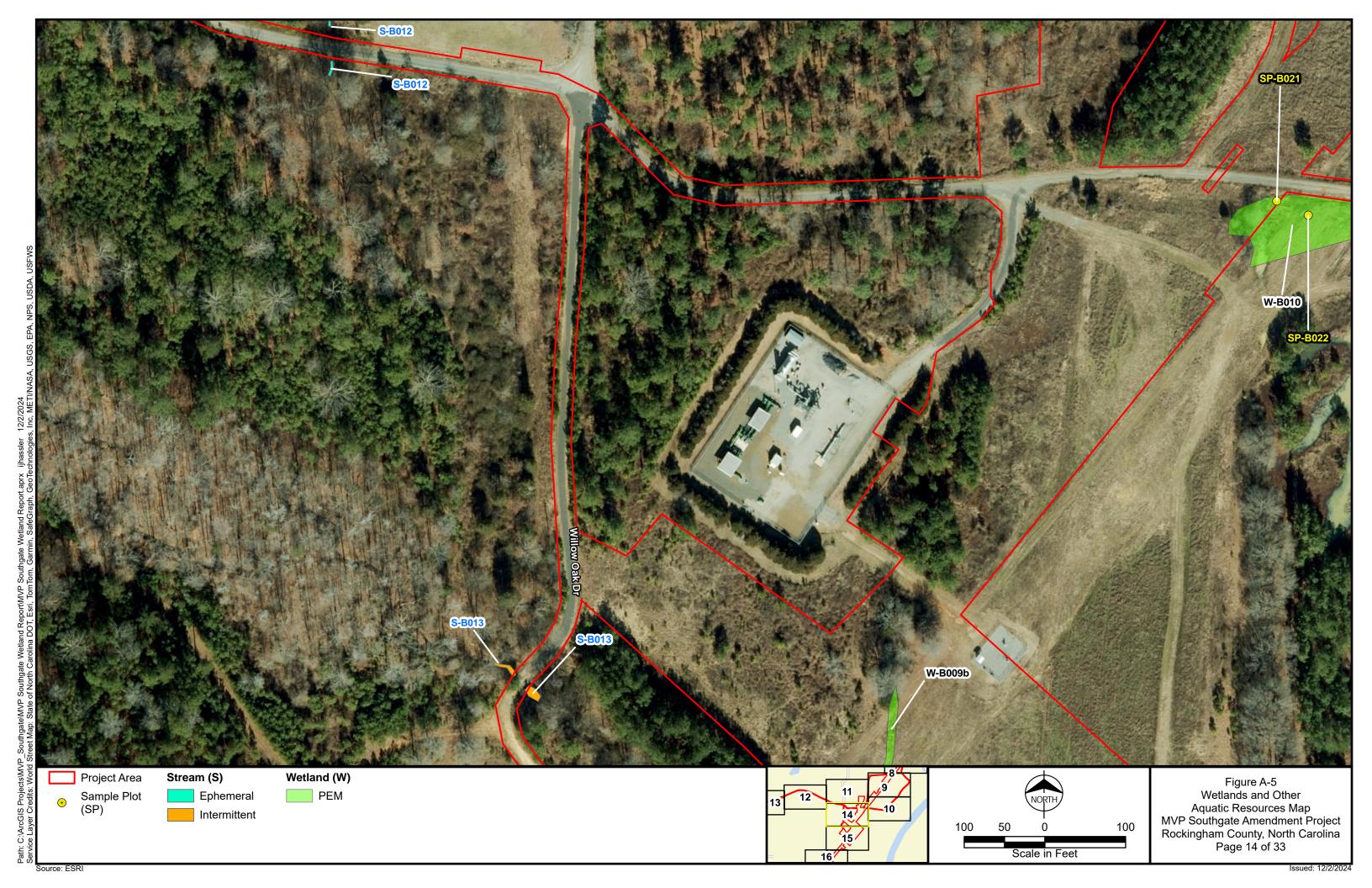


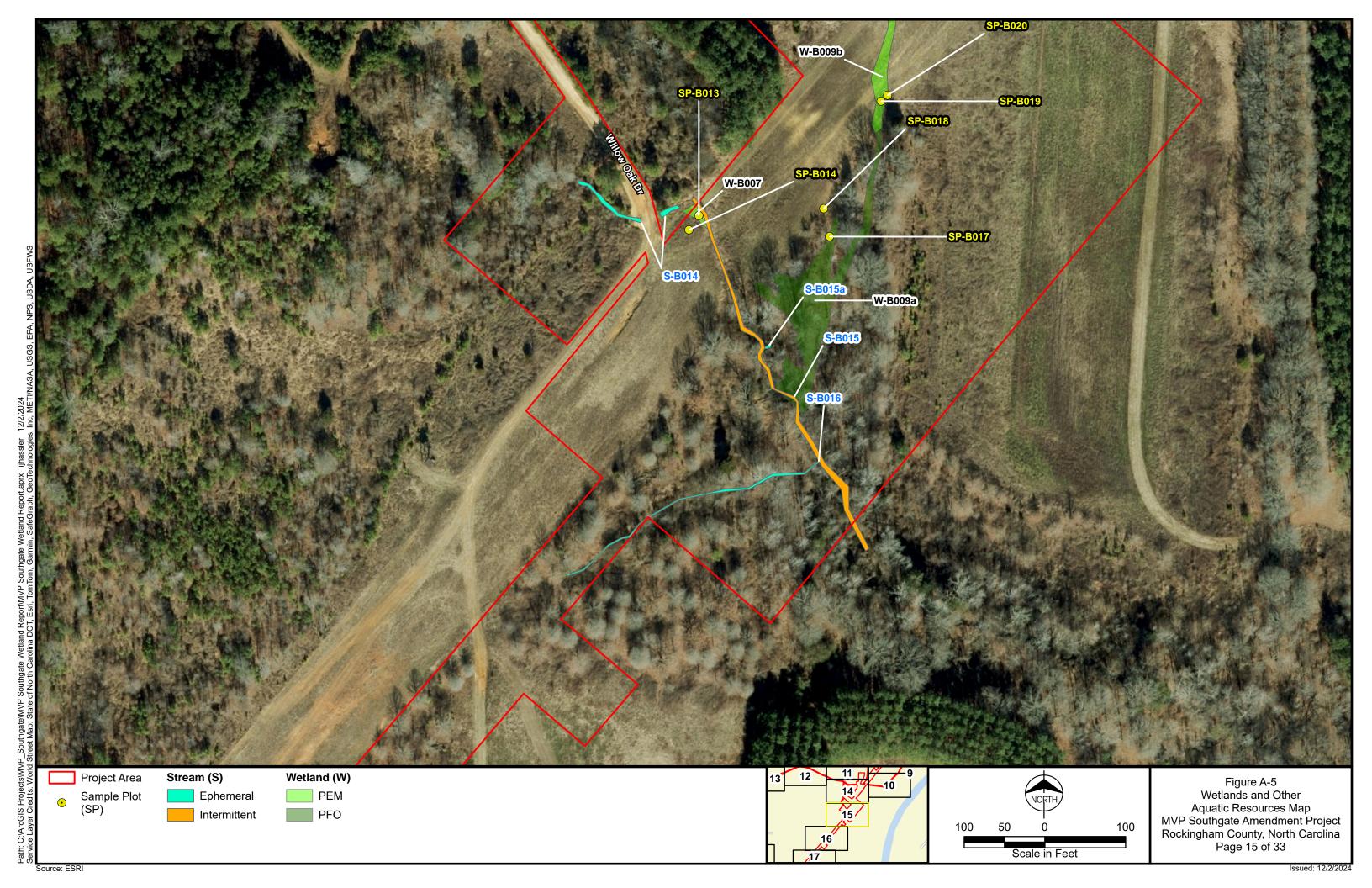


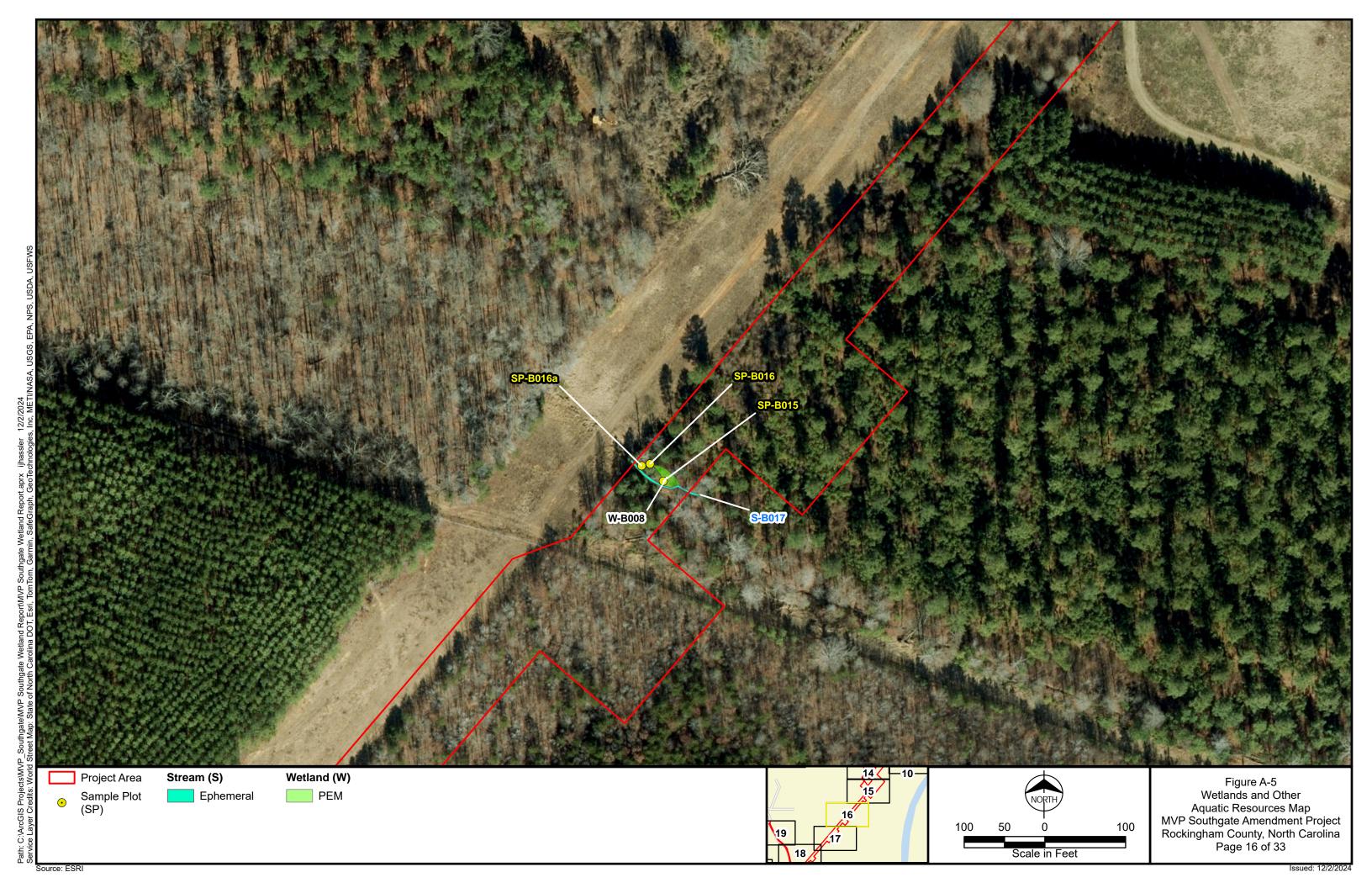


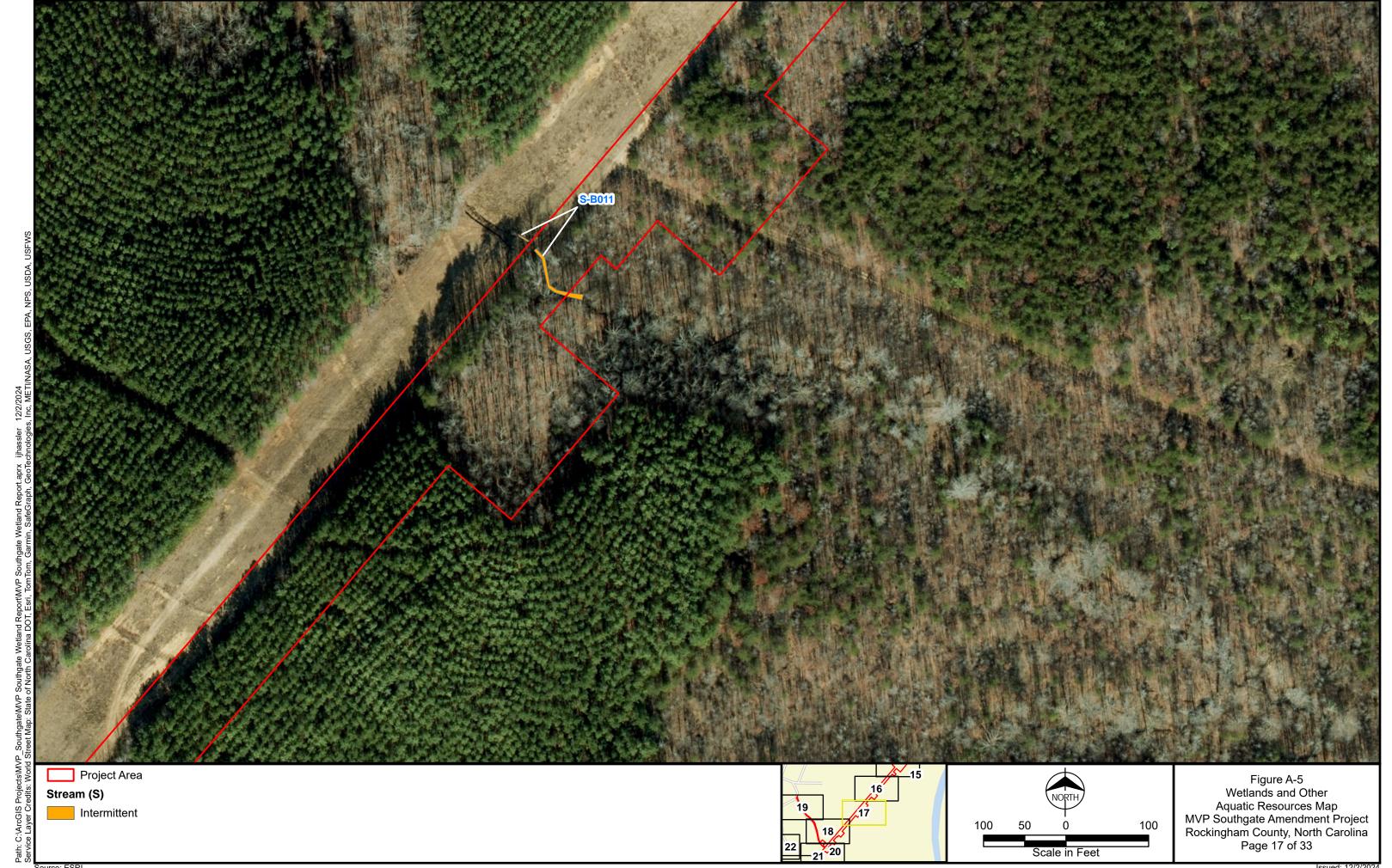


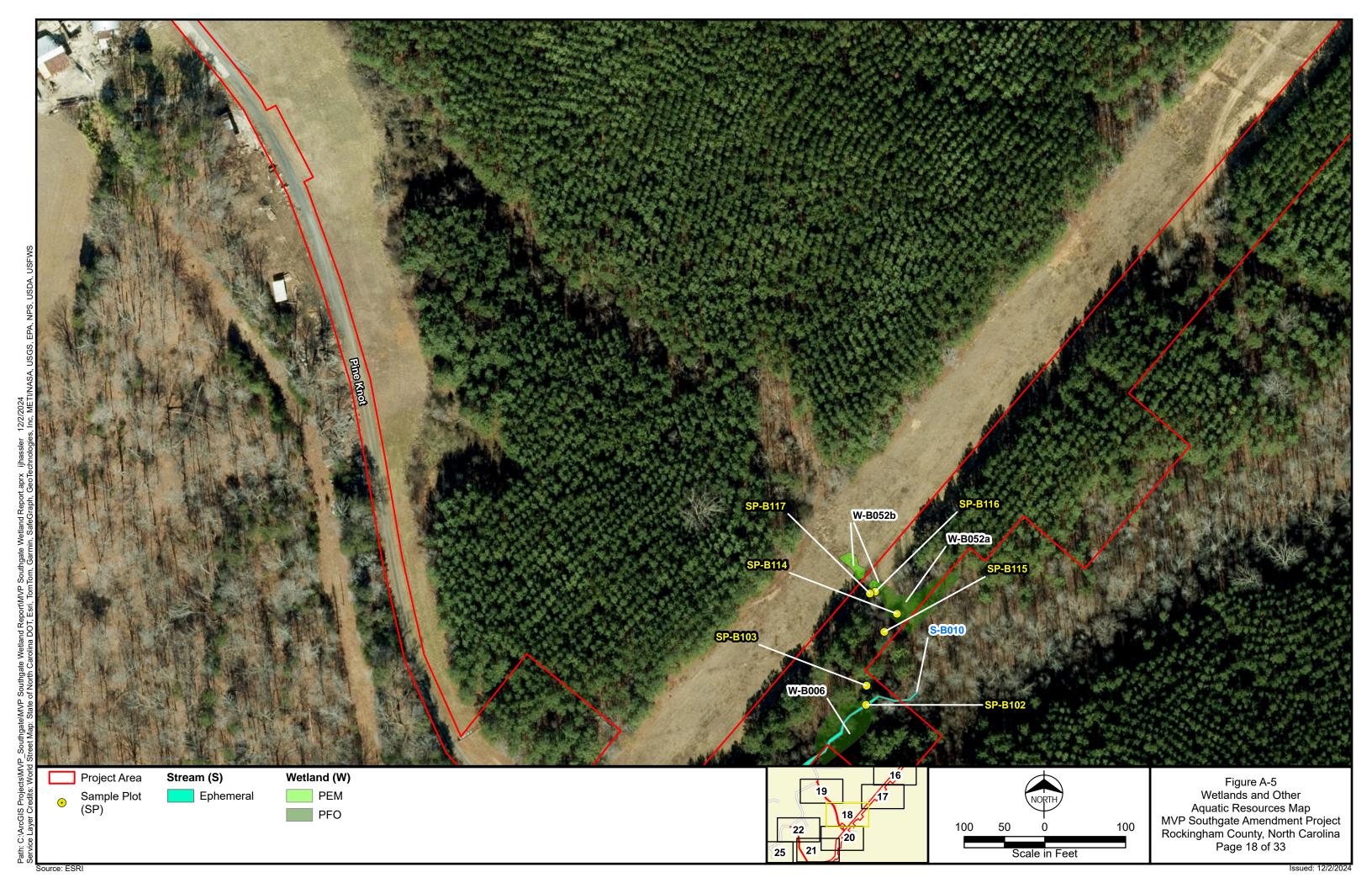


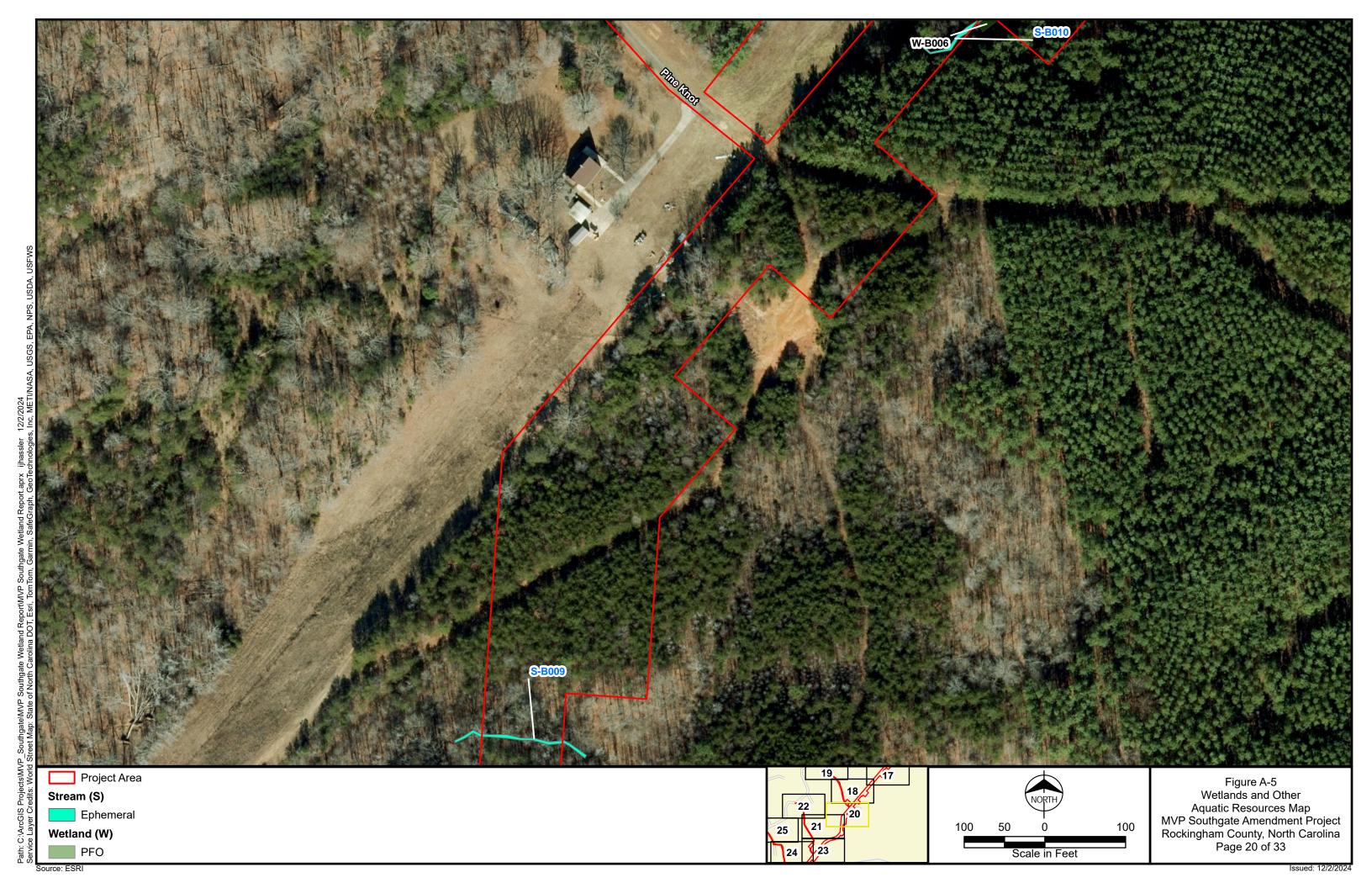


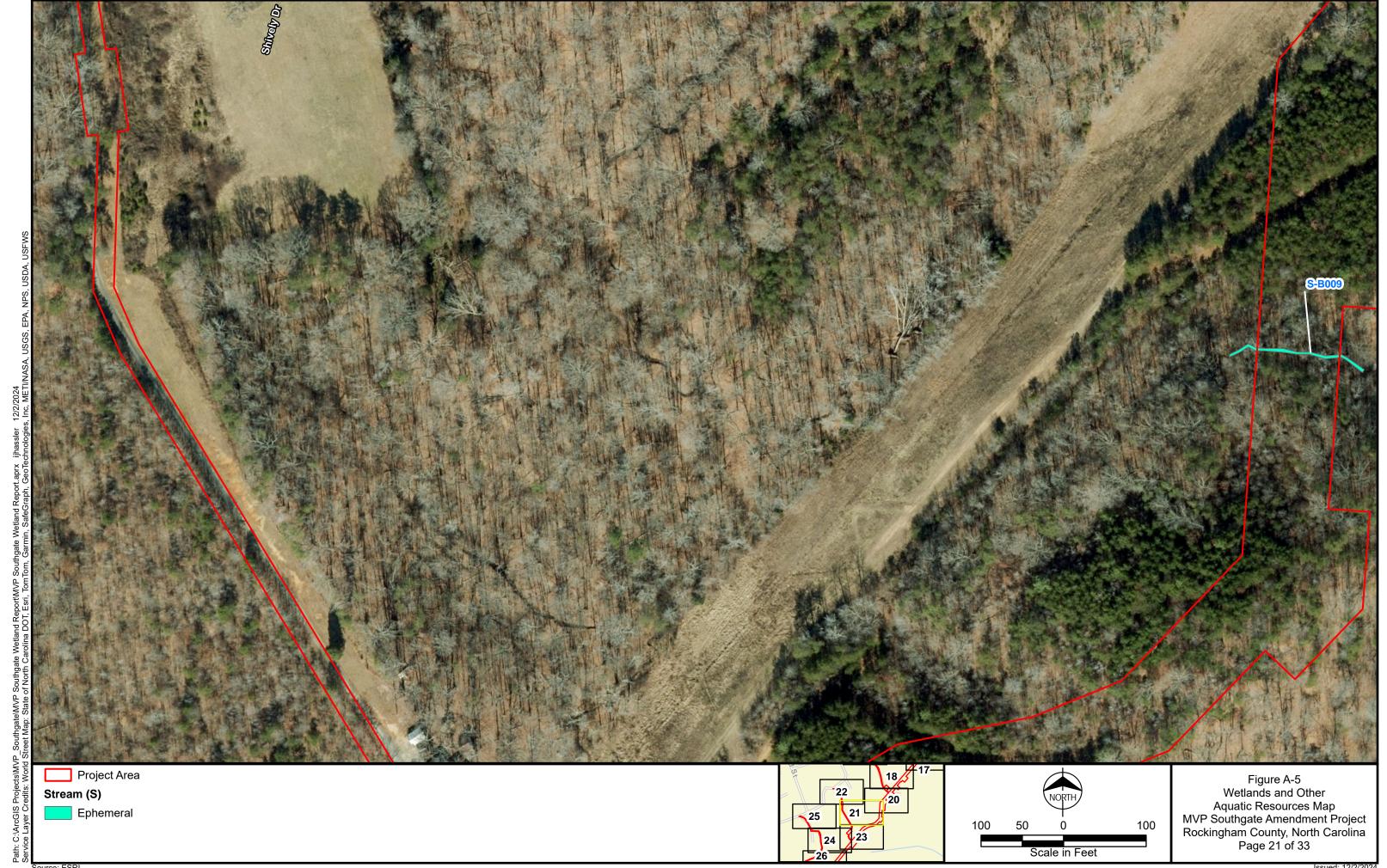






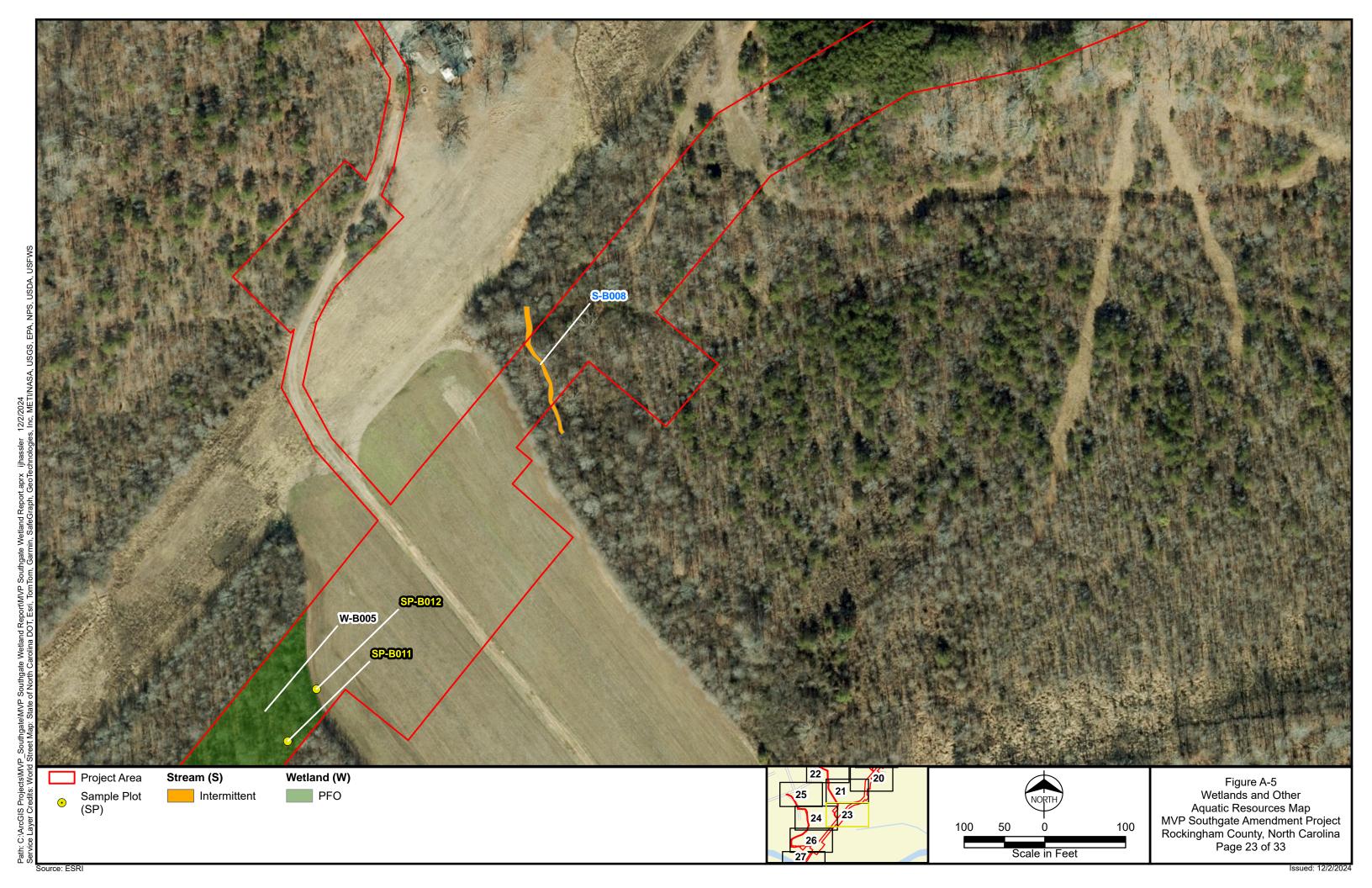


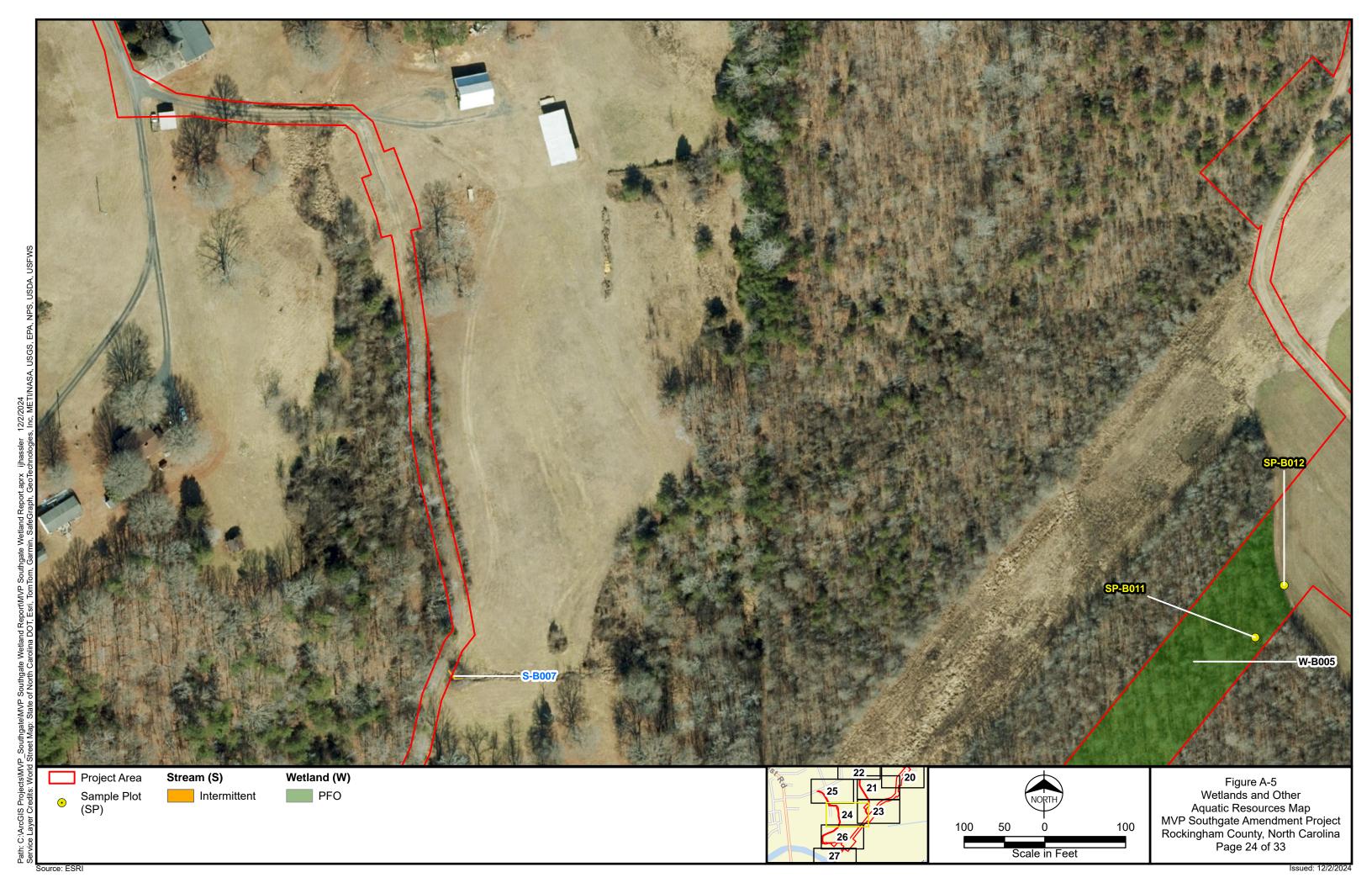


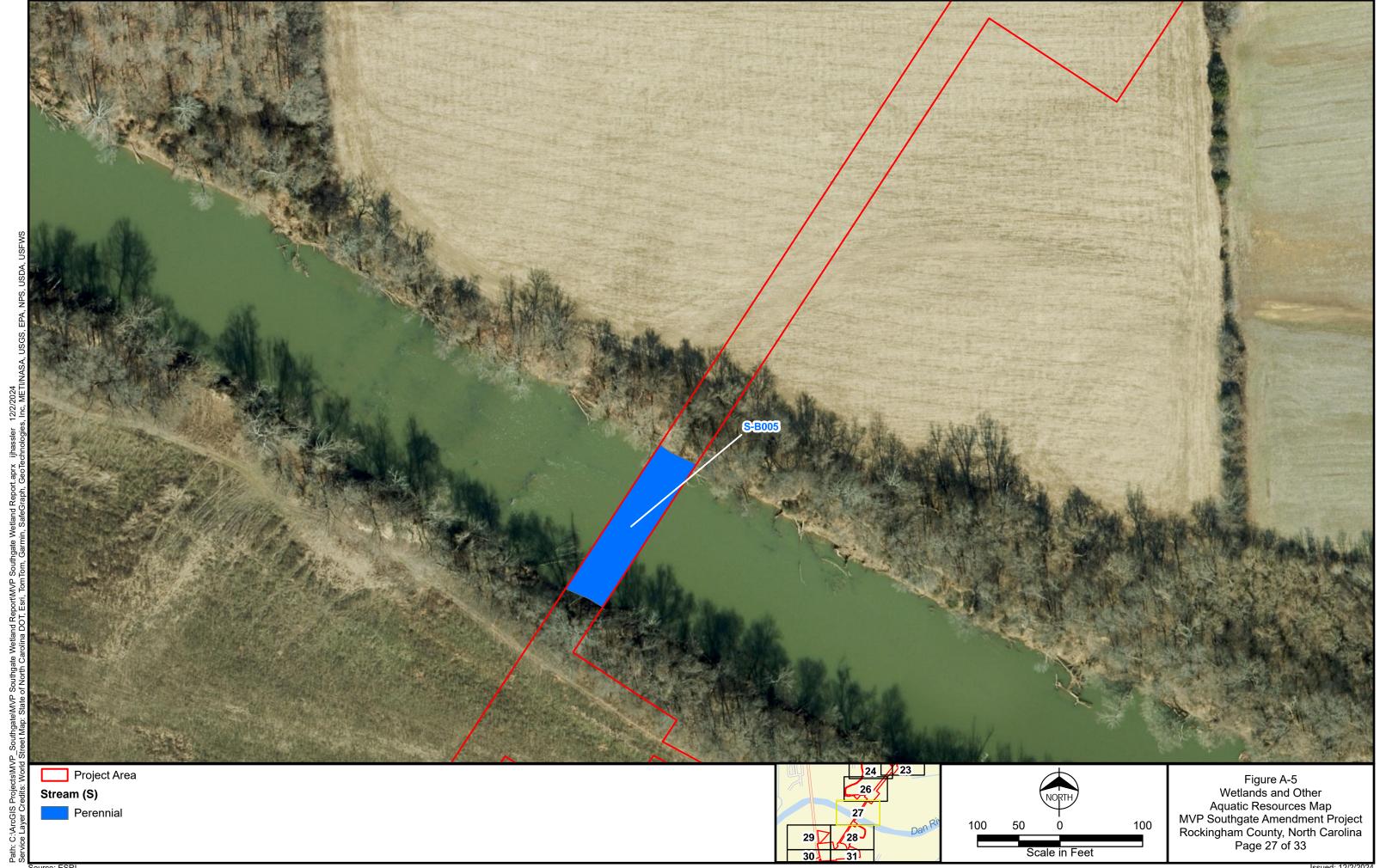


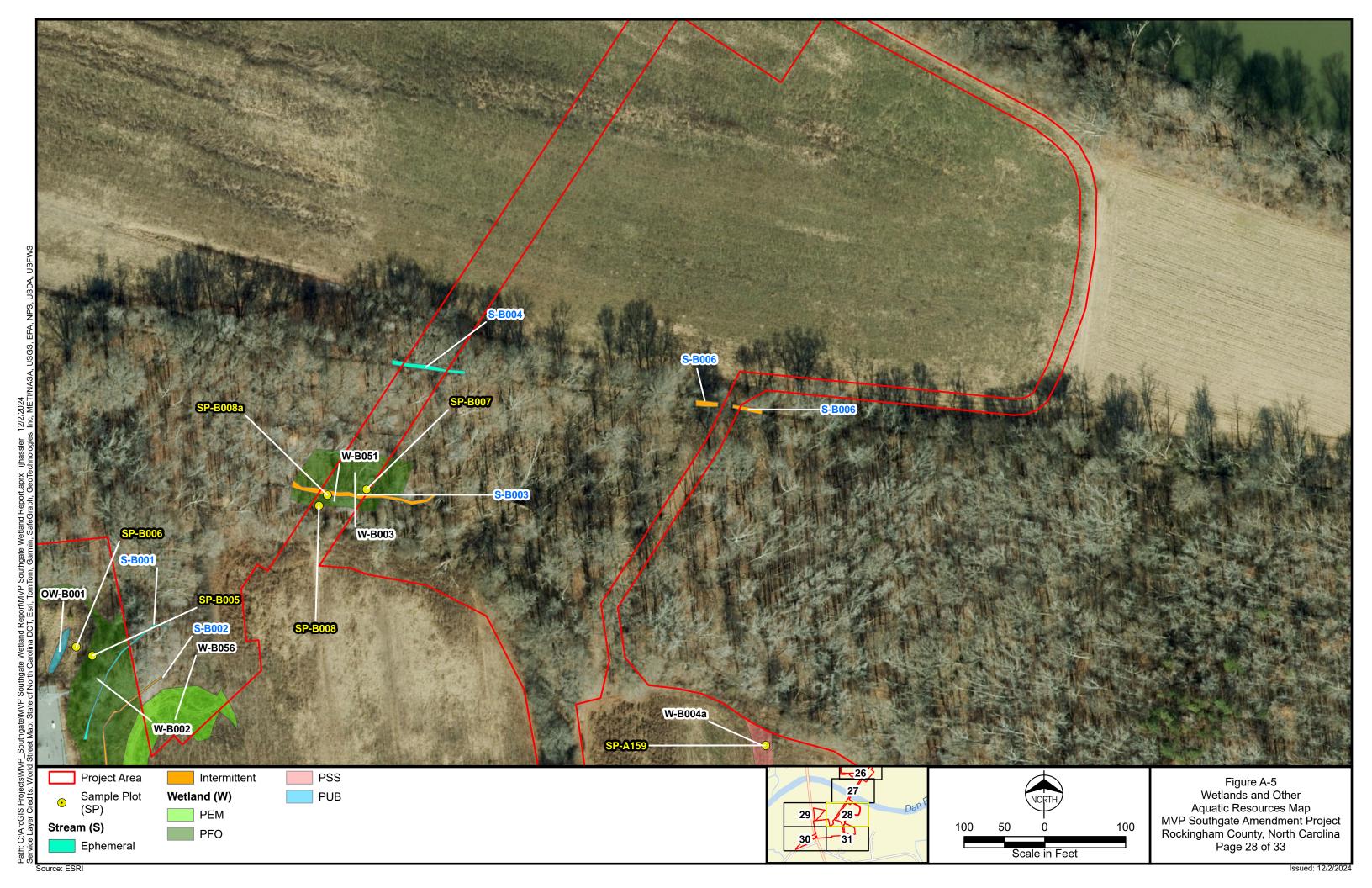
Source: ESRI

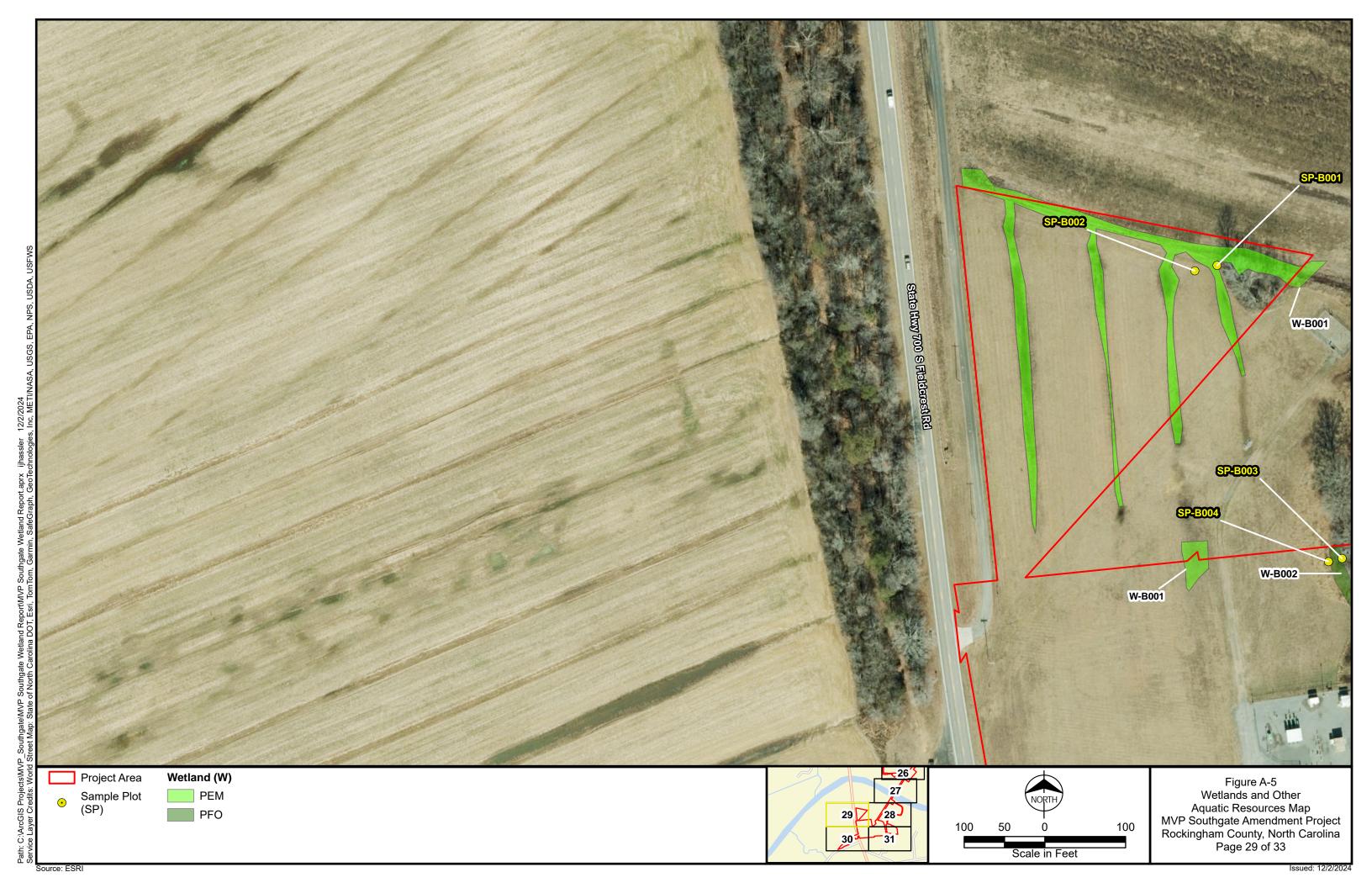
Issued: 12/2/2024

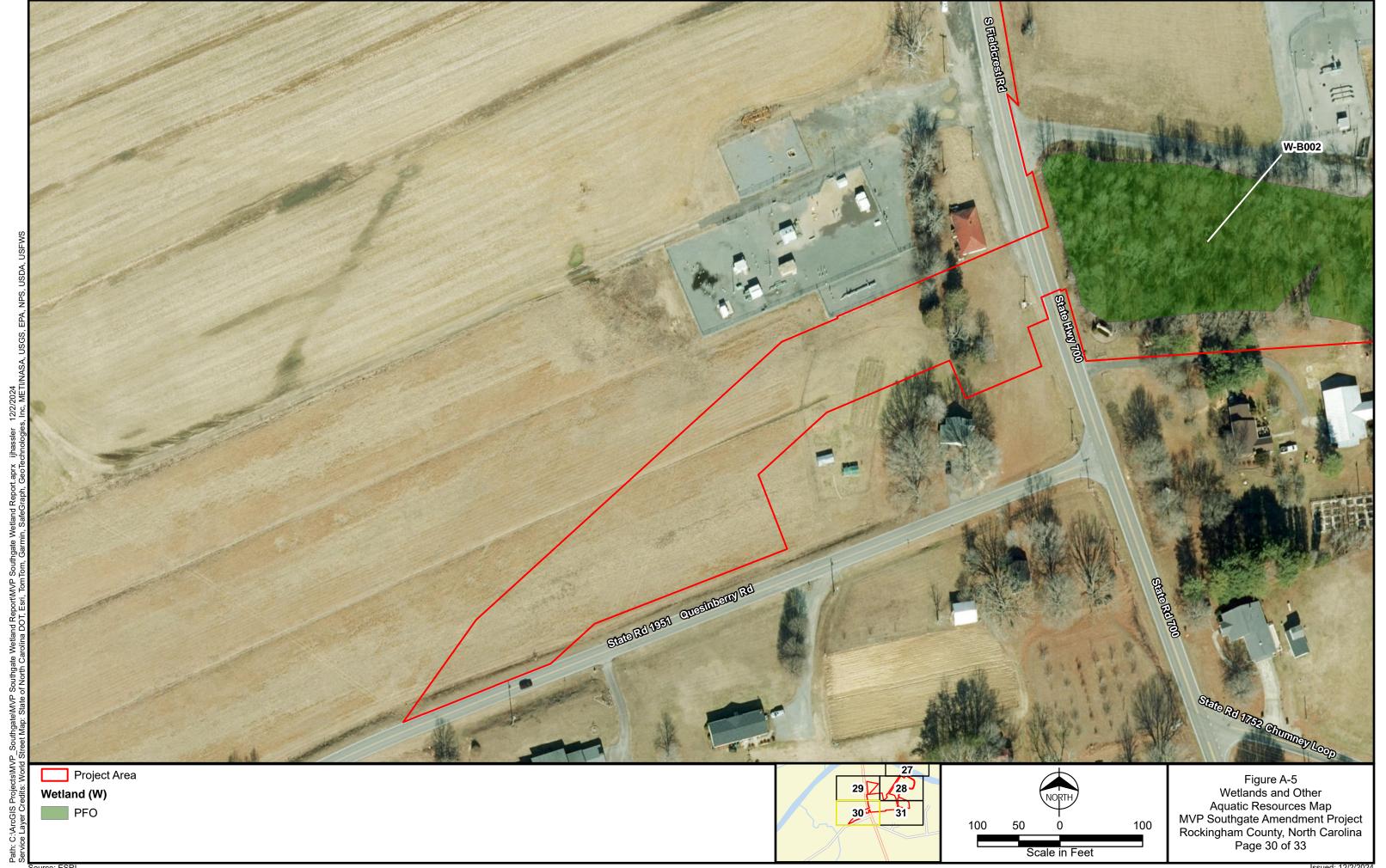






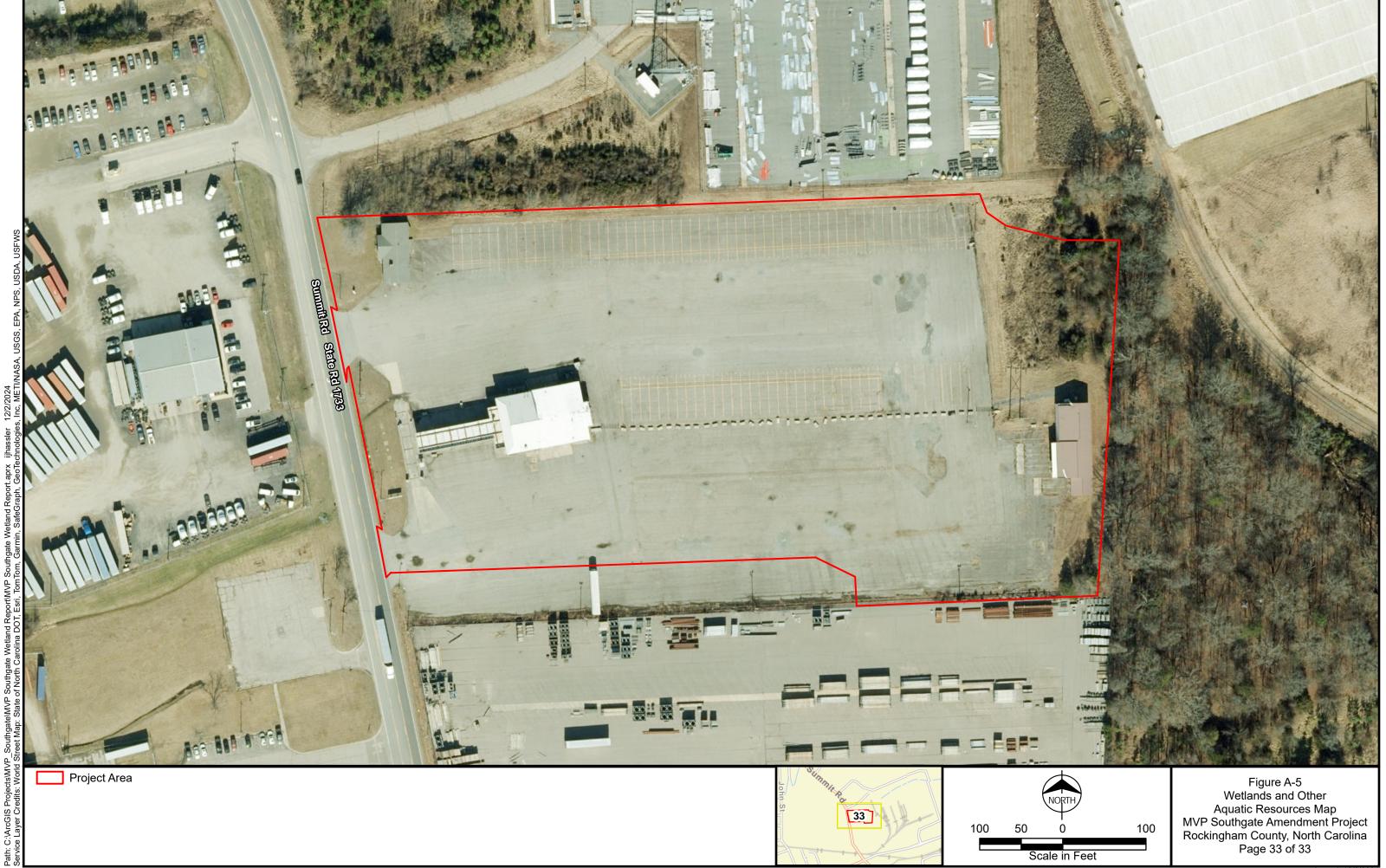












Source: ESRI

Issued: 12/2/2024

Appendix B – Routine Wetland Determination Data Forms: Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate Project City	/County: Rockingham County Sampling Date: 2024-09-03
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-A157
WILLO	ction, Township, Range:
-	elief (concave, convex, none): Convex Slope (%): 0-2
Subregion (LRR or MLRA): P 136 Lat: 36.52790094	
Soil Map Unit Name: DaA - Dan River loam, 0 to 2 percent slop	
Are climatic / hydrologic conditions on the site typical for this time of year?	<u>.</u>
Are Vegetation, Soil, or Hydrology significantly dist	urbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ No	
Hydric Soil Present? Yes V No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No
Remarks:	
Matter de constante de la contra de la DEMANA DOOZ.	- LICAGE Anton and out Donativitation Tool
Wetland sample plot within PEM W-B027a. The	ie USACE Antecedent Precipitation Tool
indicates wetter than normal conditions were	present 3 months prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants	
High Water Table (A2) Hydrogen Sulfide C	
	eres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	
Sediment Deposits (B2) Recent Iron Reduc	
Drift Deposits (B3) Thin Muck Surface	
Algal Mat or Crust (B4) Other (Explain in R	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	
Indicators A2, A3, B10, and D5 are present.	

Sampling Point: SP-A157

00.6	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 4	A)
2				Total Number of Dominant	
3					B)
4	-			Developed of Developed Oversion	
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				matric obe, 171000, 011710.	, (,)
7				Prevalence Index worksheet:	
·· <u></u>		= Total Cov	er	Total % Cover of: Multiply by:	
50% of total cover:				OBL species 60 x 1 = 60	
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species <u>40</u> x 2 = <u>80</u>	
				FAC species $0 x 3 = 0$	
1				FACU species $0 x4 = 0$	
2				UPL species 0 x 5 = 0	
3				100 140	(B)
4		-		Column Totals (A)	(D)
5				Prevalence Index = B/A = 1.40	
6		-		Hydrophytic Vegetation Indicators:	
7				✓ 1 - Rapid Test for Hydrophytic Vegetation	
8				✓ 2 - Dominance Test is >50%	
9				✓ 3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov		4 - Morphological Adaptations ¹ (Provide suppo	rtina
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)	9
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation¹ (Explain)	
1. Murdannia keisak	30		OBL	Problematic Hydrophytic Vegetation (Explain)	
2. Boehmeria cylindrica	20		FACW	1	
3. Persicaria pensylvanica	20	~	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	st
4. Persicaria sagittata	20	~	OBL	Definitions of Four Vegetation Strata:	
5. Carex Iurida	10	'	OBL	Definitions of Four Vegetation Strata.	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm	
		-		more in diameter at breast height (DBH), regardles height.	s of
7				neight.	
8				Sapling/Shrub – Woody plants, excluding vines, le	
9	-	-		than 3 in. DBH and greater than or equal to 3.28 ft	(1
10		•		m) tall.	
11				Herb - All herbaceous (non-woody) plants, regardle	ess
		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: <u>50.00</u>	20% of	total cover:	20.00	Woody vine – All woody vines greater than 3.28 ft	in
Woody Vine Stratum (Plot size: 30 ft r)				height.	
1					
2		-			
3					
4				Hudranhutia	
5				Hydrophytic Vegetation	
		= Total Cov	er	Present? Yes V No No	
50% of total cover:					
Remarks: (Include photo numbers here or on a separate si					
Tremaine. (molade priote hambers here or on a separate si	11001.)				
Rapid test and dominance test are pa	assed.				

Sampling Point: SP-A157

Depth (inches)	Matrix	%	Red	ox Feature	es Tuno ¹	1002	Toytura	Domarko	
inches) 0 - 20	Color (moist)	_ <u> </u>	Color (moist) 10YR 5/6	<u>%</u> 25	Type ¹	Loc ²	Texture Clay Loam	Remarks	
0 - 20	7.5YR 5/2	/5	1018 5/6	25	<u> </u>	<u> M </u>	Clay Loam		
-									
_			· ·		-				
		_			-		-		
			<u> </u>	· <u> </u>					
-									
-									
	-				- (
							·		
-			<u> </u>						
vpe: C=Cc	ncentration. D=De	pletion. RN	л=Reduced Matrix, М	IS=Maske	d Sand G	ains.	² Location: P	L=Pore Lining, M=Matrix.	
	ndicators:		,				Indica	ators for Problematic Hydric	Soils ³ :
_ Histosol			Dark Surfac	e (S7)				cm Muck (A10) (MLRA 147)	
	ipedon (A2)		Polyvalue B		ace (S8) (MLRA 147 .		Coast Prairie Redox (A16)	
Black His			Thin Dark S					(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gley			, -,	Р	riedmont Floodplain Soils (F19)	
	Layers (A5)		✓ Depleted Ma		` ,			(MLRA 136, 147)	
	ck (A10) (LRR N)		Redox Dark		F6)		v	ery Shallow Dark Surface (TF1	2)
_ Depleted	Below Dark Surface	ce (A11)	Depleted Da	ark Surfac	e (F7)		C	Other (Explain in Remarks)	
_ Thick Da	rk Surface (A12)		Redox Depr	essions (f	- 8)				
_ Sandy M	lucky Mineral (S1)	LRR N,	Iron-Mangai	nese Mas	ses (F12)	(LRR N,			
MLRA	147, 148)		MLRA 1	36)					
	leyed Matrix (S4)		Umbric Surf					icators of hydrophytic vegetation	
	edox (S5)		Piedmont FI					tland hydrology must be preser	nt,
	Matrix (S6)		Red Parent	Material (F21) (MLF	RA 127, 14	7) un	less disturbed or problematic.	
_ Stripped									
	ayer (if observed)):							
):							
estrictive L	ayer (if observed)):					Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (inc	ayer (if observed)):					Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes <u>V</u> No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes <u>✓</u> No	
Type: Depth (inc	ayer (if observed)		ent.				Hydric Soil	Present? Yes <u>✓</u> No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes <u>v</u> No	
Type: Depth (inc	ayer (if observed)		ent.				Hydric Soil	Present? Yes 🗸 No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
Type: Depth (inc	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
Type: Depth (inc	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
Type: Depth (inc	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incline) emarks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incline) emarks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incline) emarks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
estrictive L Type: Depth (incommerks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
Type: Depth (inc	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	
Type: Depth (incemarks:	ayer (if observed)		ent.				Hydric Soil	Present? Yes V No	

Project/Site: MVP Southgate Project	City/County: Rockingham County Sampling Date: 2024-09-04
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-A158
Investigator(s):WJ, LC	Section, Township, Range:
	ocal relief (concave, convex, none): Convex Slope (%): 2
Subregion (LRR or MLRA): P 136 Lat: 36.527915	
· · · · · · · · · · · · · · · · · · ·	slopes, frequently flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	
	ly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally p	
	ng sampling point locations, transects, important features, etc.
Attach site map showing	g sampling point locations, transcots, important leatures, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No No V	within a Wetland? Yes No
Wetland Hydrology Present? Yes V No	
Remarks:	
Upland sample plot adjacent to PFM W-B0	027a. The USACE Antecedent Precipitation Tool
indicates wetter than normal conditions w	ere present 3 months prior to survey.
LIVERGLOGY	
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic High Water Table (A2) Hydrogen Su	
	zospheres on Living Roots (C3) Moss Trim Lines (B16)
	Reduced Iron (C4) Dry-Season Water Table (C2)
1 4	Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Su	
Algal Mat or Crust (B4) Other (Explai	n in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inche	·s):
Water Table Present? Yes No Depth (inche	
Saturation Present? Yes No Depth (inche (includes capillary fringe)	es): Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:
Damada	
Remarks:	
Indicator B2 is present.	

Sampling	Point:	SP-A158
Sambillu	r Oll II.	

00.6	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1. Acer negundo	40		FAC	That Are OBL, FACW, or FAC: 2 (A)
2. Celtis occidentalis	10		FACU	Total Number of Dominant
3. Fraxinus americana	10		FACU	Species Across All Strata: 4 (B)
4. Ulmus rubra	5		FAC	D
5. Juniperus virginiana	5		FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)
6				That rice OBE, Friend, of Frie
7.				Prevalence Index worksheet:
· · ·	70 :	= Total Cove		Total % Cover of: Multiply by:
50% of total cover: <u>35.00</u>				OBL species $0 x 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r				FACW species <u>35</u> x 2 = <u>70</u>
1 Acer floridanum	5	✓	UPL	FAC species 70 x 3 = 210
		-	<u> </u>	FACU species 30 x 4 = 120
2				UPL species 40 x 5 = 200
3				Column Totals: 175 (A) 600 (B)
4				Column rotals (A) (B)
5				Prevalence Index = B/A = 3.42
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				
	5 .	= Total Cove	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 2.50	20% of	total cover:	1.00	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)		•		data in Remarks or on a separate sheet)
1. Vinca minor	35	✓	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Elymus virginicus	20		FACW	
3. Boehmeria cylindrica	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
4 Liquidambar styraciflua	10		FAC	be present, unless disturbed or problematic.
5. Smilax rotundifolia	10		FAC	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Persicaria virginiana	5		FAC	more in diameter at breast height (DBH), regardless of
7. Chasmanthium latifolium	5		FACU	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00	20% of	total cover:	20.00	
Woody Vine Stratum (Plot size: 30 ft r				Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes No _✓
		= Total Cove		rieseitt! Tes No
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate sl	neet.)			
No tests for hydrophytic vegetation a	ire pas	sed.		

Sampling Point: SP-A158

epth	Matrix	0/	Redox Features	T t	Damanda
nches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0 - 10	10YR 4/3	100		Loam	
10 - 20	2.5YR 4/6	100		Loam	
-					
-					
-					
_					
	-				
		pletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location:	PL=Pore Lining, M=Matrix.
dric Soil I	Indicators:			Indi	cators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147	148)	Coast Prairie Redox (A16)
Black His			Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	_	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Matrix (F3)		(MLRA 136, 147)
	ick (A10) (LRR N)	00 (111)	Redox Dark Surface (F6) Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	d Below Dark Surfa ark Surface (A12)	Ce (ATT)	Redox Depressions (F8)	_	Other (Explain in Remarks)
	fucky Mineral (S1)	(I RR N	Iron-Manganese Masses (F12) (LRR N,		
	147, 148)	(L IXIXI,	MLRA 136)		
	· · · · , · · · • ,		,		
Sandy G	Bleved Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ lr	ndicators of hydrophytic vegetation and
	Bleyed Matrix (S4) Redox (S5)		Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 14		ndicators of hydrophytic vegetation and vetland hydrology must be present,
Sandy R	Gleyed Matrix (S4) Redox (S5) Matrix (S6)		 Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14 	18) v	ndicators of hydrophytic vegetation and vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped	tedox (S5)):	Piedmont Floodplain Soils (F19) (MLRA 14	18) v	vetland hydrology must be present,
Sandy R Stripped	ledox (S5) Matrix (S6)) :	Piedmont Floodplain Soils (F19) (MLRA 14	18) v	vetland hydrology must be present,
Sandy R Stripped strictive L Type:	tedox (S5) Matrix (S6) Layer (if observed) :	Piedmont Floodplain Soils (F19) (MLRA 14	18) v 7) u	vetland hydrology must be present,
Sandy R Stripped Strictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) :	Piedmont Floodplain Soils (F19) (MLRA 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	tedox (S5) Matrix (S6) Layer (if observed		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incommarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incommarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incommarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped estrictive L Type: Depth (incommarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incommarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incommarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.
Sandy R Stripped strictive L Type: Depth (incomarks:	dedox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Floodplain Soils (F19) (MLRA 14 Red Parent Material (F21) (MLRA 127, 14	18) v 7) u	vetland hydrology must be present, inless disturbed or problematic.

Project/Site: MVP Southgate Project City/C	County: Rockingham County Sampling Date: 2024-09-04
· · · · · · · · · · · · · · · · · · ·	State: North Carolina Sampling Point: SP-A159
	on, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local reli	
Subregion (LRR or MLRA): P 136 Lat: 36.49387796	
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes,	, rarely flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes V No No No Remarks:	Is the Sampled Area within a Wetland? Yes No
Wetland sample plot within PSS W-B004a. The indicates wetter than normal conditions were p	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (High Water Table (A2) Hydrogen Sulfide Odd	Surface Soil Cracks (B6) B14) Sparsely Vegetated Concave Surface (B8) or (C1) Es on Living Roots (C3) Moss Trim Lines (B16) Id Iron (C4) In in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Marks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Indicators B10, D2 and D5 are present.	

Sampling Point: SP-	A159
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r		Species?		
				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
				That Ale OBE, I AOW, OI I AC (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 100.00 (A/B)
				That Are OBL, FACW, or FAC: 100.00 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	
50% of total cover:	20% of	total cover:		OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r				FACW species 15 x 2 = 30
1. Liquidambar styraciflua	65	~	FAC	FAC species 125 x 3 = 375
	10		FAC	FACU species 10
2. Diospyros virginiana				
3. Rosa multiflora	10		<u>FACU</u>	UPL species $0 \times 5 = 0$
4				Column Totals: <u>150</u> (A) <u>445</u> (B)
5				Prevalence Index = $B/A = 2.96$
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
				<u>✓</u> 2 - Dominance Test is >50%
9	0.5			✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 42.5	20% of	total cover:	17	
Herb Stratum (Plot size: 5 ft r				data in Remarks or on a separate sheet)
1. Microstegium vimineum	40	/	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Juncus effusus	10		FACW	
				¹ Indicators of hydric soil and wetland hydrology must
3. Toxicodendron radicans	10		FAC	be present, unless disturbed or problematic.
4. Boehmeria cylindrica	5		FACW	Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation Strata.
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				ini) tan.
11				Herb – All herbaceous (non-woody) plants, regardless
	65	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 32.5	20% of	total cover:	13	
Woody Vine Stratum (Plot size: 30 ft r				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				
				Hydrophytic
5				Vegetation Present? Yes ✓ No
		= Total Cov		Tresent: resNo
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	sheet.)			
Dominance test and prevalence inde	x are m	iet.		

Sampling Point: SP-A159

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Re	emarks
0 - 5	7.5YR 4/2	100					Clay Loam	_
5 - 11	10YR 5/2	90	5YR 5/6	10	<u>C</u>	М	Clay Loam	_
11 - 16	7.5YR 6/2	85	7.5YR 6/6	15	С	М	Clay Loam	_
16 - 21	7.5YR 7/1	80	10YR 5/8	20	<u>C</u>	М	Clay Loam	_
	-							_
								_
					<u> </u>			
					<u> </u>			
		_						
	-							_
		oletion, RM	I=Reduced Matrix, M	S=Maske	d Sand G	rains.	² Location: PL=Pore Lining, M=	
Hydric Soil I	ndicators:						Indicators for Problen	-
Histosol	(A1)		Dark Surface				2 cm Muck (A10) (I	•
	pipedon (A2)		Polyvalue Be		. , .		· · · —	
Black Hi	stic (A3)		Thin Dark St	urface (S9) (MLRA	147, 148)	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Piedmont Floodpla	in Soils (F19)
Stratified	l Layers (A5)		✓ Depleted Ma	trix (F3)			(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (I	F6)		Very Shallow Dark	Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da	rk Surface	e (F7)		Other (Explain in R	emarks)
	ark Surface (A12)	` ,	Redox Depre				_ ` ` `	,
	lucky Mineral (S1) (LRR N.	Iron-Mangar			(LRR N.		
	\ 147, 148)	,	MLRA 13		/cc (<u>_</u> /	(=,		
	sleyed Matrix (S4)		Umbric Surfa	•	(MIRA1	36 122\	³ Indicators of hydroph	outic vegetation and
	ledox (S5)		Piedmont Flo					-
								· ·
	Matrix (S6)		Red Parent	viateriai (i	-21) (WLF	KA 127, 14	7) unless disturbed or p	problematic.
	_ayer (if observed)	:						
Type:								
Depth (inc	ches):						Hydric Soil Present? Yes	No
Remarks:			_					
In	dicator F3 is	s prese	ent.					

Project/Site: MVP Southgate Project City/9	County: Rockingham County Sampling Date: 2024-09-04
Applicant/Owner: Mountain Valley Pipeline, LLC State: North Carolina Sampling Point: SP-A160	
Investigator(s): WJ, LC Section, Township, Range:	
Landform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 1	
Subregion (LRR or MLRA): P 136 Lat: 36.49372894	
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No	
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes Yes No No Remarks:	Is the Sampled Area within a Wetland? Yes No
Upland sample plot adjacent to PEM W-B056. The USACE Antecedent Precipitation Tool indicates wetter than normal conditions were present 3 months prior to survey.	
HYDROLOGY	
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)	
Surface Water (A1) True Aquatic Plants	
High Water Table (A2) Seturation (A2) Hydrogen Sulfide On Oxidized Phizoppho	
Saturation (A3)	
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)	
Sediment Deposits (B2)	
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)	
Iron Deposits (B5) Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)	
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No _ ✓ Depth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
No indicators are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-A160
	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4 r				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.00 (A/B)
6				Prevalence Index worksheet:
7		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:				OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species 10 x 2 = 20
1				FAC species 10 x 3 = 30
2.				FACU species <u>80</u> x 4 = <u>320</u>
3				UPL species $0 \times 5 = 0$
4				Column Totals: 100 (A) 370 (B)
5				December of the last P/A 3.70
6				Prevalence Index = B/A = 3.70
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
		= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation ¹ (Explain)
_{1.} Digitaria sanguinalis	60		FACU	Froblematic Hydrophytic vegetation (Explain)
2. Paspalum setaceum	20		FACU	¹ Indicators of hydric soil and wetland hydrology must
3. Liquidambar styraciflua	5		FAC	be present, unless disturbed or problematic.
4. Diodia virginiana	5		FACW	Definitions of Four Vegetation Strata:
5. Diospyros virginiana	5		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
8. Bidens aristosa	5		FACW	more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9			·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tail.
11	100			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 50.00		= Total Cov		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30 ft r)	20 /0 01	total cover.		Woody vine – All woody vines greater than 3.28 ft in
1				height.
2.			·	
3				
4				
5				Hydrophytic Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:	20% of	total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			
No tasts are passed				
No tests are passed.				

	Matrix Color (moist)	%	Color (moist)	lox Feature %	es Type ¹	Loc ²	Texture	Remarks
inches) 0 - 8	10YR 5/2	<u></u>	10YR 5/6	3	C Type	M	Sandy Loam	Remarks
8 - 20	-	0, 85	• •	 15	_ C			
0-20	10YR 5/2		10YR 5/6	15		<u>M</u>	Sandy Loam	
				_				
-								
-								
				_	_			
	-		-					
-			<u> </u>					
-								
			4-Dadwaad Matrix N		- C		21	-Dana Limina, M-Matrix
	oncentration, D=De Indicators:	epietion, Riv	M=Reduced Matrix, M	/IS=Maske	d Sand C	Frains.		=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³
			Dawle Comfa	(07)				
_ Histosol	oipedon (A2)		Dark Surfac		200 (88)	(MLRA 147,		cm Muck (A10) (MLRA 147) past Prairie Redox (A16)
_ Histic Ep _ Black Hi:			Polyvalue B					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gle			1 1 77 , 1 70)		edmont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted M		(/			(MLRA 136, 147)
_	ick (A10) (LRR N)		Redox Dark		F6)			ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	ace (A11)	Depleted D	ark Surfac	e (F7)		Ot	her (Explain in Remarks)
	ark Surface (A12)		Redox Dep					
-	lucky Mineral (S1)	(LRR N,	Iron-Manga		ses (F12)	(LRR N,		
	A 147, 148)		MLRA 1	•			3	
-	Sleyed Matrix (S4)		Umbric Sur					cators of hydrophytic vegetation and
-	Redox (S5)					9) (MLRA 1 4		land hydrology must be present,
	Matrix (S6)	۵۱.	Red Parent	Material (F21) (ML	RA 127, 147	() unie	ess disturbed or problematic.
	_ayer (if observed	u):						
Type:			<u></u>				l	v v
Depth (incention of the contract of the contra	ches):						Hydric Soil I	Present? Yes V No No
In	idicator F3	is prese	ent.					

Project/Site: MVP Southgate Project City/C	County: Rockingham County Sampling Date: 2024-09-04					
· ·	State: North Carolina Sampling Point: SP-A161					
Investigator(s): WJ, LC Section, Township, Range:						
Landform (hillslope, terrace, etc.): Drainageway Local rel						
Subregion (LRR or MLRA): P 136 Lat: 36.49377607						
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problems						
	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes V No No No Remarks:	Is the Sampled Area within a Wetland? Yes No					
Wetland sample plot within PEM W-B056. The indicates wetter than normal conditions were purposed within PEM W-B056. The indicates wetter than normal conditions were purposed within PEM W-B056. The indicates wetter than normal conditions were purposed within PEM W-B056.	·					
	Secondary Indicators (minimum of two required)					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (Aquatic	or (C1) Drainage Patterns (B10) es on Living Roots (C3) Moss Trim Lines (B16) d Iron (C4) Dry-Season Water Table (C2) on in Tilled Soils (C6) Crayfish Burrows (C8) C7) Saturation Visible on Aerial Imagery (C9) marks) Stunted or Stressed Plants (D1)					
Indicators D2 and D5 are present.						

% Cover Species? Status

= Total Cover

_ = Total Cover

120 = Total Cover

30 _____

30

5

50% of total cover: 60.00 20% of total cover: 24.00

____ = Total Cover 50% of total cover: ____ 20% of total cover:____

✓ FACU

FACW

FACW

FACW

FACW OBL

FAC

OBL

FAC

50% of total cover: _____ 20% of total cover:

50% of total cover: _____ 20% of total cover:____

Tree Stratum (Plot size: 30 ft r)

Sapling/Shrub Stratum (Plot size: 15 ft r)

Herb Stratum (Plot size: 5 ft r)

1. Paspalum setaceum

3. Arthraxon hispidus

8. Rhynchospora macrostachya

9. Persicaria hydropiper

Woody Vine Stratum (Plot size: 30 ft r)

2. Diodia virginiana

4. Bidens aristosa

5. Cyperus strigosus

6. Echinochloa crus-galli

7 Boehmeria cylindrica

Sampling Point: SP-A161						
Dominance Test	t worksheet:	:				
Number of Domir That Are OBL, FA			(A)			
Total Number of Species Across A		3	(B)			
Percent of Domir That Are OBL, FA		66.66	(A/B)			
Prevalence Inde	x workshee	t:				
Total % Cove	er of:	Multiply by:				
OBL species	10	x 1 = 10				
	45	x 2 = 90	_			
	35	x 3 = 105	_			
	30	x 4 = 120	_			
ACC Species _	0		-			
Of L species _	120	X 5 = -	- (5)			
Column Totals: _	120	(A) 325	_ (B)			
Prevalence	Index = B/A	x = 2.70	_			
Hydrophytic Ve	getation Indi	icators:				
1 - Rapid Te	st for Hydrop	hytic Vegetation				
2 - Dominano	ce Test is >5	0%				
✓ 3 - Prevalence	ce Index is ≤	3.0 ¹				
4 - Morpholo	gical Adapta	tions ¹ (Provide sup	porting			
data in Re	emarks or on	a separate sheet)				
Problematic	Hydrophytic '	Vegetation ¹ (Explai	n)			
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.						
Definitions of Four Vegetation Strata:						
		ng vines, 3 in. (7.6 ight (DBH), regardl				
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 – Al height.	II woody vine	s greater than 3.28	ft in			
Hydrophytic Vegetation Present?	Yes	No				

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

Dominance test is passed.

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	n the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 3	10YR 5/2	97	10YR 5/6	3	С	М	Sandy Loam	
3 - 20	10YR 5/2	85	10YR 5/6	15	С	М	Sandy Loam	
								·
		_						
					_			
-								
		_						
								· -
		_						
					_			
¹Type: C=Ce	oncentration, D=De	oletion, RN	/I=Reduced Matrix, MS	S=Maske	d Sand G	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil		,	,					ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ace (S8) (I	VILRA 147		Coast Prairie Redox (A16)
	stic (A3)		Thin Dark Su				· _	(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		F	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		✓ Depleted Ma	trix (F3)				(MLRA 136, 147)
2 cm Mu	ıck (A10) (LRR N)		Redox Dark	Surface (F6)		\	/ery Shallow Dark Surface (TF12)
Depleted	d Below Dark Surfac	ce (A11)	Depleted Dar	k Surfac	e (F7)		(Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (f	- 8)			
	lucky Mineral (S1) (LRR N,	Iron-Mangan	ese Mas	ses (F12)	(LRR N,		
	A 147, 148)		MLRA 13	•				
	Gleyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	/laterial (F21) (MLF	RA 127, 14	7) ur	nless disturbed or problematic.
Restrictive I	Layer (if observed)):						
Type:								
Depth (in	ches):						Hydric Soi	I Present? Yes ✓ No
Remarks:								
	dicator F3 is	sprese	ent.					
•••	idioditor i o ii	, p. 000	J. 1.C.					

Project/Site: MVP Southgate Project City/C	Rockingham County Sampling Date: 2024-09-04					
· · · · · · · · · · · · · · · · · · ·	State: North Carolina Sampling Point: SP-A162					
Investigator(s): WJ, LC Section, Township, Range:						
Landform (hillslope, terrace, etc.): Drainageway Local reli						
Subregion (LRR or MLRA): P 136 Lat: 36.4932346						
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes,						
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	es No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturb	bed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problema						
SUMMARY OF FINDINGS – Attach site map showing sam						
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes V No Yes No Yes No	Is the Sampled Area within a Wetland? Yes No					
Wetland Hydrology Present? Yes No Remarks:						
Wetland sample plot within PEM W-B055. Vegetation Precipitation Tool indicates wetter than normal con						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1)	or (C1) Drainage Patterns (B10) es on Living Roots (C3) Moss Trim Lines (B16) d Iron (C4) Dry-Season Water Table (C2) n in Tilled Soils (C6) Crayfish Burrows (C8) C7) Saturation Visible on Aerial Imagery (C9) narks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre						
Remarks: Indicators D2 and D5 are present.						

% Cover Species? Status

= Total Cover

= Total Cover

FAC

OBL

OBL

FACW

FACW

FACW

FACW FAC

= Total Cover

OBL

FACW

50% of total cover: _____ 20% of total cover:____

50% of total cover: _____ 20% of total cover:____

15

10

10

5

90

50% of total cover: <u>45.00</u> 20% of total cover: <u>18.00</u>

= Total Cover 50% of total cover: ____ = 20% of total cover:

Tree Stratum (Plot size: 30 ft r)

Sapling/Shrub Stratum (Plot size: 15 ft r)

Herb Stratum (Plot size: 5 ft r 1. Arthraxon hispidus

5. Persicaria hydropiper

9. Bidens aristosa

Woody Vine Stratum (Plot size: 30 ft r)

3 Murdannia keisak

7 Symphyotrichum lateriflorum

2. Poa trivialis

4. Ludwigia palustris

8. Cyperus strigosus

10.Sambucus nigra 11.Scirpus atrovirens

6. Juncus effusus

Sampling Point: SP-A162					
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: 100.00	(A/B)				
Prevalence Index worksheet:					
Total % Cover of: Multiply by: OBL species 35 x 1 = 35	_				
FACW species <u>35</u> x 2 = <u>70</u>	_				
FAC species 20 x 3 = 60	_				
FACU species 0 x 4 = 0	_				
UPL species $0 \times 5 = 0$	_				
Column Totals: 90 (A) 165	_ (B)				
Prevalence Index = B/A = 1.83	_				
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 sup	porting				
data in Remarks or on a separate sheet)					
Problematic Hydrophytic Vegetation¹ (Expla	in)				
¹ Indicators of hydric soil and wetland hydrology r be present, unless disturbed or problematic.	nust				
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 than 3 in. DBH and greater than or equal to 3.28 m) tall.					
Herb – All herbaceous (non-woody) plants, rega of size, and woody plants less than 3.28 ft tall.	rdless				
Woody vine – All woody vines greater than 3.28 height.	ft in				
Hydrophytic Vegetation Present? Yes <u></u> No					

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

Dominance test is passed.

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 6	10YR 5/1	90	10YR 5/6	10	С	PL / M	Sandy Clay Loam	
6 - 20	10YR 6/1	75	10YR 5/8	25	С	PL / M	Sandy Clay Loam	
		_	· -	-				
		- 	·					
		_	<u> </u>					
	-	_	<u> </u>					
-								
-								
		- 	·					
		<u> </u>						
		oletion, RN	M=Reduced Matrix, MS	S=Maske	ed Sand G	rains.		PL=Pore Lining, M=Matrix.
Hydric Soil I								eators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		(0.0) (1			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) (Coast Prairie Redox (A16)
Black Hi			Thin Dark Su			147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		F	Piedmont Floodplain Soils (F19)
	I Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark					Very Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da				_ (Other (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
-	lucky Mineral (S1) (LRR N,	Iron-Mangan		ses (F12)	(LRR N,		
	147, 148)		MLRA 13	•				
Sandy G	leyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain	Soils (F19)	(MLRA 14	18) we	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	Material (F21) (MLF	RA 127, 147	7) ur	nless disturbed or problematic.
Restrictive I	ayer (if observed)	:						
Type:								
Depth (inc	ches):						Hydric Soi	I Present? Yes ✓ No
Remarks:							1.,	
	dicator F3 is	nrese	ent					
•••		pics	J11C.					

Project/Site: MVP Southgate Project City/0	County: Rockingham County Sampling Date: 2024-09-03					
•	State: North Carolina Sampling Point: SP-A163					
Investigator(s):WJ, LC Section, Township, Range:						
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): Concave Slope (%): 1						
Subregion (LRR or MLRA): P 136 Lat: 36.52863274 Long: -79.64587512 Datum: NAD 83 Soil Map Unit Name: DaA - Dan River loam, 0 to 2 percent slopes, frequently flooded NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? $\mbox{\ensuremath{^{\circ}}}$						
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sar	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes V No						
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No No	Is the Sampled Area					
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No					
Remarks:						
Wotland cample plot within BSS W BOSGs. The	ALISACE Antogodont Proginitation Tool					
Wetland sample plot within PSS W-B056a. The	·					
indicates wetter than normal conditions were	oresent 3 months prior to survey.					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) True Aquatic Plants						
High Water Table (A2) Hydrogen Sulfide Oc						
Saturation (A3) Oxidized Rhizospher Water Marks (B1) Presence of Reduce						
Sediment Deposits (B2) Recent Iron Reduction Drift Deposits (B3) Thin Muck Surface (in the control of the contr						
Algal Mat or Crust (B4) Other (Explain in Re						
Iron Deposits (B5)	Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
✓ Water-Stained Leaves (B9)	Microtopographic Relief (D4)					
Aquatic Fauna (B13)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No Depth (inches):						
Saturation Present? Yes No Depth (inches):						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:					
Remarks:						
Indicators B9, D2 and D5 are present.						
, ,						

% Cover Species? Status

= Total Cover

FACW

FACW

FACW

FACW

FACW

FACW

FACU

FAC

FAC

50% of total cover: _____ 20% of total cover:____

50% of total cover: 22.50 20% of total cover: 9.00

50% of total cover: <u>27.50</u> 20% of total cover: <u>11.00</u>

= Total Cover 50% of total cover: ____ = 20% of total cover:

10

10 ____

45 = Total Cover

= Total Cover

Tree Stratum (Plot size: 30 ft r)

Sapling/Shrub Stratum (Plot size: 15 ft r)

3 Fraxinus pennsylvanica

Herb Stratum (Plot size: 5 ft r)

2. Symphyotrichum lateriflorum

5. Solidago altissima

Woody Vine Stratum (Plot size: 30 ft r)

1. Diodia virginiana

6. Verbesina alternifolia

4. Boehmeria cylindrica

3. Juncus effusus

1. Platanus occidentalis 20

2. Liquidambar styraciflua 15

Sampling Point: SP-A163					
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: 100.00	(A/B)				
Prevalence Index worksheet:					
Total % Cover of: Multiply by:					
OBL species 0 $x = 0$					
FACW species 75 x 2 = 150	_				
FAC species 20 x 3 = 60	_				
- X 0	_				
· — — — — — — — — — — — — — — — — — — —	_				
01 L 3pccics x 0 =	_				
Column Totals: 100 (A) 230	(B)				
Prevalence Index = B/A = 2.30	_				
Hydrophytic Vegetation Indicators:					
1 - Rapid Test for Hydrophytic Vegetation					
✓ 2 - Dominance Test is >50%					
✓ 3 - Prevalence Index is ≤3.0¹					
4 - Morphological Adaptations ¹ (Provide sup	porting				
data in Remarks or on a separate sheet)					
Problematic Hydrophytic Vegetation ¹ (Expla					
¹ Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic.	must				
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 than 3 in. DBH and greater than or equal to 3.28 m) tall.					
Herb – All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall.	ırdless				
Woody vine – All woody vines greater than 3.28 height.	3 ft in				
Hydrophytic Vegetation Present? Yes _ V No					

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

Dominance test is passed.

Profile Des	cription: (Describe	e to the de	ptn needed to docu	ment the	maicator	Or Commi	n the absence	or indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 8	10YR 5/2	90	10YR 5/6	10	С	М	Sandy Clay Loam	
-								
-								
	-	_	· <u></u>					
-								
-								
					· ——			-
-								
					-			
			·				-	
			· ·		<u> </u>			
¹ Type: C=C	oncentration, D=De	pletion, RN	M=Reduced Matrix, M	S=Maske	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histoso	I (A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ace (S8) (I	VILRA 147		coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su					(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gley				P	iedmont Floodplain Soils (F19)
Stratifie	d Layers (A5)		✓ Depleted Ma	ıtrix (F3)				(MLRA 136, 147)
2 cm M	uck (A10) (LRR N)		Redox Dark	Surface (F6)		V	ery Shallow Dark Surface (TF12)
Deplete	d Below Dark Surfa	ce (A11)	Depleted Da	rk Surface	e (F7)		c	ther (Explain in Remarks)
Thick D	ark Surface (A12)		Redox Depre	essions (F	⁻ 8)			
	Mucky Mineral (S1)	(LRR N,	Iron-Mangar		ses (F12) ((LRR N,		
	A 147, 148)		MLRA 13	6)				
	Gleyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					tland hydrology must be present,
	d Matrix (S6)		Red Parent I	Material (I	-21) (ML R	RA 127, 14	7) un	less disturbed or problematic.
	Layer (if observed):						
Type: Re	estrictive; rock							
Depth (in	iches): 8						Hydric Soil	Present? Yes V No No
Remarks:								
	ndicator F3 i	s nrese	ent					
••	idiodioi i o i	o pi co	J11C.					

Project/Site: MVP Southgate Project City/0	County: Rockingham County Sampling Date: 2024-09-03				
· · · · · · · · · · · · · · · · · · ·	State: North Carolina Sampling Point: SP-A164				
	ion, Township, Range:				
Landform (hillslope, terrace, etc.): Mound Local re	elief (concave, convex, none): Convex Slope (%): 1				
Subregion (LRR or MLRA): P 136 Lat: 36.52855504					
Soil Map Unit Name: DaA - Dan River loam, 0 to 2 percent slopes, frequently flooded NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No V No V No V	Is the Sampled Area within a Wetland? Yes No				
Upland sample plot adjacent to PSS W-B056a indicates wetter than normal conditions were	•				
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) True Aquatic Plants					
High Water Table (A2) Hydrogen Sulfide Od					
	res on Living Roots (C3) Moss Trim Lines (B16)				
Water Marks (B1) Presence of Reduce Sediment Deposits (B2) Recent Iron Reduction					
Drift Deposits (B3) Thin Muck Surface (
Algal Mat or Crust (B4) Other (Explain in Re					
Iron Deposits (B5)	Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)	Microtopographic Relief (D4)				
Aquatic Fauna (B13)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No Depth (inches):					
Water Table Present? Yes No Depth (inches):					
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No✓				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:				
Remarks:					
Indicator D5 is present.					

Sampling Point: SP-A164	

7 01 1 (B) 1 20 ft r	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				
7				Prevalence Index worksheet:
		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:	20% of	total cover:		OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species $\frac{40}{90}$ $\times 2 = \frac{80}{270}$
1. Liquidambar styraciflua	55		FAC	FAC species $\frac{90}{35}$ $\times 3 = \frac{270}{140}$
2. Juniperus virginiana	15		FACU	17.60 openie x :
3. Acer negundo	15		FAC	of Lapecies x 5 =
4				Column Totals: <u>165</u> (A) <u>490</u> (B)
5				Prevalence Index = B/A = 2.96
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	~=	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 42.50				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 /0 01	total cover.		data in Remarks or on a separate sheet)
1. Erechtites hieraciifolia	25	~		Problematic Hydrophytic Vegetation ¹ (Explain)
2. Boehmeria cylindrica	15		FACW	
3. Eupatorium serotinum	15		FAC	¹ Indicators of hydric soil and wetland hydrology must
4 Viola striata	10		FACW	be present, unless disturbed or problematic.
5. Poa pratensis	10		FACU	Definitions of Four Vegetation Strata:
6. Bidens aristosa	5		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Commelina communis	5		FAC	more in diameter at breast height (DBH), regardless of
8. Diodia virginiana	5		FACW	height.
g. Symphyotrichum lateriflorum	5		FACW	Sapling/Shrub – Woody plants, excluding vines, less
10 Eupatorium capillifolium	5		FACU	than 3 in. DBH and greater than or equal to 3.28 ft (1
10 Eupatorium Capilillollum 11 Ambrosia artemisiifolia	5		FACU	m) tall.
11.Ambrosia artemismona	405			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 52.50		= Total Cov total cover:		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes ✓ No
50% of total cover:		= Total Cov total cover:		rieseitt? Tes NO
Remarks: (Include photo numbers here or on a separate s	heet.)			
Dominance test is passed.				

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 3	10YR 3/3	100					Sandy Loam	
3 - 18	10YR 3/4	100					Sandy Loam	
18 - 20	10YR 5/3	70	10YR 6/6	30	С	M	Sandy Clay Loam	
10 20	10111 0/0		10111 0/0					
-				·		-		
					-			
	-	_		-				
	-							
	-							
		pletion, RN	1=Reduced Matrix, M	S=Maske	d Sand G	rains.		_=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	tors for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)
Histic Ep	oipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (I	MLRA 147	, 148) Co	oast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	urface (S9	9) (MLRA	147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye					edmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		` ,			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		F6)		Ve	ery Shallow Dark Surface (TF12)
	d Below Dark Surfac	re (A11)	Depleted Da	•				ther (Explain in Remarks)
	ark Surface (A12)	30 (7111)	Redox Depre					Lior (Explain in Normanie)
	lucky Mineral (S1)	IDDN	Iron-Mangan			(I DD N		
		LINK IN,			SES (1 12)	(LKK N,		
	A 147, 148)		MLRA 13	•	(NII D A 4)	00 400\	31	
	Sleyed Matrix (S4)		Umbric Surfa					cators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent I	Material (F21) (MLF	RA 127, 14	7) unle	ess disturbed or problematic.
Restrictive I	Layer (if observed)):						
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No 🗸
Remarks:								
N	o indicators	are pr	esent.					
		•						

Project/Site: MVP Southga	ate Project		Cit	v/County: Ro	ckingham C	County	Sampling Date: 2024-	-10-03
Applicant/Owner: Mountain							na Sampling Point: SP-	
Investigator(s):WJ			Se					
Landform (hillslope, terrace, et								. 1
Subregion (LRR or MLRA): P								
Soil Map Unit Name: CmB -								
Are climatic / hydrologic condit								
Are Vegetation, Soil	, or Hydro	logy	significantly dis	turbed?	Are "Normal	Circumstances" p	oresent? Yes N	۷o <u> </u>
Are Vegetation, Soil	, or Hydro	ology	naturally proble	ematic?	(If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDIN	GS – Attacl	n site m	ap showing sa	ampling po	int location	ons, transects	, important feature	es, etc.
Hydrophytic Vegetation President Soil Present? Wetland Hydrology Present?	Ye	es 🔽	No No	Is the Sar within a V	npled Area Vetland?	Yes	No	
Upland sample plot ac to survey, normal hyd	-		_					prior
HYDROLOGY								
Wetland Hydrology Indicate	ors:						tors (minimum of two re	quired)
Primary Indicators (minimum	of one is requi					Surface Soil		
Surface Water (A1)			True Aquatic Plant				getated Concave Surface	e (B8)
High Water Table (A2)			Hydrogen Sulfide (D t - (00)	Drainage Pa		
Saturation (A3)			Oxidized Rhizosph Presence of Reduc	-	R001S (C3)	Moss Trim L		
Water Marks (B1)Sediment Deposits (B2)			Recent Iron Reduc		coile (C6)		Water Table (C2)	
Sediment Deposits (B2) Drift Deposits (B3)			Thin Muck Surface		iolis (Co)	-	isible on Aerial Imagery	(C9)
Algal Mat or Crust (B4)			Other (Explain in F				tressed Plants (D1)	(03)
Iron Deposits (B5)			Caror (Explain III)	tomantoj		Geomorphic		
Inundation Visible on Ae	rial Imagery (B	7)				Shallow Aqu		
Water-Stained Leaves (E		,					aphic Relief (D4)	
Aquatic Fauna (B13)	-,					FAC-Neutral		
Field Observations:							· , ,	
Surface Water Present?	Yes	No 🗸	Depth (inches):					
Water Table Present?			Depth (inches): 10	0				
Saturation Present?			Depth (inches): 10		Wetland H	lydrology Preser	nt? Yes 🗸 No_	
(includes capillary fringe) Describe Recorded Data (stre					ctions) if ava	ilable:		
Describe Necorded Data (Str	sam gauge, me	officing w	eli, aeriai priotos, į	previous irispe	clions), ii ava	illable.		
Remarks:								
Indicators A2 and	A3 are pr	esent,	however, t	hey may	be misa	pplied due	to recent rainfa	all.

'EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-A165
		Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2 3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.00 (A/B)
6			-	Prevalence Index worksheet:
7		- Total Cov		Total % Cover of: Multiply by:
50% of total cover:		= Total Cover		OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /0 01			FACW species <u>0</u> x 2 = <u>0</u>
1.				FAC species <u>5</u> x 3 = <u>15</u>
2				FACU species 40 x 4 = 160
3				UPL species <u>0</u>
4				Column Totals: <u>45</u> (A) <u>175</u> (B)
5				Prevalence Index = B/A = 3.88
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cove		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	00		E4011	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Allium vineale	20		FACU	
2. Solidago altissima	10		FACU	¹ Indicators of hydric soil and wetland hydrology must
3. Rumex crispus	5 5		FAC	be present, unless disturbed or problematic.
4. Rubus allegheniensis	5		FACU	Definitions of Four Vegetation Strata:
5. Lespedeza cuneata	5		FACU	Troe Woody plants evaluding vines 3 in (7.6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 22.50 Woody Vine Stratum (Plot size: 30 ft r	20% of	total cover:	9.00	Woody vine – All woody vines greater than 3.28 ft in
voody vine Stratum (Plot size: 30 111)				height.
1				
2				
3				
4				Hydrophytic
5		T-4-1 0		Vegetation Present? Yes No ✓
50% of total cover:		= Total Cover:		133
50% of total cover:	20% 01	iolai cover:		

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

No tests for hydrophytic vegetation are met. An unidentified Carex species occupied 5% of the herbaceous stratum. Because this taxon could not be identified to species level, it was not included in dominance test calculations. If it were included, no hydrophytic vegetation indicator would be met regardless of indicator status. Vegetation significantly disturbed by mowing. Mowed stems of Solidago altissima (FACU) were abundant in the sample plot location.

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	n the absence of	indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 4/4	100			<u> </u>		Silt Loam	
4 - 6	10YR 5/2	95	10YR 4/6	5	С	M	Silty Clay Loam	
6 - 20	10YR 6/2	90	10YR 5/6	10	С	М	Sandy Clay Loam	
-								
-								
		oletion, RN	1=Reduced Matrix, M	S=Maske	d Sand G	rains.		Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2 cn	n Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (I	MLRA 147	, 148) Coa	st Prairie Redox (A16)
Black His	stic (A3)		Thin Dark Su	urface (S9) (MLRA	147, 148)	(N	/ILRA 147, 148)
	n Sulfide (A4)		Loamy Gleye					Imont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted Ma		` ,			/ILRA 136, 147)
	ck (A10) (LRR N)		Redox Dark		F6)			/ Shallow Dark Surface (TF12)
	Below Dark Surface	ce (A11)	Depleted Da	•				er (Explain in Remarks)
	rk Surface (A12)	,	Redox Depre					, ,
	lucky Mineral (S1) (LRR N.	Iron-Mangan			(LRR N.		
	147, 148)		MLRA 13) (i 1 <u>-</u>)	(=::::,		
	leyed Matrix (S4)		Umbric Surfa	•	/MI DA 1	36 122\	3Indica	tors of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					nd hydrology must be present,
	Matrix (S6)		Red Parent I					
		\-	Red Parent i	viateriai (i	-21) (IVILE	KA 127, 14	<i>i</i>) unles	s disturbed or problematic.
	_ayer (if observed)):						
Type:								
Depth (inc	ches):						Hydric Soil Pr	resent? Yes V No No
Remarks:	diantor FO is							
In	dicator F3 is	s met.						

Project/Site: MVP Southgate Project City/	County: Rockingham County Sampling Date: 2024-10-03
	State: North Carolina Sampling Point: SP-A166
	tion, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local re	
	Long:79.66986 Datum: NAD 83
CmP Clover candy loam 2 to 9 percent	Long: -79.00980 Datum: NAD 00
Soil Map Unit Name: CmB - Clover sandy loam, 2 to 8 percent	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distu	urbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sale	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Yes No No	Is the Sampled Area within a Wetland? Yes No
Remarks:	
Wetland sample plot in PEM W-B034. Region has received survey, normal hydrologic conditions are not present.	•
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants	
High Water Table (A2) Hydrogen Sulfide O	dor (C1) Drainage Patterns (B10) eres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduce Sediment Deposits (B2) Recent Iron Reducti	
Drift Deposits (B3) Thin Muck Surface (
Algal Mat or Crust (B4) Other (Explain in Re	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches): 10	
Saturation Present? Yes No Depth (inches): 10	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:
Remarks:	
Indicators A2, A3, C3, and D2 are met. Indicat	ors A2 and A3 may be misapplied due to
recent rainfall event.	

EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-A166	_
201:		Dominant I Species?		Dominance Test worksheet: Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 1 (A)	
2				Total Number of Dominant Species Across All Strata: 1 (B)	
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 100.00 (A/B))
6				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
50% of total cover:		= Total Cove		OBL species 0 x 1 = 0	
Sapling/Shrub Stratum (Plot size: 15 ft r)	20% 01	lotal cover		FACW species 65 x 2 = 130	
				FAC species 5 x 3 = 15	
1				FACU species 10 x 4 = 40	
2				UPL species $0 \times 5 = 0$	
3				Column Totals: 80 (A) 185 (B)	
4 5					
6				Prevalence Index = B/A = 2.31	
7.				Hydrophytic Vegetation Indicators:	
8				1 - Rapid Test for Hydrophytic Vegetation	
9				∠ 2 - Dominance Test is >50%	
		= Total Cove	r	✓ 3 - Prevalence Index is ≤3.0 ¹	
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting	J
Herb Stratum (Plot size: 5 ft r				data in Remarks or on a separate sheet)	
1. Juncus effusus	60		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	
_{2.} Rubus allegheniensis	5		FACU	4	
3. Solidago altissima	5		FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
_{4.} Phalaris arundinacea	5		FACW	Definitions of Four Vegetation Strata:	
_{5.} Rumex crispus	5		FAC	_	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
7				more in diameter at breast height (DBH), regardless of height.	
8					
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1	
10				m) tall.	
11				Herb – All herbaceous (non-woody) plants, regardless	
	80	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 40.00	20% of	total cover:_	16.00	Woody vine – All woody vines greater than 3.28 ft in	
Woody Vine Stratum (Plot size: 30 ft r)				height.	
1				_	
2					
3					
4				Hydrophytic	
5				Vegetation	
		= Total Cove	r	Present? Yes No	
50% of total cover:	20% of	total cover:_			
	- 1 \				_

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

Rapid test, dominance test, and prevalence index for hydrophytic vegetation are passed. Vegetation significantly disturbed by mowing. Many fewer mowed Solidago altissima (FACU) stems observed within mapped wetland boundary than outside of boundary.

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 6	10YR 5/2	90	10YR 4/6	10	С	PL / M	Silty Clay Loam	
6 - 20	10YR 6/2	70	10YR 5/6	30	С	M	Clay Loam	
		_,						
		_	·	-				
			·					
				-				
-								
	-							
			<u> </u>					
		-	·	-				
			· -					
		oletion, RN	M=Reduced Matrix, MS	S=Maske	ed Sand Gr	rains.		PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indic	cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	. ,			· · · · · · · · · · · · · · · · · · ·	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) (Coast Prairie Redox (A16)
Black His			Thin Dark Su			147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		l	Piedmont Floodplain Soils (F19)
	Layers (A5)		<u>✓</u> Depleted Ma		(E6)		,	(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	ck (A10) (LRR N) I Below Dark Surfac	· Δ (Δ11)	Redox Dark S Depleted Dark		. ,			Other (Explain in Remarks)
	rk Surface (A12)	<i>(</i> A11)	Redox Depre				`	Suici (Explain in Remarks)
	lucky Mineral (S1) (LRR N.	Iron-Mangan			(LRR N.		
	147, 148)	,	MLRA 13		,	,		
	leyed Matrix (S4)		Umbric Surfa	-	(MLRA 1	36, 122)	³ Inc	dicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo	odplain	Soils (F19)	(MLRA 14	18) w	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	Material (F21) (MLF	RA 127, 147	7) ur	nless disturbed or problematic.
Restrictive L	ayer (if observed)	:						
Туре:								
Depth (inc	ches):						Hydric Soi	il Present? Yes 🗸 No
Remarks:								
In	dicator F3 is	s met.						

Project/Site: MVP Southgate Project NC City/County: Eden/Rockingham	Sampling Date: 2024-06-03
Applicant/Owner: Mountain Valley Pipeline LLC State: North	
Investigator(s):ES, LC Section, Township, Range:	
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave	
Subregion (LRR or MLRA): P 136 Lat: 36.49548386 Long: -79.6796029	
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI class	Datum
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain	
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstance"	es" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transe	cts, important features, etc.
Hydrophytic Vegetation Present? Yes No le the Sampled Area	
Liverie Seil Proceed? Yes V No	√ No
Wetland Hydrology Present? Yes Wetland Hydrology Present? Yes No within a Wetland? Yes	
Remarks:	
Wetland comple plat within DEM W. DOO1. The LICACE Appeadant Dres	sinitation Tool
Wetland sample plot within PEM W-B001. The USACE Antecedent Pred	cipitation Fooi
indicates normal conditions were present 3 months prior to survey.	
HYDROLOGY	
	dicators (minimum of two required)
	Soil Cracks (B6)
	Vegetated Concave Surface (B8)
	Patterns (B10)
	m Lines (B16)
	son Water Table (C2)
	Burrows (C8)
	on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
	phic Position (D2)
	Aquitard (D3)
	ographic Relief (D4)
Aquatic Fauna (B13)	
1 — · · · · · · — —	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Surface Water Present? Yes No Depth (inches):	
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Yes No Depth (inches): Depth (inches): Depth (inches): Depth (inches): Wetland Hydrology Presents	
Surface Water Present? Yes No V Depth (inches): Depth (inches): Depth (inches): Water Table Present? Yes No V Depth (inches): Wetland Hydrology Present?	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present (includes capillary fringe)	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Pre(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B001
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1. Liquidambar styraciflua	10		FAC	That Are OBL, FACW, or FAC: 5 (A)
2				Total Number of Dominant
3				Species Across All Strata: 5 (B)
4		· <u></u>		Description of Description of Occasion
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				That the OBE, Thow, STITE:
7.				Prevalence Index worksheet:
	10	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 5		total cover:	_	OBL species 20 x 1 = 20
Sapling/Shrub Stratum (Plot size: 15 ft r)	_			FACW species 40 x 2 = 80
1. Liquidambar styraciflua	15	~	FAC	FAC species 65 x 3 = 195
•				FACU species 0 x 4 = 0
				UPL species $0 x 5 = 0$
3				Column Totals: 125 (A) 295 (B)
4		· 		Column Totals (Y) (B)
5				Prevalence Index = B/A = 2.36
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		. <u></u>		✓ 3 - Prevalence Index is ≤3.0 ¹
	15	= Total Cov	er	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover: 7.5	20% of	total cover:	3	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				,
1. Juncus effusus	30		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Toxicodendron radicans	25		FAC	1
3. Carex alata	10		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Cyperus strigosus	10		FACW	
5 Persicaria sagittata	10		OBL	Definitions of Four Vegetation Strata:
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
	-			more in diameter at breast height (DBH), regardless of height.
7				neight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				iii) taii.
11	0.5			Herb – All herbaceous (non-woody) plants, regardless
70% 64 4 4 A A F		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5	20% of	total cover:	17	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)	15	à	E40	height.
1. Campsis radicans	15		FAC	
2				
3				
4		. <u></u>		Hydrophytic
5				Vegetation
	15	= Total Cov	er	Present? Yes V No No
50% of total cover: 7.5	20% of	total cover:	3	
Remarks: (Include photo numbers here or on a separate s	heet.)			I.
Dominance test and prevalence inde	x are m	iet.		

Depth (in the se)	Matrix	%		ox Featur	es T 1	Loc²	T-1.4	Damanica	
(inches)	Color (moist)		Color (moist)	<u>%</u> 8	Type ¹		<u>Texture</u>	Remarks	
0 - 10	10YR 6/2	92	10YR 5/8	-	<u>C</u>	<u>M</u>	Clay Loam		
10 - 21	2.5Y 5/2	90	10YR 5/8	10	<u>C</u>	<u>M</u>	Clay Loam		
-									
-									
					_				
			-						
-									
			<u> </u>						
	-			· <u></u>			·	-	
ype: C=Cc	oncentration, D=De	epletion, RN	M=Reduced Matrix, M	S=Maske	d Sand G	Grains.	² Location: P	L=Pore Lining, M=Matrix.	
ydric Soil I	Indicators:						Indica	ators for Problematic Hydric	Soils ³ :
_ Histosol	(A1)		Dark Surfac	e (S7)			2	cm Muck (A10) (MLRA 147)	
	oipedon (A2)		Polyvalue B				. 148) C	coast Prairie Redox (A16)	
Black His	, ,		Thin Dark S	•		147, 148)		(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gley		(F2)		P	iedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)	
	ick (A10) (LRR N)		Redox Dark					ery Shallow Dark Surface (TF1	2)
	d Below Dark Surfa	ace (A11)	Depleted Da		. ,		0	ther (Explain in Remarks)	
	ark Surface (A12)		Redox Depr						
	fucky Mineral (S1)	(LRR N,	Iron-Mangar		ses (F12)	(LRR N,			
	\ 147, 148)		MLRA 13	-	(84) 5.4		3, ,		
	Gleyed Matrix (S4)		Umbric Surf					icators of hydrophytic vegetation	
Sandy R	tedox (S5)		Piedmont FI					tland hydrology must be prese	nt,
	NA-4-1 (OO)			iviateriai (F21) (IVIL	RA 127, 147	<i>r</i>) un	less disturbed or problematic.	
Stripped	Matrix (S6)	۸.	Red Falent						
Stripped Restrictive L	Matrix (S6) _ayer (if observed)	I):	Red Falelit						
Stripped Restrictive L Type:	_ayer (if observed	I):	Red Falent					- · · · · · · · · · · · · · · · · · · ·	
Stripped estrictive L Type: Depth (inc	_ayer (if observed	i):	Red Paleill	·			Hydric Soil	Present? Yes 🗸 No)
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present? Yes V No)
Stripped cestrictive L Type: Depth (inclemarks:	_ayer (if observed						Hydric Soil	Present? Yes V No)
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No)
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	
Stripped estrictive L Type: Depth (inc	Layer (if observed						Hydric Soil	Present? Yes <u>✓</u> No	
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present? Yes <u> ✓</u> No)
Stripped estrictive L Type: Depth (inc	Layer (if observed						Hydric Soil	Present? Yes <u> ✓</u> No	
Stripped estrictive L Type: Depth (inc	Layer (if observed			,			Hydric Soil	Present? Yes <u> ✓</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u>✓</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u>✓</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u> ✓</u> No	
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	•
Stripped estrictive L Type: Depth (inc	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	•
Stripped Restrictive L Type: Depth (inc Remarks:	Layer (if observed						Hydric Soil	Present? Yes <u>V</u> No	•
Stripped Restrictive L Type: Depth (inc Remarks:	Layer (if observed						Hydric Soil	Present? Yes V No	•
Stripped Restrictive L Type: Depth (inc Remarks:	Layer (if observed						Hydric Soil	Present? Yes V No	•
Stripped Restrictive L Type: Depth (inc Remarks:	Layer (if observed						Hydric Soil	Present? Yes V No	•
Stripped Restrictive L Type: Depth (inc	Layer (if observed						Hydric Soil	Present? Yes 🗸 No	
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present? Yes 🗸 No	

Project/Site: MVP Southgate Project	NC City/0	County: Eden/Rockinghan	n Sam	npling Date: 2024-06-03		
Applicant/Owner: Mountain Valley Pipel				ampling Point: SP-B002		
F0.10	Secti			-		
Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex Slope (%): 2						
Subregion (LRR or MLRA): P 136						
Soil Map Unit Name: BaB - Banister Ioa						
Are climatic / hydrologic conditions on the site						
				_		
Are Vegetation, Soil, or Hydro						
Are Vegetation, Soil, or Hydro	ology naturally problem	atic? (If needed, expla	iin any answers in l	Remarks.)		
SUMMARY OF FINDINGS – Attac	h site map showing san	npling point locations	, transects, im	portant features, etc.		
Hydric Soil Present?	res No res No No	Is the Sampled Area within a Wetland?	Yes	No <u>′</u>		
Wetland Hydrology Present?						
Upland sample plot adjacer indicates normal conditions			-	oitation Tool		
HYDROLOGY						
Wetland Hydrology Indicators:		Sec	condary Indicators ((minimum of two required)		
Primary Indicators (minimum of one is requ	ired; check all that apply)		Surface Soil Crack	ks (B6)		
Surface Water (A1)	True Aquatic Plants ((B14)	Sparsely Vegetate	ed Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns			
Saturation (A3)	Oxidized Rhizospher	- · · · · · · · · · · · · · · · · · · ·	Moss Trim Lines (
Water Marks (B1)	Presence of Reduce		Dry-Season Water			
Sediment Deposits (B2)	Recent Iron Reduction		Crayfish Burrows			
Drift Deposits (B3)	Thin Muck Surface (on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Rei	marks)	Stunted or Stresse			
Iron Deposits (B5)		_	Geomorphic Posit			
Inundation Visible on Aerial Imagery (B	57)	_	Shallow Aquitard (
Water-Stained Leaves (B9)			Microtopographic			
Aquatic Fauna (B13)			FAC-Neutral Test	(D5)		
Field Observations:						
	No Depth (inches):					
	No Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No Depth (inches):	Wetland Hydr	ology Present?	Yes No		
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos, pre	evious inspections), if available	e:			
Remarks:						
No indicators are present.						

/EGETATION (Four Strata) – Use scientific r	ames of	plants.		Sampling Point: SP-B002
	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r		Species?		Number of Dominant Species
1. Liquidambar styraciflua	10		FAC	That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)
6				That Aid OBE, I AOW, OI I AO.
7.				Prevalence Index worksheet:
	10	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 5	20% of		_	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species $\frac{5}{2}$ x 2 = $\frac{10}{2}$
1. Ligustrum sinense	15	~	FACU	FAC species 15 x 3 = 45
2. Fraxinus pennsylvanica	5		FACW	FACU species 105 x 4 = 420
3. Liquidambar styraciflua	5		FAC	UPL species 0 x 5 = 0
	. —		<u> </u>	Column Totals: 125 (A) 475 (B)
4				(b)
5				Prevalence Index = B/A = 3.80
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 12.5	20% of	total cover:	5	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				,
1. Poa pratensis	50		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Trifolium pratense	35		FACU	1
3. Lespedeza cuneata	5		FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation Strata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45</u>	20% of	total cover:	10	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)			
No indicators are present.				

Depth	Matrix	%		ox Feature		Loc ²	Toyturo	Domorko
inches) 0 - 21	Color (moist) 10YR 5/2	 90	Color (moist) 10YR 5/6	<u>%</u> 10	Type ¹		Texture Clay Loam	Remarks
0-21	10 f R 5/2	90	1018 5/6	10		_ <u>M</u>	Clay Loam	
-								
-								
_								
		_			_			
-								
-								
	_		-					
			<u> </u>					
ype: C=C	oncentration, D=De	pletion, RN	/I=Reduced Matrix, M	S=Maske	ed Sand G	rains.	² Location: Pl	L=Pore Lining, M=Matrix.
	Indicators:	,	,			-	Indica	ators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surfac	e (S7)				cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue B	. ,	ace (S8) (MLRA 147		coast Prairie Redox (A16)
	istic (A3)		Thin Dark S				, - ,	(MLRA 147, 148)
 -	en Sulfide (A4)		Loamy Gley			, -,	Р	iedmont Floodplain Soils (F19)
	d Layers (A5)		✓ Depleted Ma		,			(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark		F6)		V	ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Da	rk Surfac	e (F7)		_ 0	other (Explain in Remarks)
_ Thick Da	ark Surface (A12)		Redox Depr	essions (I	F8)			
_ Sandy N	Mucky Mineral (S1)	(LRR N,	Iron-Mangai	nese Mas	ses (F12)	(LRR N,		
MLR	A 147, 148)		MLRA 13	36)				
	Sleyed Matrix (S4)		Umbric Surf	ace (F13)	(MLRA 1	36, 122)	³ Indi	icators of hydrophytic vegetation and
_ Sandy F	Redox (S5)		Piedmont FI	oodplain	Soils (F19) (MLRA 1 4	48) we	tland hydrology must be present,
_ Stripped	l Matrix (S6)		Red Parent	Material (F21) (ML F	RA 127, 14	7) unl	less disturbed or problematic.
estrictive	Layer (if observed):						
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No
emarks:	<u> </u>							
	ndicator F3 i	s nrese	ent					
••	idiodici i o i	o p. co.	5110					

Project/Site: MVP Southgate Project NC City/C	County: Rockingham County Sampling Date: 2024-06-03
• •	State: North Carolina Sampling Point: SP-B003
FC 1.0	on, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local rel	
	Long: -79.679068 Datum: NAD 83
Soil Map Unit Name: CsA - Codorus Ioam, 0 to 2 percent slopes	frequently flooded
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly disturbed.	bed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes V No	Is the Sampled Area within a Wetland? Yes V No
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No
Remarks:	
Wetlerd commission REQ W ROOF The	LICAGE Autorodout Durginitation Tool
Wetland sample plot within PFO W-B002. The	•
indicates normal conditions were present 3 mg	onths prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (
High Water Table (A2) Hydrogen Sulfide Od	
Saturation (A3) Oxidized Rhizospher	
✓ Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reduction	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Rel	marks) Stunted or Stressed Plants (D1) V Geomorphic Position (D2)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No V Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available.
Remarks:	
Indicators B1, B9, B10, D2 and D5 are present.	
indicators bi, bo, bio, bz and bo are present.	

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B003
20.5	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1. Fraxinus pennsylvanica	35		FACW	That Are OBL, FACW, or FAC: 3 (A)
2. Liquidambar styraciflua	35		FAC	Total Number of Dominant
3. Platanus occidentalis	20		FACW	Species Across All Strata: 3 (B)
4. Acer rubrum	10		FAC	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B)
6				Prevalence Index worksheet:
7				
		= Total Cov		
50% of total cover: <u>50.00</u>	20% of	total cover:	20.00	OBL species 0 $x 1 = 0$ FACW species 55 $x 2 = 110$
Sapling/Shrub Stratum (Plot size: 15 ft r)				45 405
1				FAC species $\frac{45}{0}$ $x 3 = \frac{135}{0}$ FACU species $\frac{0}{x 4} = \frac{0}{0}$
2				1
3				
4				Column Totals: <u>100</u> (A) <u>245</u> (B)
5				Prevalence Index = B/A = 2.45
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1				
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
500/ 54 4 4		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of	total cover:		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes ✓ No
50% of total cover:		= Total Cov		100 <u>100 100 100 100 100 100 100 100 100</u>
Remarks: (Include photo numbers here or on a separate sl		total cover.		
Remarks. (include prioto numbers here of on a separate si	neet.)			
Dominance test and prevalence index	x are m	et.		

	Matrix	0/	Red	ox Feature	s T 1	12	T 4	Demondos
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 21	5Y 6/1	90	7.5YR 5/8	10	С	<u>M</u>	Clay Loam	
-		_						
-								
	-			· -	·			
					-			
-								
-								
			-					
	-		-					
		_						
-								
		_			-			
							2	
		pletion, RN	M=Reduced Matrix, M	IS=Maske	d Sand G	ains.		L=Pore Lining, M=Matrix.
-	Indicators:							ators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surfac		(00) (cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue B				148) C	coast Prairie Redox (A16)
_ Black Hi			Thin Dark S			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gley		(F2)		P	iedmont Floodplain Soils (F19)
	d Layers (A5) ick (A10) (LRR N)		<u>✓</u> Depleted Ma		=6)		V	(MLRA 136, 147) ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	co (A11)	Redox Dark		•			other (Explain in Remarks)
_	ark Surface (A12)	CC (ATT)	Redox Depi				0	The (Explain in Remarks)
	fucky Mineral (S1)	I RR N	Iron-Manga			I RR N.		
	A 147, 148)	(=::::,	MLRA 1		,00 (i i. <u>.</u>)	(=::::,		
	Gleyed Matrix (S4)		Umbric Surf	-	(MLRA 1	36, 122)	³ Ind	icators of hydrophytic vegetation and
	Redox (S5)		Piedmont F					tland hydrology must be present,
-	Matrix (S6)		Red Parent					less disturbed or problematic.
	Layer (if observed):			, ,		ĺ	
Type:								
							Hydric Soil	Present? Yes No
• •							Hydric 30ii	rieseiit: ies NO
Depth (inc	ches):							
Depth (inc	<u> </u>		- m+					
Depth (inc	ndicator F3 i	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (included)	<u> </u>	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (included)	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (included)	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (included)	<u> </u>	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (inc	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					
Depth (ind	<u> </u>	s prese	ent.					

Project/Site: MVP Southgate Project NC	City/County: Eden/Rockingham Sampling Date: 2024-06-03						
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B004						
Investigator(s): ES, LC Section, Township, Range:							
Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex Slope (%): 5							
Subregion (LRR or MLRA): P 136 Lat: 36.49447855 Long: -79.67912489 Datum: NAD 83							
	t slopes, frequently flooded NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes No (If no, explain in Remarks.)						
	antly disturbed? Are "Normal Circumstances" present? Yes No						
	y problematic? (If needed, explain any answers in Remarks.)						
	ring sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes V No							
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No Yes No V	Is the Sampled Area within a Wetland? Yes No						
Wetland Hydrology Present? Yes No 🗸	- Within a Wetland?						
Remarks:	<u>-</u>						
Upland sample plot adjacent to PFO W-E indicates normal conditions were preser	3002. The USACE Antecedent Precipitation Tool at 3 months prior to survey.						
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that ap							
	tic Plants (B14) Sparsely Vegetated Concave Surface (B8)						
	Sulfide Odor (C1) Drainage Patterns (B10)						
	chizospheres on Living Roots (C3) Moss Trim Lines (B16)						
	of Reduced Iron (C4) Dry-Season Water Table (C2)						
	n Reduction in Tilled Soils (C6) Crayfish Burrows (C8)						
	Surface (C7) Saturation Visible on Aerial Imagery (C9) lain in Remarks) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4) Other (Exp Iron Deposits (B5)	lain in Remarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2)						
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)						
Water-Stained Leaves (B9)	Microtopographic Relief (D4)						
Aquatic Fauna (B13)	FAC-Neutral Test (D5)						
Field Observations:	<u> </u>						
Surface Water Present? Yes No Depth (inc	:hes):						
Water Table Present? Yes No Depth (inc	:hes):						
Saturation Present? Yes No Depth (inc	ches): Wetland Hydrology Present? Yes No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial p	photos previous inspections) if available:						
2000.100 1.000.1000 2.000 (on our gauge, mountaining mon, acrea. p							
Remarks:							
No indicators are present.							
The managers are present.							

/EGETATION (Four Strata) – Use scientific	names of	plants.		Sampling Point: SP-B004
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species
_{1.} Liquidambar styraciflua	30	✓	FAC	That Are OBL, FACW, or FAC: 3 (A)
2				T
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Openies / toross / tir ctrata.
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 60.00 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
4-		= Total Cov	_	OBL species 0 $x 1 = 0$
50% of total cover: 15	20% of	total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft r)	_			FACW species $\frac{15}{35}$ $\times 2 = \frac{30}{105}$
1. Fraxinus pennsylvanica	5		FACW	1 A0 species x 0 =
2. Liquidambar styraciflua	5		FAC	FACU species $\frac{50}{2}$ $\times 4 = \frac{200}{2}$
3				UPL species $0 \times 5 = 0$
4				Column Totals: 100 (A) 335 (B)
5				5
6		·		Prevalence Index = B/A = 3.35
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		· 		✓ 2 - Dominance Test is >50%
9	10			3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Rubus argutus	20		FACU	1 Toblematic Trydrophytic Vegetation (Explain)
2. Prasina atlantica	5		FACW	The disease of heading and continued bedoning according
3. Juncus effusus	5		FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation Strata.
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.				more in diameter at breast height (DBH), regardless of
	- (·		height.
8	_	·		Sapling/Shrub – Woody plants, excluding vines, less
9		· 		than 3 in. DBH and greater than or equal to 3.28 ft (1
10	_			m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15	20% of	total cover:	6	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1. Lonicera japonica	30		FACU	
2				
3				
4				
5.	_			Hydrophytic
<u>. </u>	30	- Total Cav		Vegetation Present? Yes ✓ No
50% of total cover: 15		= Total Cov total cover:	_	
		total cover.		
Remarks: (Include photo numbers here or on a separate	sheet.)			
Dominance test is passed.				
bommanoo toot lo paccoa.				

(inches)	Matrix	<u></u> %	Redox Features Color (moist) % Type ¹ Loc ²	Taritima	Damadia
() E	Color (moist)		Color (moist) % Type ¹ Loc ²	<u>Texture</u>	Remarks
0 - 5	10YR 3/3	100		Loam	
5 - 21	7.5YR 6/6	100		Clay Loam	
-					
-					
_					
	-	-			
-					
-					
_					
		-			
		pletion, RM=R	Reduced Matrix, MS=Masked Sand Grains.	² Location: P	L=Pore Lining, M=Matrix.
ydric Soil I	Indicators:			Indica	ators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface (S7)		cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147	, 148) C	Coast Prairie Redox (A16)
_ Black His	, ,		Thin Dark Surface (S9) (MLRA 147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	P	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)		(MLRA 136, 147)
	ick (A10) (LRR N) d Below Dark Surfa	nce (Δ11)	Redox Dark Surface (F6)Depleted Dark Surface (F7)		ery Shallow Dark Surface (TF12) Other (Explain in Remarks)
	ark Surface (A12)	ice (ATT)	Redox Depressions (F8)		other (Explain in Nemarks)
	lucky Mineral (S1)	(LRR N.	Iron-Manganese Masses (F12) (LRR N,		
-	A 147, 148)	(=::::,	MLRA 136)		
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Ind	licators of hydrophytic vegetation and
	Redox (S5)		Piedmont Floodplain Soils (F19) (MLRA 14		etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 14	7) un	less disturbed or problematic.
estrictive l	_ayer (if observed	l):			
Type:			<u></u>		
Depth (inc	ches):			Hydric Soil	Present? Yes No 🛂
emarks:					
ciliaiks.	o indicators	are pres	ent.		

Project/Site: MVP Southga	ate Project NC	Citv/C	ounty: Eden/Rocking	ham	Sampling Date: 2024-06-03	
Applicant/Owner: Mountain			•		Sampling Point: SP-B005	
Investigator(s):ES, LC			on, Township, Range:			
Landform (hillslope, terrace, et						
Subregion (LRR or MLRA): P					Datum: NAD 83	
Soil Map Unit Name: BaB - E						
			_			
Are climatic / hydrologic condit		-				
Are Vegetation, Soil	, or Hydrology	significantly disturb	bed? Are "Normal	Circumstances" p	oresent? Yes No	
Are Vegetation, Soil	, or Hydrology	naturally problema	tic? (If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDIN	GS – Attach site m	nap showing sam	pling point location	ons, transects	, important features, etc.	
Hydrophytic Vegetation Prese	ent? Yes 🗸	No				
Hydric Soil Present?	Yes 🔽	No	Is the Sampled Area	Yes ✔	No	
Wetland Hydrology Present?	Yes 🗸	No —	within a Wetland?	Tes —		
Remarks:						
\\\ - +	Latarithia DEO V	M DOOD The I	10405 4	D	itatian Taal	
Wetland sample p	lot within PFO V	พ-8002. The เ	JSACE Anteced	dent Precip	itation I ool	
indicates normal c	onditions were	present 3 mo	nths prior to su	ırvey.		
HYDROLOGY						
Wetland Hydrology Indicate	ors:				tors (minimum of two required)	
Primary Indicators (minimum	-			Surface Soil		
Surface Water (A1)		True Aquatic Plants (I			getated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide Odd		Drainage Pa		
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li		
Water Marks (B1)		Presence of Reduced			Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur		
Drift Deposits (B3) Algal Mat or Crust (B4)		Thin Muck Surface (C Other (Explain in Rem			sible on Aerial Imagery (C9) tressed Plants (D1)	
Iron Deposits (B5)	_	Other (Explain in Ken	iaiks)	Geomorphic		
Inundation Visible on Ae	rial Imagery (B7)					
Water-Stained Leaves (E				Shallow Aquitard (D3) Microtopographic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	. , ,	
Field Observations:					,	
Surface Water Present?	Yes No	Depth (inches):				
Water Table Present?	Yes No No					
Saturation Present?		Depth (inches):		lydrology Preser	nt? Yes <u>/</u> No	
(includes capillary fringe) Describe Recorded Data (stre						
Describe Necolded Data (Stit	eam gauge, monitoring w	veii, aeriai priotos, pre	vious irispections), ii ava	iliabie.		
Remarks:						
Indicators A2, D2	and D5 are pres	sent.				
maioatoro 7t2, 52 t	and bo dro proc	,0116.				

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B005
	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1. Acer rubrum	30		FAC	That Are OBL, FACW, or FAC: 7 (A)
2. Liquidambar styraciflua	30		FAC	Total Number of Dominant
3. Fraxinus pennsylvanica	20		FACW	Species Across All Strata: 7 (B)
4				Descent of Deminant Charles
5	·			Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				
7				Prevalence Index worksheet:
	80	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 40	20% of	total cover:	16	OBL species $\frac{15}{20}$ $\times 1 = \frac{15}{100}$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species $\frac{80}{0.5}$ x 2 = $\frac{160}{10.5}$
1. Fraxinus pennsylvanica	20		FACW	FAC species $\frac{65}{2}$ $\times 3 = \frac{195}{2}$
2				FACU species $\frac{0}{2}$ $x = 4$
3				UPL species $0 \times 5 = 0$
4				Column Totals: 160 (A) 370 (B)
5				Prevalence Index = B/A = 2.31
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 10	20% of	total cover:	4	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation¹ (Explain)
1. Prasina atlantica	25		FACW	Problematic Hydrophytic vegetation (Explain)
2. Carex canescens	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Cyperus strigosus	15		FACW	be present, unless disturbed or problematic.
4. Toxicodendron radicans	5		FAC	Definitions of Four Vegetation Strata:
5				Tree Mondy plants evaluding vines 2 in (7.6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>30</u>	20% of	total cover:	12	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3	· 			
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes Vo No
50% of total cover:		total cover:	_	
Remarks: (Include photo numbers here or on a separate s	sheet.)			
Dominance test and prevalence inde	x are m	et.		

Profile Desc	cription: (Describe	to the dep	oth needed to docur	ment the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 21	10YR 5/1	80	7.5YR 5/6	20	С	М	Clay Loam	
-								
					-			
-								
				-	-			
					_			
-								
				-				
		letion, RM	=Reduced Matrix, M	S=Maske	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
Histic E _l	pipedon (A2)		Polyvalue Be				148) C	coast Prairie Redox (A16)
Black H	istic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)		P	iedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma	. ,				(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark	•				ery Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Da		, ,		<u> </u>	other (Explain in Remarks)
	ark Surface (A12)	DD 11	Redox Depre			(LDD N		
	Mucky Mineral (S1) (I	LKK N,	Iron-Mangan		ses (F12) (LKK N,		
	A 147, 148)		MLRA 13		/MI D A 44	00 400)	31	inatous of burdenish discuss stations and
	Gleyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					tland hydrology must be present,
	l Matrix (S6) Layer (if observed):		Red Parent I	viateriai (i	ZI) (WILK	A 127, 147	1	less disturbed or problematic.
Depth (in	ches):						Hydric Soil	Present? Yes No
Ir	ndicator F3 is	prese	nt.					

Project/Site: MVP Southgate Project NC	City/County	Eden/Rocking	ham S	ampling Date: 2024-06-03
Applicant/Owner: Mountain Valley Pipeline LLC	Mountain Valley Pipeline LLC State: North Carolina Sampling Point: SP-B006			
Investigator(s):ES, LC	Section, Township, Range:			
	Local relief (concave, convex, none): Convex Slope (%): 1			
Subregion (LRR or MLRA): P 136 Lat:				
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturbed?				
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes	No 🗸 Is th	e Sampled Area	Yes	No ✔
Hydric Soil Present? Yes	No v with	in a Wetland?		
Wetland Hydrology Present? Yes	No 🗸			
Remarks:				
Upland sample plot adjacent to PF	O W-B002. The	USACE Anto	ecedent Pred	cipitation Tool
Upland sample plot adjacent to PFO W-B002. The USACE Antecedent Precipitation Tool				
indicates normal conditions were	present 3 month	s prior to su	ırvey.	
HADBOLOGA				
HYDROLOGY Wetland Hydrology Indicators:			Secondary Indicato	rs (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)			Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)	
			Sparsely Vegetated Concave Surface (B8)	
	True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)			
	Oxidized Rhizospheres on		Drainage Patte Moss Trim Line	
				ater Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6)			Crayfish Burrows (C8)	
Drift Deposits (B3) Thin Muck Surface (C7)			Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4) Other (Explain in Remarks)			Stunted or Stre	ssed Plants (D1)
Iron Deposits (B5)			Geomorphic Po	osition (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitard (D3)	
Water-Stained Leaves (B9)			Microtopographic Relief (D4)	
Aquatic Fauna (B13)			FAC-Neutral Te	est (D5)
Field Observations:				
	Depth (inches):			
	Depth (inches):			
Saturation Present? Yes No	Depth (inches):	Wetland F	lydrology Present?	Yes No
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous	inspections), if ava	ilable:	
Remarks:				
No indicators are present.				

EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B006
20.4	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r		Species?		Number of Dominant Species
1. Celtis occidentalis	30		FACU	That Are OBL, FACW, or FAC: 3 (A)
2. Liquidambar styraciflua	25		FAC	Total Number of Dominant
3. Ulmus alata	25		FACU	Species Across All Strata: 6 (B)
4. Acer rubrum	20		FAC	Description of Description of Occasion
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)
6				
7				Prevalence Index worksheet:
	100	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover: 50.00	20% of	total cover:	20.00	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r				FACW species $0 \times 2 = 0$
1				FAC species 125 x 3 = 375
2				FACU species <u>75</u> x 4 = <u>300</u>
3				UPL species <u>0</u> x 5 = <u>0</u>
4				Column Totals: 200 (A) 675 (B)
5				2 27
6				Prevalence Index = B/A = 3.37
7				Hydrophytic Vegetation Indicators:
8		-		1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
<u>. </u>		= Total Cove		3 - Prevalence Index is ≤3.0 ¹
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)				data in Remarks or on a separate sheet)
1. Toxicodendron radicans	80	✓	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Parthenocissus quinquefolia	20		FACU	
				¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
1				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tail.
11	100			Herb – All herbaceous (non-woody) plants, regardless
500% of total account 50 00		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00	20% 01	total cover:	20.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes No
		= Total Cove		Fresent? Tes No
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate sl	neet.)			
No tests are passed.				
to toots are passed.				

Depth	Matrix	%		Redox Features				Demonstra	
inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹		Texture	Remarks	
0 - 21	10YR 5/3	90	10YR 4/6	10	<u>C</u>	<u>M</u>	Sandy Clay Loam		
-			<u> </u>						
-									
_			· ·						
		_	-		-				
			-	·					
-									
-									
				· -	_				
	-			·					
			<u> </u>						
					_				
vpe: C=C	oncentration, D=De	pletion, RN	M=Reduced Matrix, M	IS=Maske	ed Sand G	rains.	² Location: Pl	L=Pore Lining, M=Matrix.	
	Indicators:		,					ators for Problematic Hydric Soils ³	
Histosol	(A1)		Dark Surfac	e (S7)			2	cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue B		ace (S8) (MLRA 147		Coast Prairie Redox (A16)	
	istic (A3)		Thin Dark S		. , .		, , <u>—</u>	(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gley	•	, .	, ,	Р	Piedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted M		` ,			(MLRA 136, 147)	
	uck (A10) (LRR N)		Redox Dark		(F6)		V	'ery Shallow Dark Surface (TF12)	
Deplete	d Below Dark Surfa	ce (A11)	Depleted Da	ark Surfac	e (F7)			Other (Explain in Remarks)	
_ Thick Da	ark Surface (A12)		Redox Depr	essions (I	F8)				
_ Sandy N	Mucky Mineral (S1)	(LRR N,	Iron-Manga	nese Mas	ses (F12)	(LRR N,			
MLR	A 147, 148)		MLRA 1	36)					
_ Sandy C	Sleyed Matrix (S4)		Umbric Surf	ace (F13)	(MLRA 1	36, 122)	³ Ind	icators of hydrophytic vegetation and	
_ Sandy F	Redox (S5)		Piedmont F	oodplain	Soils (F19) (MLRA 1	48) we	etland hydrology must be present,	
_ Stripped	l Matrix (S6)		Red Parent	Material (F21) (ML I	RA 127, 14	7) unl	less disturbed or problematic.	
estrictive	Layer (if observed):							
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes No 🔽	
emarks:	<u> </u>								
	lo indicators	are pr	esent.						
- '	o maioatoro	и о р.	0001111						

Project/Site: MVP Southgate Project NC City/0	County: Eden/Rockingham Sampling Date: 2024-06-04					
· ·	State: North Carolina Sampling Point: SP-B007					
FC 1.0	ion, Township, Range:					
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1						
	Long: -79.67763675 Datum: NAD 83					
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes	: rarely flooded					
Are climatic / hydrologic conditions on the site typical for this time of year?	<u>.</u>					
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes V No	Is the Sampled Area within a Wetland? Yes V No					
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No					
Remarks:						
Wetland comple plet within DEO W DOO2. The	LICACE Antocodent Dresinitation Tool					
Wetland sample plot within PFO W-B003. The	•					
indicates normal conditions were present 3 mg	onths prior to survey					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) True Aquatic Plants						
High Water Table (A2) Hydrogen Sulfide Od						
Saturation (A3) Oxidized Rhizosphe						
Water Marks (B1) Presence of Reduce						
Sediment Deposits (B2) Recent Iron Reduction This Muck Surface (_ · · · · · · · · · · · · · · · · · · ·					
Drift Deposits (B3) Thin Muck Surface (Algal Mat or Crust (B4) Other (Explain in Re						
Iron Deposits (B5)	Geomorphic Position (D2)					
Indi Deposits (DS) Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
Water-Stained Leaves (B9)	Microtopographic Relief (D4)					
Aquatic Fauna (B13)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No Depth (inches):						
Saturation Present? Yes No Depth (inches):						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, principle)	evious inspections), if available:					
Remarks:						
Indicators C9, D2 and D5 are present.						

		plants.		Sampling Point: SP-B007
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species
1. Liquidambar styraciflua	50		FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Acer rubrum	30		FAC	Total Number of Dominant
3. Fraxinus pennsylvanica	20		FACW	Species Across All Strata: 6 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				That Aid OBE, I AOW, OI I AO.
7				Prevalence Index worksheet:
	100	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 50.00				OBL species <u>55</u> _{x 1 = <u>55</u>}
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species <u>65</u> x 2 = <u>130</u>
1. Fraxinus pennsylvanica	20	~	FACW	FAC species 100 x 3 = 300
2				FACU species 0 x 4 = 0
				UPL species 0 x 5 = 0
				Column Totals: 220 (A) 485 (B)
4				
5				Prevalence Index = B/A = 2.20
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8	-			✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 10.00	20% of	total cover:	4.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)			0.01	Problematic Hydrophytic Vegetation¹ (Explain)
1. Ludwigia palustris	55		OBL	1 Toblematic Hydrophytic Vegetation (Explain)
2. Cyperus rotundus	20		FAC	Indicators of hydric call and watland hydrology must
3. Juncus effusus	15		FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Eleocharis tortilis	10		FACW	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				
9	-			Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.	-			m) tall.
11.	-			
· · · · · · · · · · · · · · · · · · ·	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00				of size, and woody plants less than 5.20 it tall.
Woody Vine Stratum (Plot size: 30 ft r)	2070 01	total cover.		Woody vine – All woody vines greater than 3.28 ft in
				height.
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes ✓ No
		= Total Cov		riesent: ies NO
50% of total cover:		total cover:		
	sheet.)			
Remarks: (Include photo numbers here or on a separate s				
	v ara m	ot.		
Remarks: (Include photo numbers here or on a separate sometimes) Dominance test and prevalence inde	ex are m	et.		
	ex are m	et.		
	ex are m	iet.		
	ex are m	iet.		
	ex are m	iet.		

Color (moist)	
3 - 11	
11-21 10YR 7/1 90 10YR 6/8 10 C M Silty Clay	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: Indicators for Problematic My (MLRA 147, 148) Type: Indicators for Problematic My (MLRA 147, 148) Type: Indicators of Problematic My (MLRA 147, 148) Type: Indicators of Problematic My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148) Type: Indicators of hydrophytic vertical My (MLRA 147, 148	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soil MLRA 136, 147) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be strictive Layer (if observed): Type: Depth (inches): Depth (inches): Demarks:	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soil MLRA 136, 147) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be strictive Layer (if observed): Type: Depth (inches): Depth (inches): Demarks:	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soil MLRA 136, 147) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be strictive Layer (if observed): Type: Depth (inches): Depth (inches): Demarks:	
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ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A10) Bandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Red Parent Material (F21) (MLRA 148) Muck (A10) (LRR A148) Muck (A10) (LRR N, MLRA 136, 122) Piedmont Floodplain Soil (MLRA 136, 147) Very Shallow Dark Surface (F7) Other (Explain in Remark MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 148) wetland hydrology must be unless disturbed or probletestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Hydric Soil Present? Yes Pollowate (S7) 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) MLRA 136, Stratified Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Permarks:	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A10) Bandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Demont Floodplain Soil (F19) Wery Shallow Dark Surface (A12) Sandy Redox (S5) Demont Floodplain Soil (MLRA 136, 147) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Demont Floodplain Soil (F19) (MLRA 148) Wetland hydrology must be strictive Layer (if observed): Type: Depth (inches): Depth (inches): Denth (i	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A10) Bandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Red Parent Material (F21) (MLRA 148) Muck (A10) (LRR A148) Muck (A10) (LRR N, MLRA 136, 122) Piedmont Floodplain Soil (MLRA 136, 147) Very Shallow Dark Surface (F7) Other (Explain in Remark MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 148) wetland hydrology must be unless disturbed or probletestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Hydric Soil Present? Yes Pollowate (S7) 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) MLRA 136, Stratified Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Permarks:	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A10) Bandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Red Parent Material (F21) (MLRA 148) Muck (A10) (LRR A148) Muck (A10) (LRR N, MLRA 136, 122) Piedmont Floodplain Soil (MLRA 136, 147) Very Shallow Dark Surface (F7) Other (Explain in Remark MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 148) wetland hydrology must be unless disturbed or probletestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Hydric Soil Present? Yes Permarks:	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Thick Dark Surface (A10) Bandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Red Parent Material (F21) (MLRA 148) Muck (A10) (LRR A148) Muck (A10) (LRR N, MLRA 136, 122) Piedmont Floodplain Soil (MLRA 136, 147) Very Shallow Dark Surface (F7) Other (Explain in Remark MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 148) wetland hydrology must be unless disturbed or probletestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Hydric Soil Present? Yes Permarks:	
Addric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Depleted Matrix (S4) Sandy Redox (S5) Depleted Matrix (S4) Sandy Redox (S5) Depleted Matrix (S6) Sandy Redox (S5) Piedmont Floodplain Soil (MLRA 136, 147) Very Shallow Dark Surface (F7) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be setrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Pemarks:	(.
Histic Epipedon (A2)	lydric Soils ³ :
Black Histic (A3)	147)
Stratified Layers (A5) _ 2 cm Muck (A10) (LRR N) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, _ MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Stripped Matrix (S6)	
	s (F19)
Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	S)
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Type: Depth (inches): MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problem of the problem of	
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5)	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be unless disturbed or problem unless disturbed or	egetation and
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problemestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes emarks:	-
Type: Depth (inches): Hydric Soil Present? Yes emarks:	
Depth (inches): Hydric Soil Present? Yes venarks:	
emarks:	
emarks:	No
Indicator F3 is present.	

Project/Site: MVP Southgate Project NC	City/County: Rockingham County Sampling Date: 2024-06-04					
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B008					
Investigator(s):ES, LC	Section, Township, Range:					
andform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex Slope (%): 1						
Subregion (LRR or MLRA): P 136 Lat: 36.49						
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:						
	ne of year? Yes No (If no, explain in Remarks.)					
	ficantly disturbed? Are "Normal Circumstances" present? Yes No					
	rally problematic? (If needed, explain any answers in Remarks.)					
	owing sampling point locations, transects, important features, etc.					
Oblimati of Findings - Attach site map site	wing sampling point locations, transects, important reatures, etc.					
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area					
Hydric Soil Present? Yes V	within a Wetland? Yes 🗾 No					
Wetland Hydrology Present? Yes V No						
Remarks:						
Upland sample plot adjacent to PFO W	-B003. The USACE Antecedent Precipitation Tool					
	-					
indicates normal conditions were pres	ent 3 months prior to survey.					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that						
	uatic Plants (B14) Sparsely Vegetated Concave Surface (B8)					
<u> </u>	en Sulfide Odor (C1) Drainage Patterns (B10)					
	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)					
Water Marks (B1) Presence	e of Reduced Iron (C4) Dry-Season Water Table (C2)					
Sediment Deposits (B2) Recent	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)					
	ck Surface (C7) Saturation Visible on Aerial Imagery (C9)					
	(xplain in Remarks) Stunted or Stressed Plants (D1)					
Iron Deposits (B5)	Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
Water-Stained Leaves (B9)	Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)					
Aquatic Fauna (B13) Field Observations:	- FAC-Neutial Test (D5)					
Surface Water Present? Yes No Depth	inches):					
Water Table Present? Yes No Depth	inches):					
Saturation Present? Yes No Depth						
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aeria	ıl photos, previous inspections), if available:					
Remarks:						
Indicator DE is present						
Indicator D5 is present.						

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B008
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	50		FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Liquidambar styraciflua	30		FAC	Total Number of Deminant
3. Fraxinus pennsylvanica	20	~	FACW	Total Number of Dominant Species Across All Strata: 8 (B)
4.				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)
6.				That Are OBE, I AGW, GIT AG.
7				Prevalence Index worksheet:
	100	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: <u>50.00</u>				OBL species <u>55</u> x 1 = <u>55</u>
Sapling/Shrub Stratum (Plot size: 15 ft r)	_	•		FACW species <u>55</u> x 2 = <u>110</u>
1. Fraxinus pennsylvanica	35	✓	FACW	FAC species 90 x 3 = 270
2. Salix nigra	30		OBL	FACU species 50 x 4 = 200
3. Alnus serrulata	25		OBL	UPL species $0 \times 5 = 0$
4. Liquidambar styraciflua	10		FAC	Column Totals: <u>250</u> (A) <u>635</u> (B)
•				Prevalence Index = B/A = 2.54
•				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	100			3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 50.00		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20% 01	total cover.		data in Remarks or on a separate sheet)
1. Toxicodendron radicans ssp. radicans	30	V		Problematic Hydrophytic Vegetation ¹ (Explain)
2. Anthoxanthum odoratum	20		FACU	
3. Lonicera japonica	20		FACU	¹ Indicators of hydric soil and wetland hydrology must
	5		FACU	be present, unless disturbed or problematic.
4. Achillea millefolium	5		FACU	Definitions of Four Vegetation Strata:
5. Solidago canadensis			FACO	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11		·		Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 40.00	20% of	total cover:	16.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3		·		
4		·		Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes V No No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate sl	heet.)			·
Dominance test is passed				
Dominance test is passed.				

Depth	Matrix	%		Redox Features				Damani
inches) 0 - 21	Color (moist) 2.5Y 6/2	<u>%</u> 97	Color (moist) 7.5YR 5/8	_ <u> </u>	Type ¹ C		Texture Clay Loam	Remarks
0-21	2.51 6/2	_ 9/	7.51K 5/8	3		_ <u>M</u>	Clay Loam	
-								
-								
_								
								-
-								
-								
			-	-				
							-	
			· -					
				<u> </u>				
vpe: C=C	oncentration, D=De	epletion, RN	/I=Reduced Matrix, M	IS=Maske	ed Sand G	rains.	² Location: Pl	L=Pore Lining, M=Matrix.
	Indicators:	,	,			-	Indica	ators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surfac	e (S7)				cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue B	. ,	face (S8) (MLRA 147		oast Prairie Redox (A16)
	stic (A3)		Thin Dark S				, ., <u> </u>	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gley			, -,	Р	iedmont Floodplain Soils (F19)
	d Layers (A5)		<u>✓</u> Depleted Ma		,			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		(F6)		V	ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	ice (A11)	Depleted Da	ark Surfac	e (F7)		_ 0	ther (Explain in Remarks)
_ Thick Da	ark Surface (A12)		Redox Depr	essions (F8)			
_ Sandy N	Mucky Mineral (S1)	(LRR N,	Iron-Mangar	nese Mas	ses (F12)	(LRR N,		
MLR	A 147, 148)		MLRA 13	36)				
Sandy C	Bleyed Matrix (S4)		Umbric Surf	ace (F13	(MLRA 1	36, 122)	³ Indi	icators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont FI	oodplain	Soils (F19) (MLRA 1	48) we	tland hydrology must be present,
Stripped	Matrix (S6)		Red Parent	Material ((F21) (ML	RA 127, 14	7) unl	less disturbed or problematic.
estrictive	Layer (if observed	l):						
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes V No No
emarks:	,							
	ndicator F3 i	s nrese	ent					
	idioator i o i	o prese	J11C.					

Project/Site: MVP Southgate	City/County: Rockingham County Sampling Date: 2024-08-27						
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-B008a						
Investigator(s).AC, LC	Section, Township, Range:						
andform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1							
	41 Long: -79.6777966 Datum: NAD 83						
	Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of y							
	y disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally pr							
	g sampling point locations, transects, important features, etc.						
V A No	j emipinig point rounding, numbered, imperium rounding, otal						
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No No	Is the Sampled Area						
	within a Wetland? Yes No						
Wetland Hydrology Present? Yes V No							
Wetland sample plot within W-B051. The Uwetter than normal conditions 3 months p	JSACE Antecedent Precipitation Tool indicates rior to survey.						
HYDROLOGY	<u>, </u>						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)							
Surface Water (A1) True Aquatic F							
Surface Water (A1) High Water Table (A2) Hydrogen Sulf	Fide Odor (C1) Spaisely vegetated Concave Surface (B6)						
	ospheres on Living Roots (C3) Moss Trim Lines (B16)						
Water Marks (B1) Presence of R							
	eduction in Tilled Soils (C6) Crayfish Burrows (C8)						
Drift Deposits (B3) Thin Muck Sui	rface (C7) Saturation Visible on Aerial Imagery (C9)						
Algal Mat or Crust (B4) Other (Explain	in Remarks) Stunted or Stressed Plants (D1)						
Iron Deposits (B5)	✓ Geomorphic Position (D2)						
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)						
Water-Stained Leaves (B9)	Microtopographic Relief (D4)						
Aquatic Fauna (B13)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No Depth (inches							
Water Table Present? Yes No Depth (inches							
Saturation Present? Yes No Depth (inchest (includes capillary fringe)	s): Wetland Hydrology Present? Yes No						
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:						
Remarks:							
Indicators A2 DO D10 D2 and DE ave not							
Indicators A3, B9, B10, D2, and D5 are pres	sent.						

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B008a
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	20		FAC	That Are OBL, FACW, or FAC: 9 (A)
2. Quercus phellos	20		FAC	Total Number of Dominant
3. Liquidambar styraciflua	15		FAC	Species Across All Strata: 9 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				That Are OBE, I AGW, OF AG.
7	-			Prevalence Index worksheet:
	55	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: <u>27.50</u>				OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 70 01	10101 00101.		FACW species <u>35</u> x 2 = <u>70</u>
1. Liquidambar styraciflua	25	~	FAC	FAC species 130 x 3 = 390
2. Quercus phellos	20		FAC	FACU species $0 x 4 = 0$
3. Carpinus caroliniana	15		FAC	UPL species 0 x 5 = 0
·			170	Column Totals: 165 (A) 460 (B)
4				Column Totals (A) (B)
5				Prevalence Index = B/A = $\frac{2.78}{}$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations¹ (Provide supporting
50% of total cover: <u>30.00</u>	20% of	total cover:	12.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Boehmeria cylindrica	20		FACW	Problematic Hydrophytic Vegetation (Explain)
2. Leersia virginica	15		FACW	1
3. Toxicodendron radicans	15		FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation Strata.
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				noight.
9				Sapling/Shrub – Woody plants, excluding vines, less
	•			than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
				in tall
11	50			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 25.00		= Total Cov		of size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size: 30 ft r)	20 /0 01	total cover.		Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes ✓ No
		= Total Cov		Present? Yes V No No
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
Dominance test and prevalence index	v are m	ωt		
Dominance test and prevalence inde	x are iii	iet.		

SOIL

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	n the absence of inc	licators.)			
Depth	Matrix		Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 4	10YR 5/3	100					Clay Loam				
4 - 14	10YR 5/2	95	10YR 5/8	5	С	<u>M</u>	Clay Loam				
14 - 20	10YR 5/2	85	10YR 5/8	15	С	М	Clay Loam				
-					-						
_											
	-	_			-						
				-							
			· ·		_						
					_						
		pletion, RN	1=Reduced Matrix, M	S=Maske	d Sand G	rains.	² Location: PL=Por	e Lining, M=Matrix. for Problematic Hydric Soils ³ :			
Hydric Soil I			5 . 6 .	(O=)				-			
Histosol	, ,		Dark Surface	. ,	(00) #			uck (A10) (MLRA 147)			
	pipedon (A2)		Polyvalue Be		. , .		· · · —	Prairie Redox (A16)			
Black Hi			Thin Dark Su			147, 148)		RA 147, 148)			
	n Sulfide (A4)		Loamy Gleye		(F2)			nt Floodplain Soils (F19)			
	l Layers (A5)		Depleted Ma	ıtrix (F3)			•	RA 136, 147)			
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (F6)			nallow Dark Surface (TF12)			
Depleted	d Below Dark Surfac	ce (A11)	Depleted Da	rk Surface	e (F7)		Other (F	Explain in Remarks)			
Thick Da	ark Surface (A12)		Redox Depre	essions (F	- 8)						
Sandy M	lucky Mineral (S1) (LRR N,	Iron-Mangan	ese Mass	ses (F12)	(LRR N,					
MLRA	A 147, 148)	MLRA 13	6)								
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 136, 122) ³ Indicators of hydrophytic vegetation and						
	edox (S5)		Piedmont Flo					hydrology must be present,			
	Matrix (S6)		Red Parent I					sturbed or problematic.			
	_ayer (if observed)):	<u> </u>		/ (,	1				
Type:	, ,										
Depth (inc	ches).						Hydric Soil Prese	ent? Yes V No			
Remarks:							1.,				
	dicator F3 is	s met.									

Project/Site: MVP Southgate Project NC City/	County: Eden/Rockingham Sampling Date: 2024-06-04					
· · · · · · · · · · · · · · · · · · ·	State: North Carolina Sampling Point: SP-B009					
Investigator(s):ES, LC Section, Township, Range:						
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1						
	Long:79.67595217 Datum: NAD 83					
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes						
Are climatic / hydrologic conditions on the site typical for this time of year?						
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No						
Hydric Soil Present? Yes V No	Is the Sampled Area within a Wetland? Yes V No					
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No					
Remarks:						
Mottond complement within DEMAN DOOA. The	LICA OF Autopolant Duppinitation Tool					
Wetland sample plot within PEM W-B004. The	•					
indicates normal conditions were present 3 m	onths prior to survey.					
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) True Aquatic Plants						
High Water Table (A2) Hydrogen Sulfide Oc						
	res on Living Roots (C3) Moss Trim Lines (B16)					
Water Marks (B1) Presence of Reduce						
Sediment Deposits (B2) Recent Iron Reducti						
Drift Deposits (B3) Thin Muck Surface (Algal Mat or Crust (B4) Other (Explain in Re						
Iron Deposits (B5)	Geomorphic Position (D2)					
Indit Deposits (DS) Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
Water-Stained Leaves (B9)	Microtopographic Relief (D4)					
Aquatic Fauna (B13)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No _ ✓ Depth (inches):						
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:					
Remarks:						
Indicators B10, D2 and D5 are present.						
, , , , , , , , , , , , , , , , , , , ,						

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B009
00.5				Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30 ft r)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B)
6				Prevalence Index worksheet:
<i>1</i>		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:				OBL species 30 x 1 = 30
Sapling/Shrub Stratum (Plot size: 15 ft r)	_			FACW species $0 x 2 = 0$
1				FAC species 60 x 3 = 180
2				FACU species 0 x 4 = 0
3				UPL species <u>0</u>
4				Column Totals: <u>90</u> (A) <u>210</u> (B)
5				Prevalence Index = B/A = 2.33
6		-		
7				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	er	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	00		EAC	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Zea mays	20		FAC OBL	
2. Ludwigia palustris 3. Lemna minor	10		OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Lettilla Itililoi	10		OBL	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7 o				height.
8 9.				Sapling/Shrub – Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.		-		
	90	= Total Cov	er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45.00				Was desired Allowed by the section there 0.00 ft in
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes No
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
Dominance test and prevalence inde	x are m	et.		
•				

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Re	emarks
0 - 5	7.5YR 4/2	100					Clay Loam	_
5 - 11	10YR 5/2	90	5YR 5/6	10	<u>C</u>	М	Clay Loam	_
11 - 16	7.5YR 6/2	85	7.5YR 6/6	15	С	М	Clay Loam	_
16 - 21	7.5YR 7/1	80	10YR 5/8	20	<u>C</u>	М	Clay Loam	_
	-							_
								_
					<u> </u>			
					<u> </u>			
		_						
	-							_
		oletion, RM	I=Reduced Matrix, M	S=Maske	d Sand G	rains.	² Location: PL=Pore Lining, M=	
Hydric Soil I	ndicators:						Indicators for Problen	-
Histosol	(A1)		Dark Surface				2 cm Muck (A10) (I	•
	pipedon (A2)		Polyvalue Be		. , .		· · · —	
Black Hi	stic (A3)		Thin Dark St	urface (S9) (MLRA	147, 148)	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Piedmont Floodpla	in Soils (F19)
Stratified	l Layers (A5)		✓ Depleted Ma	trix (F3)			(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (I	F6)		Very Shallow Dark	Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da	rk Surface	e (F7)		Other (Explain in R	emarks)
	ark Surface (A12)	` ,	Redox Depre				_ ` ` `	,
	lucky Mineral (S1) (LRR N.	Iron-Mangar			(LRR N.		
	\ 147, 148)	,	MLRA 13		/cc (<u>_</u> /	(=,		
	sleyed Matrix (S4)		Umbric Surfa	•	(MIRA1	36 122\	³ Indicators of hydroph	outic vegetation and
	ledox (S5)		Piedmont Flo					-
								· ·
	Matrix (S6)		Red Parent	viateriai (i	-21) (WLF	KA 127, 14	7) unless disturbed or p	problematic.
	_ayer (if observed)	:						
Type:								
Depth (inc	ches):						Hydric Soil Present? Yes	No
Remarks:			_					
In	dicator F3 is	s prese	ent.					

Project/Site: MVP Southgate	e Project NC	City/C	ounty: Eden/Rocking	ham (Sampling Date: 2024-06-04
Applicant/Owner: Mountain Va			=		Sampling Point: SP-B010
Investigator(s):ES, LC		Section	on, Township, Range:		
Landform (hillslope, terrace, etc.)					Slope (%): 1
Subregion (LRR or MLRA):					
Soil Map Unit Name: BaB - Ba					
Are climatic / hydrologic condition					
Are Vegetation, Soil					_
Are Vegetation, Soil					
SUMMARY OF FINDING					
SOMMAN OF THE DINGS	5 - Attach site in		ipinig point locatio	ms, transects,	important reatures, etc.
Hydrophytic Vegetation Present		No 🗸	Is the Sampled Area		
Hydric Soil Present?	Yes	No 🗸	within a Wetland?	Yes	No 🗸
Wetland Hydrology Present? Remarks:	Yes	No 🗸			
Upland sample plot indicates normal co	•				ecipitation Fool
HYDROLOGY					
Wetland Hydrology Indicators					ors (minimum of two required)
Primary Indicators (minimum of	-			Surface Soil C	
Surface Water (A1)		True Aquatic Plants (I			etated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide Odd		Drainage Patte Moss Trim Lin	
Water Marks (B1)		Presence of Reduced	-		/ater Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burro	
Drift Deposits (B3)		Thin Muck Surface (C			ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			essed Plants (D1)
Iron Deposits (B5)				Geomorphic P	Position (D2)
Inundation Visible on Aeria	I Imagery (B7)			Shallow Aquita	ard (D3)
Water-Stained Leaves (B9))				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral T	est (D5)
Field Observations:		Double (in the ca)			
	Yes No				
	Yes No			ludada an Dasas at	? Yes No
Saturation Present? (includes capillary fringe)	res No	Depth (inches):	wetland H	iyarology Present	? res No
Describe Recorded Data (stream	m gauge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
No indicators are pr	rocont				
ino indicators are pr	esent.				

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B010
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1		Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				Openies Across Air Otrata.
				Percent of Dominant Species That Are OBL FACW or FAC: 0.00 (A/B)
5 6				That Are OBL, FACW, or FAC: 0.00 (A/B)
6				Prevalence Index worksheet:
7		- Total Cov		Total % Cover of: Multiply by:
50% of total cover:		= Total Cov		OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /0 01	total cover.		FACW species $0 x 2 = 0$
				FAC species 3 x 3 = 9
1				FACU species 7
2				UPL species 90 x 5 = 450
3				Column Totals: 100 (A) 487 (B)
4				()
5				Prevalence Index = B/A = 4.87
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		-	-	2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	90	~	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Zea mays	5		FACU	
2. Solanum carolinense	3	-	FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Acer rubrum	2		FACU	be present, unless disturbed or problematic.
4. Apocynum cannabinum			FACO	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7		-		height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50.00</u>	20% of	total cover:	20.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes No V
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
No indicators are present				
No indicators are present.				

Color (moist) % Color (moist) % Loc Extitle Remarks	Depth	Matrix	0/		x Feature		1 2	- .	Б
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, MS=Masked Sand Grains. Type: C=Concentration (Rd) Matrix, MS=Masked Sand Grains. Toda Grains. Toda G	0 - 15	10YR 4/3	100					Sandy Loam	
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (F6) Depleted Dark Surface (F7) Histo Dark Surface (A11) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 147, 148) Mura 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Mura 136, 147) Depleted Dark Surface (F7) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	15 - 21	10YR 5/3	85	10YR 4/6	15	С	M	Sandy Clay Loam	
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) MLRA 136, 147) Indicators for Problematic Hydric Soil 2 cm Muck (A10) (MLRA 147, 148) MLRA 136, 147) Depleted Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Remarks:	-								
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Dark Surface (F1) Each y Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Bare Red Parent Material (F21) (MLRA 127, 147) Indicators for Problematic Hydric Soil Present? Yes No									
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Dark Surface (F1) Each y Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Bare Red Parent Material (F21) (MLRA 127, 147) Indicators for Problematic Hydric Soil Present? Yes No		-							
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Ered Muck (A10) (LRR N) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 136, 147) Jedentric Mark Surface (A12) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Remarks: Indicators for Problematic Hydric Soil 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Tinch Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	-			· <u></u>				·	
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Ered Muck (A10) (LRR N) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 136, 147) Jedentric Mark Surface (A12) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Remarks: Indicators for Problematic Hydric Soil 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Tinch Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	-								
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Ered Muck (A10) (LRR N) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 136, 147) Jedentric Mark Surface (A12) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Remarks: Indicators for Problematic Hydric Soil 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Tinch Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	_	•							
New Control of Control				· -				·	
New Control of Control				· ·					
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Ered Muck (A10) (LRR N) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 136, 147) Jedentric Mark Surface (A12) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Remarks: Indicators for Problematic Hydric Soil 2 cm Muck (A10) (MLRA 147) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Tinch Dark Surface (A12) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	-								
New Control of Control									
New Control of Control	Type: C=C	oncentration D=De	enletion RN	/=Reduced Matrix M	S=Masked	Sand G	ains	² Location: PI	=Pore Lining M=Matrix
Histosol (A1)			prodon, ra	T TOUGOOG MALIX, W	o maonoc	. Cana Ci	unio.		
Histic Epipedon (A2)	-			Dark Surface	e (S7)				
						ce (S8) (I	MLRA 147.		
Stratified Layers (A5) Depleted Matrix (F3) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Trick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Trick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3Indicators of hydrophytic vegetation a wetland hydrology must be present, Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed):							, ,		
2 cm Muck (A10) (LRR N)						,			
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depteted Dark Surface (F7) Set of the (Explain in Remarks) Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic. Medicators of hydrophytic vegetation and hydrology must be present, unless disturbed or problematic.		• • •				- 6)			
Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Slndicators of hydrophytic vegetation a Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Remarks:			ice (A11)			•			• • • • • • • • • • • • • • • • • • • •
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)			, ,						,
MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Hydric Soil Present? Yes No			(LRR N,				(LRR N,		
Sandy Gleyed Matrix (S4)			•			` ,	•		
Sandy Redox (S5)					•	(MLRA 1	36, 122)	³ Indi	cators of hydrophytic vegetation and
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Remarks:									
Type: Depth (inches): Hydric Soil Present? Yes No Remarks:	Stripped	d Matrix (S6)		Red Parent	Material (F	21) (MLF	RA 127, 14	7) unle	ess disturbed or problematic.
Depth (inches): No	Restrictive	Layer (if observed	l):						
Depth (inches): No	Type:								
Remarks:		iches).						Hydric Soil	Present? Yes No
								,	
	N	io indicators	s are pr	esent.					

Project/Site: MVP Southga	ate Project NC	(City/County: Ede	en/Rockingh	nam	Sampling Date: 2024-06-04	
Applicant/Owner: Mountain						na Sampling Point: SP-B011	
Investigator(s):ES, LC		;				_ ,	
Landform (hillslope, terrace, et						Slope (%): 1	
Subregion (LRR or MLRA): P	136	Lat. 36.50159731	1				
Soil Map Unit Name: CsA - 0	Codorus Ioam (to 2 percent slo	nes freguen				
Are climatic / hydrologic condit							
Are Vegetation, Soil	, or Hydrology	significantly	disturbed?	Are "Normal (Circumstances" p	resent? Yes No	
Are Vegetation, Soil	, or Hydrology	naturally pro	blematic?	(If needed, ex	xplain any answe	rs in Remarks.)	
SUMMARY OF FINDIN	GS – Attach sit	te map showing	sampling po	int locatio	ns, transects	, important features, etc.	
Hydrophytic Vegetation Pres	ent? Yes	✓ No					
Hydric Soil Present?	Yes	✓ No		npled Area	Yes 🗸	No	
Wetland Hydrology Present?	Yes	<u>✓</u> No	within a W	/etland?	1es <u> </u>		
Remarks:	-						
Wetland sample p	lot within PF	O W-B005. T	he USACE	Anteced	ent Precipi	itation Tool	
indicates normal c	onditions we	ere present 3	months pr	ior to sui	rvev.		
					,		
HYDROLOGY	-						
Wetland Hydrology Indicat	ors:				Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum	of one is required;	check all that apply)			Surface Soil	Cracks (B6)	
Surface Water (A1)		True Aquatic Pla	ants (B14)	-	Sparsely Veg	getated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfid	le Odor (C1)		Drainage Patterns (B10)		
Saturation (A3)		Oxidized Rhizos	spheres on Living	Roots (C3)	Moss Trim Lines (B16) Dry-Season Water Table (C2)		
Water Marks (B1)		Presence of Rec	duced Iron (C4)	-			
Sediment Deposits (B2)		Recent Iron Rec	duction in Tilled S	oils (C6)	Crayfish Burr	rows (C8)	
Drift Deposits (B3)		Thin Muck Surfa	ace (C7)	-		sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in	n Remarks)	-		tressed Plants (D1)	
Iron Deposits (B5)				·-	C Geomorphic	` ,	
Inundation Visible on Ae				-	Shallow Aqui		
Water-Stained Leaves (F	39)			-		phic Relief (D4)	
Aquatic Fauna (B13)				-	FAC-Neutral	Test (D5)	
Field Observations:		•					
Surface Water Present?		Depth (inches):					
Water Table Present?		Depth (inches):				.1	
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches):	:	Wetland Hy	ydrology Presen	t? Yes No	
Describe Recorded Data (str	eam gauge, monitor	ring well, aerial photos	s, previous inspe	tions), if avail	lable:		
Remarks:							
Indicators B7 and	D2 are prese	ent.					
	a a p. aaa						

50% of total cover: 50.00

Tree Stratum (Plot size: 30 ft r

Sapling/Shrub Stratum (Plot size: 15 ft r)

4. Nyssa sylvatica

1. Liquidambar styraciflua

3. Carpinus caroliniana

4. Pinus taeda

1. Liriodendron tulipifera

Herb Stratum (Plot size: 5 ft r

1. Microstegium vimineum

3. Impatiens capensis

2. Dulichium arundinaceum

4 Polystichum acrostichoides

3. Carpinus caroliniana

2. Acer rubrum

2 Acer rubrum

Absolute Dominant Indicator

% Cover Species? Status

= Total Cover

_ 20% of total cover: 20.00

70 = Total Cover

100 = Total Cover

20 = Total Cover

25

5

100

10

50% of total cover: 35.00 20% of total cover: 14.00

10

10

50% of total cover: 50.00 20% of total cover: 20.00

FAC

FAC

FAC

FAC

FACU **FAC**

FAC

FAC

OBL

FACW

FACU

Sampling Po	int: SP-B011	
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)

85.71

(A/B)

That Are OBL, FACW, or FAC: Prevalence Index worksheet:

Percent of Dominant Species

Total % Co	ver of:	M	ultiply by:	
OBL species	10	x 1 =	10	
FACW species	10	x 2 =	20	
FAC species	230	x 3 =	690	
FACU species	40	x 4 =	160	
UPL species	0	x 5 =		
Column Totals:	290	(A)	880	(B)
		_	••	

Prevalence Index = B/A = 3.03

Hydrophytic	Vegetation	Indicators
-------------	------------	------------

- ___ 1 Rapid Test for Hydrophytic Vegetation
- ✓ 2 Dominance Test is >50%
- 3 Prevalence Index is ≤3.01
- 4 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 ____

50% of total cover: 10.00 20% of total cover: 4.00 Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine Stratum (Plot size: 30 ft r)

1. Vitis rotundifolia

Dominance test is passed.

Profile Desc	ription: (Describe	to the de	oth needed to docu	ment the	indicator	or confirr	n the absence of in	dicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 5/2	60	7.5YR 5/8	10	С	М	Sandy Clay Loam	_
0 - 4	10YR 6/2	30					Sandy Clay Loam	_
4 - 12	10YR 5/3	85	7.5YR 5/8	15	С	М	Sandy Clay Loam	
12 - 21	10YR 6/2	70	10YR 6/6	30	С	М	Sandy Clay Loam	
		- (-				
					_			
					_			
					_			
		- (<u></u>						
		letion, RM	I=Reduced Matrix, M	S=Maske	d Sand G	ains.		re Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface					luck (A10) (MLRA 147)
Histic Ep	ipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (I	VILRA 147	, 148) Coast I	Prairie Redox (A16)
Black His	stic (A3)		Thin Dark Su	urface (S9) (MLRA	147, 148)	(MLI	RA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Piedmo	ont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted Ma					RA 136, 147)
	ck (A10) (LRR N)		Redox Dark		F6)			hallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da					Explain in Remarks)
	rk Surface (A12)	- ()	Redox Depre					,
	ucky Mineral (S1) (I	RR N	Iron-Mangan			(I RR N		
	. 147, 148)		MLRA 13		303 (1 12)	(LIXIX IV,		
				•	/MI D A 14	26 122\	3Indicator	s of hydrophytic vegetation and
	leyed Matrix (S4)		Umbric Surfa					
	edox (S5)		Piedmont Flo					hydrology must be present,
	Matrix (S6)		Red Parent I	viateriai (i	-21) (WLF	KA 127, 14	uniess d	listurbed or problematic.
	.ayer (if observed):							
Type:								_
Depth (inc	ches):						Hydric Soil Pres	ent? Yes No
Remarks:			_					
In	dicator F3 is	prese	ent.					

Project/Site: MVP Southg	ate Project NC	Citv/C	ounty: Eden/Rocking	ham	Sampling Date: 2024-06-04
Applicant/Owner: Mountain		-			na Sampling Point: SP-B012
Investigator(s):ES, LC			on, Township, Range:		
Landform (hillslope, terrace, e					
Subregion (LRR or MLRA): \underline{P}					Datum:_NAD 83
Soil Map Unit Name: CSA -	Codorus Ioam Oto	2 nercent slones			
Are climatic / hydrologic condi					
Are Vegetation, Soil _	, or Hydrology	significantly disturb	ped? Are "Normal	Circumstances" p	resent? Yes No
Are Vegetation, Soil _	, or Hydrology	naturally problema	itic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDIN	IGS – Attach site n	nap showing sam	pling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Pres	sent? Yes 🗸	No			
Hydric Soil Present?	Yes	No 🗸	Is the Sampled Area	Yes	No 🗸
Wetland Hydrology Present?	Yes	No 🗸	within a Wetland?	——————————————————————————————————————	
Remarks:					
Upland sample plo	ot adjacent to P	'FO W-B005. I	he USACE Ant	ecedent Pre	ecipitation I ool
indicates normal of	conditions were	present 3 mo	nths prior to su	ırvey.	
		·	·		
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required; chec	k all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	<u>—</u>	True Aquatic Plants (I	B14)	Sparsely Veg	getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odd		Drainage Patterns (B10)Moss Trim Lines (B16)Dry-Season Water Table (C2)	
Saturation (A3)	_		es on Living Roots (C3)		
Water Marks (B1)		Presence of Reduced			
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burr	
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren	narks)		tressed Plants (D1)
Iron Deposits (B5)	· (D-7)			Geomorphic	, ,
Inundation Visible on Ae				Shallow Aqui	
Water-Stained Leaves (В9)				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:	Vaa Na V	Donath (in all a a)			
Surface Water Present?		_ Depth (inches):			
Water Table Present?		_ Depth (inches):		luduala au Pasasa	40 Van Na V
Saturation Present? (includes capillary fringe)	Yes No _•	_ Depth (inches):	wetland F	lydrology Presen	t? Yes No
Describe Recorded Data (str	ream gauge, monitoring	well, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
No indicators are	present.				
	•				

	plants.		Sampling Point: SP-B012
Absolute	Dominant		Dominance Test worksheet:
	Species?		Number of Dominant Species
10		FAC	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: 66.66 (A/R)
			That Are OBL, FACW, or FAC: 66.66 (A/B)
	-	-	Prevalence Index worksheet:
10			Total % Cover of: Multiply by:
			OBL species $0 x 1 = 0$
20% or	total cover:	2.00	FACW species $0 \times 2 = 0$
20		E40	100
			I
25		FAC	UPL species $0 \times 5 = 0$
			Column Totals: <u>140</u> (A) <u>460</u> (B)
			2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
			Prevalence Index = B/A = 3.28
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
0.5	-		3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide supporting
20% of	total cover:	17.00	data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation¹ (Explain)
			1 Toblematic Trydrophytic Vegetation (Explain)
			1
			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
	_ T-4-1 C		
:	Total Cov	er	of size, and woody plants less than 3.28 ft tall.
	total cover:		of size, and woody plants less than 3.28 ft tall.
			of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
			of size, and woody plants less than 3.28 ft tall.
20% of		FAC	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
20% of 35 10	total cover:		of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
20% of 35 10	total cover:	FAC	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
20% of 35 10	total cover:	FAC	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
20% of 35 10	total cover:	FAC	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
35 10 45	total cover:	FAC FACU	of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
	85 20% of	Species? 10	Species Status FAC FAC

Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148)
18 - 21	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Indicators:Indicators:Histosol (A1)Dark Surface (S7)2Histic Epipedon (A2)Polyvalue Below Surface (S8) (MLRA 147, 148)0Black Histic (A3)Thin Dark Surface (S9) (MLRA 147, 148)1Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)5Stratified Layers (A5)Depleted Matrix (F3)12 cm Muck (A10) (LRR N)Redox Dark Surface (F6)1	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: _ Histosol (A1) Dark Surface (S7) 2 _ Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 _ Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) E _ Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) E _ Stratified Layers (A5) Depleted Matrix (F3) E _ 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) N	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: Histosol (A1) Dark Surface (S7) 2 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) 5 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 5 Stratified Layers (A5) Depleted Matrix (F3) 5 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) 1	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: Histosol (A1) Dark Surface (S7) 2 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) 5 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 5 Stratified Layers (A5) Depleted Matrix (F3) 5 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) 1	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: Histosol (A1) Dark Surface (S7) 2 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) 5 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 5 Stratified Layers (A5) Depleted Matrix (F3) 5 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) 1	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: Histosol (A1) Dark Surface (S7) 2 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) 5 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 5 Stratified Layers (A5) Depleted Matrix (F3) 5 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) 1	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: _ Histosol (A1) _ Dark Surface (S7) _ 2 _ Histic Epipedon (A2) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ 0 _ Black Histic (A3) _ Thin Dark Surface (S9) (MLRA 147, 148) E _ Hydrogen Sulfide (A4) _ Loamy Gleyed Matrix (F2) E _ Stratified Layers (A5) _ Depleted Matrix (F3) E _ 2 cm Muck (A10) (LRR N) _ Redox Dark Surface (F6) N	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: _ Histosol (A1) _ Dark Surface (S7) _ 2 _ Histic Epipedon (A2) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ 0 _ Black Histic (A3) _ Thin Dark Surface (S9) (MLRA 147, 148) E _ Hydrogen Sulfide (A4) _ Loamy Gleyed Matrix (F2) E _ Stratified Layers (A5) _ Depleted Matrix (F3) E _ 2 cm Muck (A10) (LRR N) _ Redox Dark Surface (F6) N	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: Histosol (A1) Dark Surface (S7) 2 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) 5 Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 5 Stratified Layers (A5) Depleted Matrix (F3) 5 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) 1	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: _ Histosol (A1) _ Dark Surface (S7) _ 2 _ Histic Epipedon (A2) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ 0 _ Black Histic (A3) _ Thin Dark Surface (S9) (MLRA 147, 148) E _ Hydrogen Sulfide (A4) _ Loamy Gleyed Matrix (F2) E _ Stratified Layers (A5) _ Depleted Matrix (F3) E _ 2 cm Muck (A10) (LRR N) _ Redox Dark Surface (F6) N	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
ydric Soil Indicators: Indicators: _ Histosol (A1) Dark Surface (S7) 2 _ Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) 0 _ Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) E _ Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) E _ Stratified Layers (A5) Depleted Matrix (F3) E _ 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) N	ators for Problematic Hydric Soils ³ 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histosol (A1) Dark Surface (S7) 2 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Foratified Layers (A5) Depleted Matrix (F3) Com Muck (A10) (LRR N) Redox Dark Surface (F6)	cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
_ Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148)	Coast Prairie Redox (A16)
_ Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) F _ Stratified Layers (A5) Depleted Matrix (F3) _ 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) N	(MI RA 147 148)
Stratified Layers (A5) Depleted Matrix (F3) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) \	(MERCA 141, 140)
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) \	Piedmont Floodplain Soils (F19)
	(MLRA 136, 147)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) (67)	/ery Shallow Dark Surface (TF12)
	Other (Explain in Remarks)
Thick Dark Surface (A12) Redox Depressions (F8)	
_ Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148) MLRA 136)	
	dicators of hydrophytic vegetation and
	etland hydrology must be present,
	less disturbed or problematic.
estrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soi	l Present? Yes No 🛂
emarks:	
No indicators are present.	
•	

Project/Site: MVP Southgate Project NC	City/C	ounty: Eden/Rockinghan	n Sampling	Date: 2024-06-05
Applicant/Owner: Mountain Valley Pipeline		SI		
FC 1.0	Section			ŭ <u></u>
Landform (hillslope, terrace, etc.): Depression				Slope (%): 1
Subregion (LRR or MLRA): P 136	Lat: 36.5166371	Long: <u>-79.65</u>		
Soil Map Unit Name: CmB - Clover sandy	loam 2 to 8 percent sl	ones	NIVA(I plane) fination.	Datum.
Are climatic / hydrologic conditions on the site ty				
Are Vegetation, Soil, or Hydrolog				
Are Vegetation, Soil, or Hydrolog	gy naturally problema	itic? (If needed, expla	in any answers in Rema	arks.)
SUMMARY OF FINDINGS – Attach s	site map showing sam	pling point locations	transects, import	ant features, etc.
Hydrophytic Vegetation Present? Yes	✓ No			
Hydric Soil Present? Yes	✓ No	Is the Sampled Area within a Wetland?	Yes ✔ No)
Wetland Hydrology Present? Yes	✓ No	within a Wetland:		
Remarks:				
Wetland sample plot within P	FM W-R007 The	USACE Anteceder	nt Precinitation	Tool
• •			•	1001
indicates normal conditions v	were present 3 mo	nths prior to surv	ey.	
HYDROLOGY				
Wetland Hydrology Indicators:		Sec	condary Indicators (minin	num of two required)
Primary Indicators (minimum of one is required	d; check all that apply)		Surface Soil Cracks (B6	
Surface Water (A1)	True Aquatic Plants (I		Sparsely Vegetated Co	*
High Water Table (A2)	Hydrogen Sulfide Odd		Drainage Patterns (B10	
Saturation (A3)	Oxidized Rhizosphere		Moss Trim Lines (B16)	,
Water Marks (B1)	Presence of Reduced		Dry-Season Water Table	le (C2)
Sediment Deposits (B2)	Recent Iron Reduction		Crayfish Burrows (C8)	, ,
Drift Deposits (B3)	Thin Muck Surface (C		Saturation Visible on A	erial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Ren		Stunted or Stressed Pla	
Iron Deposits (B5)			Geomorphic Position (E	
Inundation Visible on Aerial Imagery (B7)		_	Shallow Aquitard (D3)	,
Water-Stained Leaves (B9)		_	Microtopographic Relie	f (D4)
Aquatic Fauna (B13)		<u></u>	FAC-Neutral Test (D5)	,
Field Observations:				
Surface Water Present? Yes No	Depth (inches):			
Water Table Present? Yes No	Depth (inches):			
	Depth (inches):	Wetland Hydr	ology Present? Yes _	No
(includes capillary fringe) Describe Recorded Data (stream gauge, monit	toring well, aerial photos, pre	vious inspections), if availabl	<u>e</u> :	
, , , ,				
Remarks:				
Indicators D2 and D5 are pres	sent.			
·				

'EGETATION (Four Strata) – Use scientific n	ailles oi	piants.		Sampling Point: SP-B013
20.64	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
F00/ - 54-4-1		= Total Cov		OBL species 10
50% of total cover:	20% of	total cover:		FACW species 85 x 2 = 170
Sapling/Shrub Stratum (Plot size: 15 ft r)				FAC species $0 \times 3 = 0$
1,				FACU species 5 x 4 = 20
2				UPL species 0 x 5 = 0
3				Column Totals: 100 (A) 200 (B)
4				Column Totals. 100 (A) 100 (B)
5				Prevalence Index = B/A = 2.00
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supportin
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	65	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus 2. Carex scoparia	10		FACW	
2. Carex scopana 3. Carex vulpinoidea	10		OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Carex vulphiolidea 4. Dichanthelium scoparium	10		FACW	be present, unless disturbed or problematic.
5 Solidago canadensis	5		FACU	Definitions of Four Vegetation Strata:
v			1,400	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
6				more in diameter at breast height (DBH), regardless of
7				height.
8. <u> </u>				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11	100			Herb – All herbaceous (non-woody) plants, regardless
500/ official course 50		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% 01	total cover:	20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes V No
FOO/ of total covers		= Total Cov		resent: resno
		total cover.		
Remarks: (include photo numbers here or on a separate s	sneet.)			
50% of total cover: Remarks: (Include photo numbers here or on a separate s Rapid test, dominance test and preva	20% of theet.)	total cover:		

Profile Desc	ription: (Describe	to the de	oth needed to docur	ment the	indicator	or confirm	m the absence of indicators.)	
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u> <u>Remarks</u>	
0 - 2	7.5YR 5/3	100					Clay Loam	
2 - 10	10YR 5/2	55	7.5YR 5/8	10	С	<u>M</u>	Clay Loam	
2 - 10	10YR 6/2	35					Clay Loam	
10 - 21	10YR 5/2	65	7.5YR 6/8	15	С	<u>M</u>	Clay Loam	
10 - 21	10YR 6/1	20					Clay Loam	
							·	
							·	
							·	
							·	
'Type: C=Co		letion, RM	I=Reduced Matrix, M	S=Maske	d Sand Gi	rains.	Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³	
-			Dork Curtons	(07)				
Histosol			Dark Surface		(CO) / I	MI DA 447	2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be		. , .		· · · · · · · · · · · · · · · · · · ·	
Black His			Thin Dark Su			147, 148)		
	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)	
	l Layers (A5)		Depleted Ma				(MLRA 136, 147)	
	ck (A10) (LRR N)		Redox Dark		,		Very Shallow Dark Surface (TF12)	
	d Below Dark Surfac	e (A11)	Depleted Da				Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre					
Sandy M	lucky Mineral (S1) (I	RR N,	Iron-Mangan	ese Mass	ses (F12)	(LRR N,		
MLRA	\ 147, 148)		MLRA 13	6)				
Sandy G	leyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 1	36, 122)	³ Indicators of hydrophytic vegetation and	
	edox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	48) wetland hydrology must be present,	
	Matrix (S6)		Red Parent N					
	_ayer (if observed):							
Type:	,							
Depth (inc	ches):						Hydric Soil Present? Yes No	_
Remarks:							-	
In	dicator F3 is	prese	ent.					
		μ.σσσ						

Project/Site: MVP Southgate I	Project NC	City/Co	ounty: Eden/Rocking	ham (Sampling Date: 2024-06-05
Applicant/Owner: Mountain Valle			-		Sampling Point: SP-B014
Investigator(s):ES, LC		Sectio	n, Township, Range:		<u> </u>
Landform (hillslope, terrace, etc.):					Slope (%):_1
Subregion (LRR or MLRA): P 136					
Soil Map Unit Name: CmB - Clo	ver sandy loam,	2 to 8 percent sl	opes	NWI classifica	tion:
Are climatic / hydrologic conditions					
					_
Are Vegetation, Soil					
Are Vegetation, Soil					
SUMMARY OF FINDINGS	- Attach site ma	ap showing sam	pling point location	ns, transects,	important features, etc.
Hydrophytic Vegetation Present?	Yes	No 🗸	le the Campled Area		
Hydric Soil Present?	Yes	No 🔽	Is the Sampled Area within a Wetland?	Yes	No 🗸
Wetland Hydrology Present?	Yes	No 🗸			
Remarks:					
Upland sample plot a	djacent to PE	M W-B007. 1	he USACE Ant	ecedent Pre	cipitation Tool
indicates normal con-	ditions were	present 3 mo	nths prior to su	ırvey.	
			·		
HYDROLOGY					
Wetland Hydrology Indicators:	-			Secondary Indicato	ors (minimum of two required)
Primary Indicators (minimum of or	ne is required; check	all that apply)		Surface Soil C	racks (B6)
Surface Water (A1)	т	True Aquatic Plants (E	314)	Sparsely Vege	etated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odd		Drainage Patte	erns (B10)
Saturation (A3)			s on Living Roots (C3)	Moss Trim Line	
Water Marks (B1)		Presence of Reduced			/ater Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burro	
Drift Deposits (B3)		Thin Muck Surface (C			ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	<u> </u>	Other (Explain in Rem	narks)		essed Plants (D1)
Iron Deposits (B5)	(DZ)			Geomorphic P	
Inundation Visible on Aerial Ir	nagery (B7)			Shallow Aquita	
Water-Stained Leaves (B9)					phic Relief (D4)
Aquatic Fauna (B13) Field Observations:			<u> </u>	FAC-Neutral T	
	es No	Depth (inches):			
	es No				
	es No			lydrology Present	? Yes No
(includes capillary fringe)					: res No
Describe Recorded Data (stream	gauge, monitoring we	ell, aerial photos, prev	vious inspections), if ava	ilable:	
Remarks:					
No indicators are pro	cont				
No indicators are pre	Sent.				

Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1
That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B) Prevalence Index worksheet:
Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B) Prevalence Index worksheet:
Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B) Prevalence Index worksheet:
Percent of Dominant Species That Are OBL, FACW, or FAC: Total % Cover of:
That Are OBL, FACW, or FAC: 50.00 (A/B) Prevalence Index worksheet:
Prevalence Index worksheet: Total % Cover of: DBL species 0 x1 = 0 FACW species 20 x2 = 40 FAC species 0 x3 = 0 FACU species 80 x4 = 320 UPL species 0 x5 = 0 Column Totals: 100 (A) 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Total % Cover of: OBL species OBL species FACW species OBL specie
OBL species 0 x 1 = 0 FACW species 20 x 2 = 40 FAC species 0 x 3 = 0 FACU species 80 x 4 = 320 UPL species 0 x 5 = 0 Column Totals: 100 (A) 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) UU UU UU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
FACW species 20 x 2 = 40 FAC species 0 x 3 = 0 FACU species 80 x 4 = 320 UPL species 0 x 5 = 0 Column Totals: 100 (A) 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) UU UU UU ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
FAC species 0 x 3 = 0 FACU species 80 x 4 = 320 UPL species 0 x 5 = 0 Column Totals: 100 (A) 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) When the species 0 x 4 = 320 Hydrophytic Vegetation (B) Froblematic Hydrophytic Vegetation (CEXPlain) UNIT Totals: 100 (B) Problematic Hydrophytic Vegetation (Frovide supporting data in Remarks or on a separate sheet) UNIT Totals: 100 (B)
FACU species 80 x 4 = 320 UPL species 0 x 5 = 0 Column Totals: 100 (A) 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) UCU UCU ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
UPL species 0 x 5 = 0 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) UU UU UU UI UI UI UI UI UI U
UPL species 0 x 5 = 0 360 (B) Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) UU UU UU UI UI UI UI UI UI U
Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation2 - Dominance Test is >50%3 - Prevalence Index is ≤3.0¹4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) CU U U U Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Prevalence Index = B/A = 3.60 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) CU U U U U Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) CU CU U Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) U U U U Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) U U U Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation¹ (Explain) CU U Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation¹ (Explain) CU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
CU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
The control of the co
be present, unless disturbed or problematic.
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

Depth	Matrix	%		ox Featur		Loc ²	Touturo	Domarka
(inches) 0 - 21	Color (moist) 10YR 6/3		Color (moist) 7.5YR 5/8	_ <u> </u>	Type ¹	M	Texture Clay Loam	Remarks
			7.51K 3/6			_ <u>IVI</u>		
0 - 21	10YR 6/2	48	<u> </u>				Clay Loam	
-			<u></u>		_			
-								
_								
							-	
	-		<u></u>					
-								
-								
_							-	
	-		-					
	-		<u></u>					
		pletion, RN	M=Reduced Matrix, M	S=Mask	ed Sand G	rains.	² Location: P	L=Pore Lining, M=Matrix.
	Indicators:							ators for Problematic Hydric Soil
_ Histosol			Dark Surfac					2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue B				148) (Coast Prairie Redox (A16)
_ Black His	, ,		Thin Dark S			147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4) d Layers (A5)		Loamy Gley Depleted Ma		(FZ)		F	Piedmont Floodplain Soils (F19)
	ick (A10) (LRR N)		Redox Dark	, ,	(F6)		\	(MLRA 136, 147) /ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	ice (A11)	Nedox Dark		. ,			Other (Explain in Remarks)
	ark Surface (A12)		Redox Depr					outer (Express in Februarie)
	fucky Mineral (S1)	(LRR N,	Iron-Mangar			(LRR N,		
	A 147, 148)	,	MLRA 13		,	,		
Sandy G	Bleyed Matrix (S4)		Umbric Surf	ace (F13	(MLRA 1	36, 122)	³Ind	licators of hydrophytic vegetation ar
								licators of hydrophytic vegetation ar etland hydrology must be present,
_ Sandy R _ Stripped	Gleyed Matrix (S4) Redox (S5) Matrix (S6)		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we	
Sandy R Stripped	Bleyed Matrix (S4) Redox (S5)	l):	Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we	etland hydrology must be present,
_ Sandy R _ Stripped	Gleyed Matrix (S4) Redox (S5) Matrix (S6)	l):	Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we	etland hydrology must be present,
_ Sandy R _ Stripped estrictive L	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed	l):	Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present,
Sandy R Stripped estrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed	l):	Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
Sandy R Stripped estrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
Sandy R Stripped Restrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
Sandy R Stripped estrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (inc	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incentally)	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incemarks:	Gleyed Matrix (S4) Redox (S5) Matrix (S6) Layer (if observed		Umbric Surf	oodplain	Soils (F19) (MLRA 14	18) we 7) un	etland hydrology must be present, lless disturbed or problematic.

Project/Site: MVP Southg	ate Project NC	Citv/C	ounty: Eden/Rocking	ham	Sampling Date: 2024-06-05
Applicant/Owner: Mountain			-		na Sampling Point: SP-B015
Investigator(s):ES, LC		Section			
Landform (hillslope, terrace, e					
Subregion (LRR or MLRA): P					
Soil Map Unit Name: CmD -	Clover sandy lo	am 8 to 15 percent	Long	NA# 1 '6	Datum
Are climatic / hydrologic condi					
Are Vegetation, Soil _	, or Hydrology _	significantly disturb	ped? Are "Normal	Circumstances" p	oresent? Yes No
Are Vegetation, Soil _	, or Hydrology _	naturally problema	tic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDIN	IGS – Attach site	e map showing sam	pling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Pres	sent? Yes	✓ No			
Hydric Soil Present?	Yes	No No	Is the Sampled Area	Yes 🗸	No
Wetland Hydrology Present?	Yes (No No	within a Wetland?	100	
Remarks:					
\\\ - +	1-4:41-: DEI	MANA DOOG The	110405 4	-1 4 D :	tanating Total
Wetland sample p	lot within Per	M W-B008. The	USACE Antece	dent Precip	itation I ool
indicates normal of	conditions we	ere present 3 mo	nths prior to su	ırvey.	
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required; c			Surface Soil	
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odd		Drainage Pat	
Saturation (A3)		Oxidized Rhizosphere		Moss Trim Li	
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burr	
Drift Deposits (B3) Algal Mat or Crust (B4)		Thin Muck Surface (COther (Explain in Rem			sible on Aerial Imagery (C9) tressed Plants (D1)
Iron Deposits (B5)		Other (Explain in Neil	iai koj	✓ Geomorphic	, ,
Inundation Visible on Ae	erial Imagery (B7)			Shallow Aqui	
Water-Stained Leaves (phic Relief (D4)
Aquatic Fauna (B13)	/			FAC-Neutral	
Field Observations:					,
Surface Water Present?	Yes No	Depth (inches):			
Water Table Present?		Depth (inches):			
Saturation Present?		Depth (inches):		lydrology Presen	it? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (str					
Describe Recorded Data (Sti	eam gauge, monitori	ing well, aerial priotos, pre-	nous inspections), ii ava	illable.	
Remarks:					
Indicators C9 and	D2 are prese	ent.			
maioatoro oo arra	52 a.o p. 000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			

00.6	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r		Species?	Status	Number of Dominant Species
1. Acer rubrum	20		FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Pinus taeda	15		FAC	Total Number of Dominant
3. Liriodendron tulipifera	10		FACU	Species Across All Strata: 6 (B)
4	· 			Percent of Dominant Species
5	· 			That Are OBL, FACW, or FAC: 83.33 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
99.5		= Total Cov	-	OBL species 45 x 1 = 45
50% of total cover: <u>22.5</u>	20% of	total cover:	9	FACW species 10 x 2 = 20
Sapling/Shrub Stratum (Plot size: 15 ft r)	10		540	75 005
1. Liquidambar styraciflua			FAC	
2				· -
3				
4				Column Totals: <u>155</u> (A) <u>390</u> (B)
5	· 			Prevalence Index = B/A = 2.51
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	·			✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5	20% of	total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	4-		0.01	Problematic Hydrophytic Vegetation¹ (Explain)
1. Carex crinita	45		OBL	Troblematic Hydrophytic vegetation (Explain)
2. Microstegium vimineum	30		FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Lonicera japonica	15		FACU	be present, unless disturbed or problematic.
4. Bidens aristosa	10		FACW	Definitions of Four Vegetation Strata:
5	·			_
6	· 			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	total cover:	20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1	· 			
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes V No No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	sheet.)			-
Dominance test and prevalence inde	x are m	et.		

Depth	Matrix	0/		ox Featu		12	T d	5	
nches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹		<u>Texture</u>	R	lemarks
0 - 10	7.5YR 3/2	60	7.5YR 5/6	3	_ <u>C</u>	<u>M</u>	Sandy Loam		
0 - 10	10YR 4/2	<u>37</u>					Sandy Loam		
10 - 21	2.5Y 5/1	95	7.5R 4/8	5	С	М	Sandy Loam		
-									
_			-	-					
			-	-			-	-	
			· -				•		
-	· ·		<u> </u>						
-	· -								
-									
			-	-					
			A Deduced Metric N	40 Marala			21 4:	Dans Lining M	A. N.AAudio
	Indicators:	epietion, Riv	M=Reduced Matrix, M	15=IVIaski	ed Sand G	rains.	Location: PL	=Pore Lining, M	ı=⋈atrıx. matic Hydric Soils³:
			Dork Curfos	o (C7)					
_ Histoso	pipedon (A2)		Dark Surfac		faco (SR) (MI D A 1/17		cm Muck (A10) (past Prairie Red	
	listic (A3)		Polyvalue B				· —	MLRA 147, 14	
	en Sulfide (A4)		Loamy Gley			. , 1 4 0)		edmont Floodpla	•
	d Layers (A5)		<u>✓</u> Depleted M					(MLRA 136, 14	
	uck (A10) (LRR N)		Redox Dark					•	k Surface (TF12)
	ed Below Dark Surfa	ace (A11)	Depleted Da		. ,			her (Explain in F	, ,
_ Thick D	ark Surface (A12)		Redox Depi	ressions ((F8)				
-	Mucky Mineral (S1)	(LRR N,	Iron-Manga		sses (F12)	(LRR N,			
	A 147, 148)		MLRA 1	-			2		
	Gleyed Matrix (S4)		Umbric Surf						hytic vegetation and
-	Redox (S5)		Piedmont F						must be present,
	d Matrix (S6)		Red Parent	Material	(F21) (ML I	RA 127, 14	7) unle	ess disturbed or	problematic.
	Layer (if observed	1):							
Type:									4
Depth (in	nches):						Hydric Soil F	resent? Yes	s No
emarks:			_						
Ir	ndicator F3 i	s prese	ent.						

Project/Site: MVP Southgate Project NC City	/County: Eden/Rockingham Sampling Date: 2024-06-05
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B016
50.10	tion, Township, Range:
Landform (hillslope, terrace, etc.): Upland Local r	
Subregion (LRR or MLRA): P 136 Lat: 36.51327012	
Soil Map Unit Name: CmD - Clover sandy loam, 8 to 15 percen	t slopes
Are climatic / hydrologic conditions on the site typical for this time of year?	
	urbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland?
Wetland Hydrology Present? Yes No	
Remarks:	
Upland sample plot adjacent to PEM W-B008	The USACE Antecedent Precipitation Tool
	•
indicates normal conditions were present 3 m	onthis prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants	· · ·
High Water Table (A2) Hydrogen Sulfide C	
	eres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	
Sediment Deposits (B2) Recent Iron Reduct	
Drift Deposits (B3) Thin Muck Surface	(C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in R	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
Remarks:	
Indicator D5 is present.	
·	

2 Carex crinita 3 OBL 4 OBL 4 OBL 5 OBL 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. 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 Stratum (Plot size: 30 ft r) 1 Smilax rotundifolia 25	VEGETATION (Four Strata) – Use	scientific names of	plants.		Sampling Point: SP-B016
Pinus taeda	00.5				Dominance Test worksheet:
2 Fraxinus pennsylvanica					
Total Number of Dominant Species Tank Arc Ost Species Across All Strata: T (B)					That Are OBL, FACW, or FAC: 6 (A)
Percent of Dominant Species That Are OBL, FACW, or FAC: B5.71 (A/B)			-	FACW	
Prevent of Dominant Species Sp. 21	3		-		Species Across All Strata: 7 (B)
Prevalence Index worksheet: Total % Cover of. Multiply by.					Percent of Dominant Species
Transport Tran					That Are OBL, FACW, or FAC: 85.71 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r			-		Prevalence Index worksheet:
Soling/Shrub Stratum (Plot size: 15 ft r	7	0.5			
Sapling/Shrub Stratum (Plot size: 15 ft r	EOO/ of tot				
Carya glabra 20		ar cover 20 % or	total cover.		
2 Nyssa sylvatica 3 Quercus phellos 10			~	FACU	FAC species 90 x 3 = 270
3 Quercus phellos 4 4					FACU species 20
Column Totals: 120 (A) 365 (B) Prevalence Index = B/A = 3.04 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation May be prevalence Index is \$3.0¹ Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation May be prevalence Index is \$3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation **(Explain)* Athyrium asplenioides 15					_
Prevalence Index = B/A = 3.04 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation	<u>.</u>	·	·		· — — · — — ·
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Herb - All hydrophytic Vegetation Herb - All hydrophytic Vege			-		
7.			-		Prevalence Index = B/A = 3.04
8			-		Hydrophytic Vegetation Indicators:
9.					
Add			-		✓ 2 - Dominance Test is >50%
Solid cover 20.00 20% of total cover 8.00 20% of total cover 50% of total cover 12.50 20% of total cover 5.00 20% of total	s	4.0	= Total Cov		
Athyrium asplenioides 15	50% of total				
1. Athyrium asplenioides 2. Carex crinita 3.)			• • • • • • • • • • • • • • • • • • • •
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 vines greater than 3.28 ft tall. Woody Vine Stratum (Plot size: 30 ft r) 1. Smilax rotundifolia	1. Athyrium asplenioides	15	~	FAC	Problematic Hydrophytic Vegetation¹ (Explain)
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, 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 Stratum (Plot size: 30 ft r	2. Carex crinita	5	~	OBL	
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, as 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 Stratum (Plot size: 30 ft r) Smillax rotundifolia 25	3.				
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 Stratum (Plot size: 30 ft r) 1. Smilax rotundifolia 25					·
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 Stratum (Plot size: 30 ft r) 1. Smilax rotundifolia 25					Definitions of Four Vegetation Strata.
7					
9	_				
9	8				One Broad Ohanda Wandandanda ayahadin a
10					
20 = Total Cover 50% of total cover: 10.00 20% of total cover: 4.00 Woody Vine Stratum (Plot size: 30 ft r)	10				\$ 4 H
Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition Stratum Solition Soli	11				Herb – All herbaceous (non-woody) plants regardless
Woody Vine Stratum (Plot size: 30 ft r) 1. Smilax rotundifolia 25 ✓ FAC 2					
Smilax rotundifolia 25		al cover: <u>10.00</u> 20% of	total cover:	4.00	Woody vine – All woody vines greater than 3.28 ft in
2. 3. 4. 5. 25	Woody Vine Stratum (Plot size: 30 ft r)			
3	1. Smilax rotundifolia	25		FAC	
4					
5	3				
25 = Total Cover 50% of total cover: 12.50 20% of total cover: 5.00 Present? Yes No Remarks: (Include photo numbers here or on a separate sheet.)					Hydrophytic
50% of total cover: 12.50 20% of total cover: 5.00 20% of total cover:	5	0.5			
Remarks: (Include photo numbers here or on a separate sheet.)					Present? fes _ No
			total cover:	3.00	
Dominance test is passed.	Remarks: (Include photo numbers here or	on a separate sheet.)			
	Dominance test is passed.				
	·				

Depth	Matrix Color (moist) %		Redox Features Color (moist) % Type ¹ Loc ²				Toyturo	Domestic
inches) 0 - 21	Color (moist)	<u>%</u> 98	Color (moist) 10YR 6/6	<u>%</u> 2	Type ¹ C		Texture Sandy Loam	Remarks
0-21	2.5Y 5/2	98	1018 6/6			_ <u>M</u>	Sandy Loani	
-								
_								
			· ·					
			· -					
-								
_								
	•		-	-				
			· -					
			· ·					
ype: C=C	oncentration, D=De	epletion, RN	M=Reduced Matrix, M	S=Maske	ed Sand G	rains.	² Location: Pl	L=Pore Lining, M=Matrix.
	Indicators:	· · · ·	•				Indica	ators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface	Dark Surface (S7)				cm Muck (A10) (MLRA 147)
	oipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147, 1					Coast Prairie Redox (A16)	
	stic (A3)	Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)						
	en Sulfide (A4)	Loamy Gley				Р	riedmont Floodplain Soils (F19)	
	d Layers (A5)	<u>✓</u> Depleted Ma		,			(MLRA 136, 147)	
	ick (A10) (LRR N)	Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)						
	d Below Dark Surfa	Depleted Dark Surface (F7) Other (Explain in Remarks)						
_ Thick Da	ark Surface (A12)	Redox Depressions (F8)						
_ Sandy N	Mucky Mineral (S1)	Iron-Manganese Masses (F12) (LRR N,						
MLRA	A 147, 148)		MLRA 13	36)				
_ Sandy G	Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122) 3Indicators of hydrophytic vegetation and						
Sandy F	Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,						
_ Stripped	Matrix (S6)		Red Parent	Material ((F21) (ML	RA 127, 14	7) unl	less disturbed or problematic.
estrictive	Layer (if observed	l):						
Type:								
Depth (inches):							Hydric Soil	Present? Yes No
emarks:								
	idicator F3 i	s nrese	ent					
	idiodici i o i	o pi co	J11C.					

Project/Site: MVP Southgate	City/County: Rockingham County Sampling Date: 2024-08-27									
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-B016a									
Investigator(s):AC, LC	Section, Township, Range:									
	eal relief (concave, convex, none): Convex Slope (%): 3									
	36.51325001 Long: -79.66008075 Datum: NAD 83									
Soil Map Unit Name: CmD - Clover sandy loam, 8 to 15 percent slopes NWI classification:										
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)										
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No										
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)										
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.										
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes No Yes No Remarks:	Is the Sampled Area within a Wetland? Yes No									
Upland sample plot adjacent to PEM W-B008. The USACE Antecedent Precipitation Tool indicates wetter than normal conditions 3 months prior to survey.										
HYDROLOGY										
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)									
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)									
Surface Water (A1) True Aquatic Pl	ants (B14) Sparsely Vegetated Concave Surface (B8)									
High Water Table (A2) Hydrogen Sulfice										
	spheres on Living Roots (C3) Moss Trim Lines (B16)									
Water Marks (B1) Presence of Re										
	duction in Tilled Soils (C6) Crayfish Burrows (C8)									
Drift Deposits (B3) Thin Muck Surfa										
Algal Mat or Crust (B4) Other (Explain i										
Iron Deposits (B5)	Geomorphic Position (D2)									
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)									
Water-Stained Leaves (B9)	Microtopographic Relief (D4)									
Aquatic Fauna (B13)	FAC-Neutral Test (D5)									
Field Observations: Surface Water Present? Yes No Depth (inches)										
Water Table Present? Yes No Depth (inches)										
Saturation Present? Yes No Depth (inches)										
(includes capillary fringe)										
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:									
Remarks:										
No indicators met.										

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B016a
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species
1. Pinus taeda	60		FAC	That Are OBL, FACW, or FAC: 4 (A)
2. Carya glabra	30		FACU	Total Number of Dominant
3				Species Across All Strata: 8 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)
6				matrice obe, triow, of trio.
7				Prevalence Index worksheet:
	90	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 45.00				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot size: 15 ft r			_	FACW species <u>0</u>
1. Carya glabra	15	~	FACU	FAC species 90 x 3 = 270
2. Liquidambar styraciflua	10	~	FAC	FACU species
3. Pinus taeda	10		FAC	UPL species $0 \times 5 = 0$
·				Column Totals: <u>165</u> (A) <u>570</u> (B)
4				
5		· 		Prevalence Index = B/A = 3.45
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	25			3 - Prevalence Index is ≤3.0 ¹
77.50		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>17.50</u>	20% of	total cover:	7.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	00	,	FAOLI	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Lonicera japonica	20		FACU	
2. Rubus argutus	10		FACU	¹ Indicators of hydric soil and wetland hydrology must
3. Smilax rotundifolia	10		FAC	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				
	40	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20.00				
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes No
EOO/ of total covers		= Total Cov		100 100
50% of total cover:		total cover.		
Remarks: (Include photo numbers here or on a separate sl	neet.)			
No indicators are present.				
r				

SOIL

Depth	Matrix	0/		x Feature		1 2	T 4	D-	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks
0 - 10	10YR 4/3	100					Clay Loam		
10 - 16	10YR 6/3	98	7.5YR 5/6	2	С	M	Clay Loam		
-									
_									
			· 		-	· ——		-	
-									
-									
						· ——			
		_						-	
								-	
vpe: C=Co	oncentration, D=De	epletion, RN	/I=Reduced Matrix, M	S=Masked	I Sand Gr	ains.	² Location: P	L=Pore Lining, M=	:Matrix.
	Indicators:	<u> </u>	,				Indica	ators for Problem	atic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (N	/ILRA 147)
	oipedon (A2)		Polyvalue Be	, ,	ce (S8) (N	/ILRA 147,		Coast Prairie Redo	
Black Hi			Thin Dark Su		. , .		<i>,</i> —	(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gley			, ,	P	Piedmont Floodplai	
	d Layers (A5)		Depleted Ma	,	,			(MLRA 136, 147	
	ick (A10) (LRR N)		Redox Dark		·6)		V	ery Shallow Dark	
	d Below Dark Surfa	ice (A11)	Depleted Da	•				Other (Explain in R	
_ Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)				
_ Sandy M	lucky Mineral (S1)	(LRR N,	Iron-Mangar	ese Mass	es (F12) (LRR N,			
MLRA	\ 147, 148)		MLRA 13	66)					
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ace (F13) (MLRA 13	86, 122)	³ Ind	licators of hydroph	ytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	oodplain S	oils (F19)	(MLRA 14	l8) we	etland hydrology m	ust be present,
Stripped	Matrix (S6)		Red Parent I	Material (F	21) (MLR	A 127, 147	7) un	less disturbed or p	roblematic.
	Layer (if observed	l):							
Type: Gr	avel		<u> </u>				Hydric Soil	Present? Yes	No 🗸
Type: Gr Depth (inc							Hydric Soil	Present? Yes	No <u> </u>
Type: Gr Depth (ind temarks:	avel ches): 16	e mot					Hydric Soil	Present? Yes	No <u> </u>
Type: Gr Depth (indemarks:	avel	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incemarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (indemarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>*</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>v</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>v</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (indemarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>v</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No V
Type: Gr Depth (incention of the control of the con	avel ches): 16	s met.					Hydric Soil	Present? Yes	No V
Type: Gr Depth (incention of the control of the con	avel ches): 16	s met.					Hydric Soil	Present? Yes	No V
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No V
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No V
Type: Gr Depth (ind Remarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No V
Type: Gr Depth (ind Remarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>v</u>
Type: Gr Depth (ind Remarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>*</u>
Type: Gr Depth (ind Remarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>v</u>
Type: Gr Depth (indemarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incention of the contract of t	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>
Type: Gr Depth (incemarks:	avel ches): 16	s met.					Hydric Soil	Present? Yes	No <u>~</u>

Project/Site: MVP Southgate Project NC	City/County: Eden/Rock	ngham _{Sa}	mpling Date: 2024-06-05
Applicant/Owner: Mountain Valley Pipeline LLC			Sampling Point: SP-B017
Investigator(s):ES, LC	Section, Township, Range		
Landform (hillslope, terrace, etc.): Depression			Slope (%): 2
Subregion (LRR or MLRA): P 136 Lat: 36 Soil Map Unit Name: CmB - Clover sandy loam, 2 t	o 8 percent slopes	, 0.00002027	Datum
Are climatic / hydrologic conditions on the site typical for thi	·	- ' '	•
Are Vegetation, Soil, or Hydrologys	significantly disturbed? Are "Nor	mal Circumstances" pres	ent? Yes No
Are Vegetation, Soil, or Hydrologyı	naturally problematic? (If needs	d, explain any answers ir	n Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point loca	tions, transects, in	nportant features, etc.
Trydrophytic vegetation resent:	No Is the Sampled Ard within a Wetland?	a Yes ✔	No
Wetland Hydrology Present? Yes	No		
Remarks:			
Wetland sample plot within PFO W-lindicates normal conditions were pr		•	ation Tool
HYDROLOGY			() () ()
Wetland Hydrology Indicators:		·	s (minimum of two required)
Primary Indicators (minimum of one is required; check all		_ Surface Soil Cra	
	e Aquatic Plants (B14)		ted Concave Surface (B8)
	Irogen Sulfide Odor (C1)	Drainage Patterr	
	dized Rhizospheres on Living Roots (C		
	sence of Reduced Iron (C4)	Dry-Season Wat	
	cent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows	
	n Muck Surface (C7) er (Explain in Remarks)	Saturation visible Stunted or Stres	e on Aerial Imagery (C9)
Iron Deposits (B5)	er (Explain in Nemarks)	✓ Geomorphic Pos	
✓ Inundation Visible on Aerial Imagery (B7)		Shallow Aquitare	
Water-Stained Leaves (B9)		Microtopographi	
Aquatic Fauna (B13)		FAC-Neutral Tes	
Field Observations:			
Surface Water Present? Yes No De	pth (inches):		
Water Table Present? Yes No De			
Saturation Present? Yes No De		d Hydrology Present?	Yes No
(includes capillary fringe)	, , , ,		
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if	available:	
Remarks:			
Indicators D7 C2 D2 and DE are no			
Indicators B7, C3, D2 and D5 are pre	esent.		

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B017
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover	Species?		Number of Dominant Species
1. Liquidambar styraciflua	40		FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Quercus phellos	20		FAC	Total Number of Deminerat
3				Total Number of Dominant Species Across All Strata: 5 (B)
4.				
5				Percent of Dominant Species That Are OBL_FACW_or_FAC: 120.00 (A/B)
_				That Are OBL, FACW, or FAC: 120.00 (A/B)
6				Prevalence Index worksheet:
7	60	T-4-1 O		Total % Cover of: Multiply by:
50% of total cover: _30		= Total Cov		OBL species 0 x 1 = 0
·	20% 01	total cover.	<u></u>	FACW species 45 x 2 = 90
Sapling/Shrub Stratum (Plot size: 15 ft r) 1. Liquidambar styraciflua	30	V	FAC	FAC species 140 $\times 3 = 420$
			FAC	FACU species $0 \times 4 = 0$
2	· 			
3				
4				Column Totals: <u>185</u> (A) <u>510</u> (B)
5				Prevalence Index = B/A = 2.75
6				
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				✓ 2 - Dominance Test is >50%
<u> </u>	30	= Total Cov		✓ 3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 15			_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 70 01	10101 00101.		data in Remarks or on a separate sheet)
1. Microstegium vimineum	30	/	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Dichanthelium scoparium	30		FACW	
3. Smilax rotundifolia	20		FAC	¹ Indicators of hydric soil and wetland hydrology must
	15		FACW	be present, unless disturbed or problematic.
4. Juncus effusus			ACW	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9	· - <u></u>			than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Harb All harbassaus (non woody) plants, regardless
	95	= Total Cov	<u></u>	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 47.5				
Woody Vine Stratum (Plot size: 30 ft r		•		Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3				
4		· ——	-	Hydrophytic
5				Vegetation Present? Yes ✓ No
		= Total Cov		rieseitt: ies NO
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate s	sheet.)			
Dominance test and prevalence inde	y are m	et.		
Dominance test and prevalence inde	x ale iii	iet.		

Depth	Matrix	%		ox Feature		Loc ²	T	Damanka	
(inches)	Color (moist)		Color (moist)	<u>%</u> 20	Type ¹	LOC	Texture Sandy Clay Loam	Remarks	
0 - 12	10YR 5/2	80	7.5YR 4/6	20	<u>C</u>		Sandy Clay Loam		
12 - 21	10YR 6/3	70	10YR 5/6	30	<u>C</u>	M	Sandy Clay Loam		
-									
-									
					-			-	
	•		-					-	
-									
-									
			<u> </u>	· <u> </u>					
			<u> </u>						
ype: C=Cc	oncentration, D=De	epletion, RN	M=Reduced Matrix, M	IS=Maske	d Sand G	ains.	² Location: P	L=Pore Lining, M=Matrix.	
dric Soil I	Indicators:						Indica	ators for Problematic Hydrid	: Soils ³ :
_ Histosol	(A1)		Dark Surfac	e (S7)			2	cm Muck (A10) (MLRA 147)	
_ Histic Ep	oipedon (A2)		Polyvalue B	elow Surfa	ace (S8) (I	MLRA 147,	148) C	Coast Prairie Redox (A16)	
_ Black His	stic (A3)		Thin Dark S	urface (S	9) (MLRA	147, 148)		(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gley		(F2)		P	Piedmont Floodplain Soils (F19	9)
	d Layers (A5)		✓ Depleted Ma	atrix (F3)				(MLRA 136, 147)	
 '	ıck (A10) (LRR N)		Redox Dark					ery Shallow Dark Surface (TF	12)
	d Below Dark Surfa	ice (A11)	Depleted Da		. ,		c	Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depr						
	Mucky Mineral (S1)	(LRR N,	Iron-Mangai		ses (F12)	(LRR N,			
	A 147, 148)		MLRA 1	-			3		
	Bleyed Matrix (S4)		Umbric Surf					licators of hydrophytic vegetat	
	Paday (95)		Piedmont FI					etland hydrology must be pres	
_ Sandy R						RA 127, 147	7) un	less disturbed or problematic.	
_ Stripped	Matrix (S6)		Red Parent	Material (-21) (WILF	., ,	, un	ices disturbed of problematic.	
_ Stripped		l):	Red Parent	Material (-21) (IVILE		, un	iless disturbed or problematic.	
_ Stripped	Matrix (S6)	l):	Red Parent	Material (-21) (IVIL F		, un	`	
_ Stripped estrictive L	Matrix (S6) Layer (if observed	l):	Red Parent	Material (F21) (WLF		Hydric Soil	,	lo
_ Stripped estrictive L Type: Depth (inc	Matrix (S6) Layer (if observed	I):	Red Parent	Material (-21) (WILF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WILF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WL r			`	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material (-21) (WL r			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WL r			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
_ Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (WLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped Restrictive L Type: Depth (inc	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	
_ Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed			Material (-21) (MLF			`	

Project/Site: MVP Southg	ate Proje	ct NC		City/Co	ounty: Eden/F	Rocking	ham	Sampling D	Date: 2024-06-05
Applicant/Owner: Mountain				-	-				g Point: SP-B018
Investigator(s):ES, LC									, <u> </u>
Landform (hillslope, terrace, e									Slope (%): 2
Subregion (LRR or MLRA): \underline{P}									
Soil Map Unit Name: CmB -	Clover s	andv loa	m. 2 to 8 pei	rcent slo	opes	ing	NIMI elegai	fications	Datum.
Are climatic / hydrologic condi									.
Are Vegetation, Soil _									
Are Vegetation, Soil _	, or H	ydrology _	naturally	problema	itic? (If r	needed, e	xplain any ansv	vers in Remark	(S.)
SUMMARY OF FINDIN	iGS – Att	ach site	map showi	ng sam	pling point	locatio	ns, transect	ts, importa	nt features, etc.
Hydrophytic Vegetation Pres Hydric Soil Present? Wetland Hydrology Present? Remarks:	?	Yes Yes Yes	No V No V	0000	Is the Sample within a Wetla	and?	Yes _		
Upland sample plo indicates normal of	•							Precipita	tion I ooi
HYDROLOGY									
Wetland Hydrology Indicat	ors:						Secondary Indi	cators (minimu	um of two required)
Primary Indicators (minimum	of one is re	equired; ch	eck all that appl	ly)			Surface Sc	oil Cracks (B6)	
Surface Water (A1)		_	True Aquatio	c Plants (E	B14)		Sparsely V	egetated Cond	cave Surface (B8)
High Water Table (A2)			Hydrogen Sı				_	Patterns (B10)	
Saturation (A3)			Oxidized Rh			ots (C3)		Lines (B16)	
Water Marks (B1)			Presence of			(00)		n Water Table	(C2)
Sediment Deposits (B2)		_	Recent Iron			(C6)	-	urrows (C8)	dal Imagen (CO)
Drift Deposits (B3) Algal Mat or Crust (B4)		_	_ Thin Muck S _ Other (Expla					Stressed Plan	rial Imagery (C9)
Iron Deposits (B5)		_	Other (Expla	anii iii ixeiii	iaiks)			ic Position (D2	
Inundation Visible on Ae	erial Imagery	/ (B7)					Shallow Ac		.,
Water-Stained Leaves ((=:)						graphic Relief ((D4)
Aquatic Fauna (B13)	-,						FAC-Neutr		· '
Field Observations:									
Surface Water Present?	Yes	No _ _	, Depth (inch	ies):					
Water Table Present?	Yes	No _ _	Depth (inch	ies):					
Saturation Present?	Yes	No _ _	Depth (inch	ies):	w	etland H	ydrology Pres	ent? Yes	No
(includes capillary fringe) Describe Recorded Data (str	ream gauge	, monitorin	g well, aerial ph	otos, prev	vious inspectior	ns), if avai	ilable:		
Remarks:									
No indicators are	present	t.							

EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B018
00.6	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r		Species?		Number of Dominant Species _
_{1.} Liquidambar styraciflua	30		FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Quercus phellos	10		FAC	Total Number of Dominant
3				Species Across All Strata: 9 (B)
4.				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 55.55 (A/B)
6				That Ale OBL, FACW, of FAC (A/B)
_				Prevalence Index worksheet:
/	40	T-4-1 O		Total % Cover of: Multiply by:
50% of total cover: 20.00		= Total Cov		OBL species 0 x 1 = 0
	20% 01	total cover.		FACW species $\frac{5}{}$ x 2 = $\frac{10}{}$
Sapling/Shrub Stratum (Plot size: 15 ft r)	10		EAC	FAC species 55 x 3 = 165
1 Quercus phellos			FAC	1710 opeoido x o
2. Fraxinus pennsylvanica	5		FACW	
3. Liquidambar styraciflua	5		FAC	UPL species $0 \times 5 = 0$
4				Column Totals: <u>160</u> (A) <u>575</u> (B)
5				Dravelance Index = D/A = 3 59
6				Prevalence Index = B/A = 3.59
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	20			3 - Prevalence Index is ≤3.0 ¹
500/ - 54-4-1 10.00		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 10.00	20% of	total cover:	4.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	25		FACIL	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Lespedeza cuneata	35		FACU	
2. Rubus argutus	35		FACU	¹ Indicators of hydric soil and wetland hydrology must
3. Solidago canadensis	20		FACU	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				John Marie Coll Car Vogetation Chata.
6			· ·	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				noight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
45.00		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45.00</u>	20% of	total cover:	18.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
_{1.} Lonicera japonica	10		FACU	
2				
3				
4				Hadron bod's
5				Hydrophytic Vegetation
	10	= Total Cov		Present? Yes V No No
50% of total cover: <u>5.00</u>		total cover:		
		total cover.		
Remarks: (Include photo numbers here or on a separate si	neet.)			
Dominance test is passed.				
- са				

Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Striped Matrix (S4) Striped Matrix (S6) Red Parent Material (F21) (MLRA 147, 148) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F1 (MLRA 147, 148) Piedmont Floodplain Soils (F1 (MLRA 136, 147) Very Shallow Dark Surface (TI Other (Explain in Remarks) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 148) Restrictive Layer (if observed): Type: Type:	clay Loam Clay Loam Clay Loam Clay Loam Clay Loam Clay
6 - 21 10YR 5/3 70 10YR 5/8 2 C M Sandy Clay Loam 6 - 21 10YR 6/6 28 Sandy Clay Loam	clay Loam
Company Comp	cation: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) (MLRA 147)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depleted Matrix. Indicators for Problematic Hydri 2 cm Muck (A10) (MLRA 147, 148) Histic Epipedon (A2) Polyvalue Below Surface (S9) (MLRA 147, 148) Pledmont Floodplain Soils (F1) (MLRA 147, 148) Piedmont Floodplain Soils (F1) (MLRA 136, 147) Very Shallow Dark Surface (T1) Other (Explain in Remarks) Type: Stripped Matrix (S4) Piedmont Floodplain Soils (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F13) (MLRA 148) Walkan 136, 147) Priedmont Floodplain Soils (F19) (MLRA 148) Walkan 136, 142) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Walkan 136, 142) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Walkan 136, 1422 Piedmont Floodplain Soils (F19) (MLRA 148) Walkan 136, 1422 Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Walkan 136, 1427 Very Shallow Dark Surface (T1) Other (Explain in Remarks) Type: Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Unless disturbed or problematic destrictive Layer (if observed): Type: Stripped Matrix (S6)	eation: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
ydric Soil Indicators: Histosol (A1) Poark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Peleted Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F1) (MLRA 136, 147) Very Shallow Dark Surface (TI Other (Explain in Remarks) All Clark N, MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be presumbled or problematic estrictive Layer (if observed): Type: Type:	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
ydric Soil Indicators: Histosol (A1) Poark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Peleted Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F1) (MLRA 136, 147) Very Shallow Dark Surface (TI Other (Explain in Remarks) All Clark N, MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be presumbled or problematic estrictive Layer (if observed): Type: Type:	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
ydric Soil Indicators: Histosol (A1) Poark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Peleted Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F1) (MLRA 136, 147) Very Shallow Dark Surface (TI Other (Explain in Remarks) All Clark N, MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be presumbled or problematic estrictive Layer (if observed): Type: Type:	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
ydric Soil Indicators: Histosol (A1) Poark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Peleted Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F1) (MLRA 136, 147) Very Shallow Dark Surface (TI Other (Explain in Remarks) All Clark N, MLRA 136, 122) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be presumbled or problematic estrictive Layer (if observed): Type: Type:	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (MLRA 147)
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F1 Tatified Layers (A5) Depleted Matrix (F3) Piedmont Floodplain Soils (F1 Tatified Layers (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TI Thick Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pressiripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic estrictive Layer (if observed): Type:	2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Polyvalue Below Surface (S8) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Piedmont Floodplain Soils (F1 (MLRA 136, 147) Very Shallow Dark Surface (TI Other (Explain in Remarks) Type: Depleted Dark Surface (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Were Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F1 Other (Explain in Remarks) Type: Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Unless disturbed or problematic	
	Const Duninia Daday (A4C)
Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Explain in Remarks) MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Redox Derk Surface (Ti Other (Explain in Remarks) All Indicators of hydrophytic vegeta wetland hydrology must be presuntless disturbed or problematic unless disturbed or problematic	
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TI Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N,	
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Sandy Gleyed Matrix (S4) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pressure of the problematic strictive Layer (if observed): Type: Other (Explain in Remarks)	Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148)	
MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Red Parent Material (F21) (MLRA 127, 147) Type: MLRA 136) _ Umbric Surface (F13) (MLRA 136, 122) _ Piedmont Floodplain Soils (F19) (MLRA 148) _ Red Parent Material (F21) (MLRA 127, 147) wetland hydrology must be presunless disturbed or problematic	
Sandy Gleyed Matrix (S4)	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be pres Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic estrictive Layer (if observed):	3
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic restrictive Layer (if observed): Type:	
estrictive Layer (if observed): Type:	
Type:	unless disturbed of problematic.
•••	
Deptit (inches).	dric Soil Present? Yes No 🗸
emarks:	uric Soil Present? Tes No
No indicators are present.	

Project/Site: MVP Southgate Project	ect NC	City/C	ounty: Eden/Rockingl	ham	Sampling Date: 2024-06-05
Applicant/Owner: Mountain Valley P		-	-		Sampling Point: SP-B019
FC 1.0			on, Township, Range:		
Landform (hillslope, terrace, etc.): Depr					Slope (%): 2
Subregion (LRR or MLRA): P 136	l at·	36.51703014	Long: -79.	.65640715	Datum: NAD 83
Soil Map Unit Name: CmB - Clover s	andy loam	2 to 8 percent s	lones	NIVAL alabaje	Datum
Are climatic / hydrologic conditions on th					
Are Vegetation, Soil, or H					
Are Vegetation, Soil, or h	lydrology	naturally problema	atic? (If needed, e	xplain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – At	tach site m	ap showing sam	pling point locatio	ns, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Yes 🗸	No			
Hydric Soil Present?	Yes 🗸	No	Is the Sampled Area within a Wetland?	Yes 🗸	, No
Wetland Hydrology Present?	Yes 🗸	No	within a Wetland:		_
Remarks:					
Wetland sample plot with	hin PFM \	N-ROO9h The	LISACE Antece	edent Prec	initation Tool
• •					ipitation rooi
indicates normal condition	ons were	present 3 mo	ntns prior to su	rvey.	
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is	required: check	c all that apply)		Surface Soil	
Surface Water (A1)	•	True Aquatic Plants (·		getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Ode		Drainage Pa	
Saturation (A3)				Moss Trim L	
Water Marks (B1)		Presence of Reduced			Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur	
Drift Deposits (B3)		Thin Muck Surface (C			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			tressed Plants (D1)
Iron Deposits (B5)		` '	,	Geomorphic	
Inundation Visible on Aerial Image	ry (B7)			Shallow Aqu	
Water-Stained Leaves (B9)	, ,				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	
Field Observations:					
		Depth (inches):			
Water Table Present? Yes	No	Depth (inches):			
	No	Depth (inches):	Wetland H	ydrology Preser	nt? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge	e, monitoring w	vell, aerial photos, pre	 vious inspections), if avai	lable:	
			· · · · · · · · · · · · · · · · · · ·		
Remarks:					
Indicators D2 and D5 are	present.	•			
	•				

/EGETATION (Four Strata) – Use scientific	names of p	plants.		Sampling Point: SP-B019
20.4		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B)
6		-		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species 15 x 1 = 15
50% of total cover:	20% of	total cover:		FACW species 70 x 2 = 140
Sapling/Shrub Stratum (Plot size: 15 ft r)				FAC species 0 $x = 0$
1				FACU species 15 x 4 = 60
2				UPL species 0 x 5 = 0
3				
4				Column Totals: 100 (A) 215 (B)
5				Prevalence Index = B/A = 2.15
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	00		E A C\A/	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus	60		FACW	<u> </u>
2. Carex vulpinoidea	_ 15	-	OBL FACU	¹ Indicators of hydric soil and wetland hydrology must
3. Poa pratensis	_ 15	-	FACW	be present, unless disturbed or problematic.
_{4.} Juncus marginatus	10		FACW	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
50		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of	total cover:	20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes ✓ No
		= Total Cov		Present? Yes V No No
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)			
Rapid test, dominance test, and pre-	valence	index a	re met	t.
				•

Depth	Matrix	%		ox Feature		Loc ²	Ta		Damanica	
(inches) 0 - 21	Color (moist) 7.5YR 5/2		Color (moist) 10YR 5/6	<u>%</u> 10	Type ¹	M	Texture Silty Clay		Remarks	
			1011 3/0	10		IVI				
0 - 21	7.5YR 6/2	30	· -	<u> </u>			Silty Clay			
-										
-										
-										
		_	-	•						
			-					-		
-				<u> </u>						
-										
Type: C=C(oncentration D=De	nletion RN	/=Reduced Matrix, M	IS=Maske	d Sand G	raine	² Location: P	I =Pore I ini	na M=Matriy	,
	Indicators:	piction, ren	VI-reduced Matrix, IV	IO-Maske	u Gariu G	airis.	Indic	ators for Pr	oblematic H	ydric Soils ³ :
_ Histosol			Dark Surfac	e (S7)					A10) (MLRA	
	pipedon (A2)		Polyvalue B		ace (S8) (MLRA 147.			Redox (A16	
Black His			Thin Dark S					(MLRA 14		,
	n Sulfide (A4)		Loamy Gley	•	, .	, , , , ,	F		odplain Soils	s (F19)
	Layers (A5)		✓ Depleted Ma		` /			(MLRA 13		
2 cm Mu	ick (A10) (LRR N)		Redox Dark		F6)		\		Dark Surfac	e (TF12)
_ Depleted	d Below Dark Surfa	ce (A11)	Depleted Da	ark Surfac	e (F7)		c	Other (Expla	in in Remark	s)
	ark Surface (A12)		Redox Depr							
	lucky Mineral (S1)	(LRR N,	Iron-Manga		ses (F12)	(LRR N,				
	A 147, 148)		MLRA 1	•			2			
	Gleyed Matrix (S4)		Umbric Surf						ydrophytic ve	-
Sandy R	tedox (S5)		Piedmont FI					-	logy must be	
-	NA-4-4- (OO)			iviateriai (F21) (IVILI	RA 127, 147	r) un	iess disturb	ed or problen	natic.
_ Stripped	Matrix (S6)	٠.	Red Falent	•						
Stripped estrictive L	Matrix (S6) _ayer (if observed):	Red Falent							
_ Stripped estrictive L Type:	_ayer (if observed):	Red Faleill	·						
_ Stripped estrictive L Type: Depth (inc	_ayer (if observed):	Red Falent	·			Hydric Soil	Present?	Yes <u></u>	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present?	Yes	No
Stripped estrictive L Type: Depth (inc emarks:	_ayer (if observed						Hydric Soil	Present?	Yes 🗸	_ No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present?	Yes_ <u>v</u>	No
_ Stripped estrictive L Type: Depth (incommarks:	Layer (if observed						Hydric Soil	Present?	Yes <u>v</u>	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present?	Yes V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present?	Yes <u>v</u>	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes V	No
_ Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present?	Yes_V	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes 🗸	No
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed						Hydric Soil	Present?	Yes 🗸	No
Stripped cestrictive L Type: Depth (inclemarks:	Layer (if observed			,			Hydric Soil	Present?	Yes 🗸	No
Stripped Restrictive L Type: Depth (inc	Layer (if observed			,			Hydric Soil	Present?	Yes 🗸	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes 🗸	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes 🗸	No
Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed			,			Hydric Soil	Present?	Yes V	No
_ Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed						Hydric Soil	Present?	Yes V	No

Project/Site: MVP Southgate Project NC	City/C	ounty: Eden/Rockingh	ıam g	Sampling Date: 2024-06-05
Applicant/Owner: Mountain Valley Pipeline LLC		•		Sampling Point: SP-B020
E0.10		on, Township, Range:		
Landform (hillslope, terrace, etc.): Upland		ef (concave, convex, none		Slope (%): 2
Subregion (LRR or MLRA): P 136 La				
Soil Map Unit Name: CmB - Clover sandy loar	n, 2 to 8 percent sl	opes	NWI classificat	ion·
Are climatic / hydrologic conditions on the site typical				
				_
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS – Attach site	map showing sam	ipling point location	ıs, transects, ı	mportant features, etc.
Hydrophytic Vegetation Present? Yes	No <u>~</u>	Is the Sampled Area		
Hydric Soil Present? Yes	within a Wetland		Yes	No 🗸
Wetland Hydrology Present? Yes	No 🗸			
Remarks:				
Upland sample plot adjacent to I	PEM W-B009b.	The USACE An	tecedent Pr	ecipitation Tool
indicates normal conditions were	e present 3 mo	nths prior to sur	vey.	
	·	•		
HYDROLOGY				
Wetland Hydrology Indicators:		<u> </u>	Secondary Indicato	rs (minimum of two required)
Primary Indicators (minimum of one is required; che	ck all that apply)		Surface Soil Cr	racks (B6)
Surface Water (A1)	_ True Aquatic Plants (F	B14) _	Sparsely Veget	tated Concave Surface (B8)
High Water Table (A2)	_ Hydrogen Sulfide Odd	or (C1) _	Drainage Patte	rns (B10)
Saturation (A3)	_ Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Line	es (B16)
Water Marks (B1)	Presence of Reduced	Iron (C4)	Dry-Season Wa	ater Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burrov	ws (C8)
Drift Deposits (B3)	_ Thin Muck Surface (C		Saturation Visit	ble on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rem	narks)	Stunted or Stre	essed Plants (D1)
Iron Deposits (B5)		-	Geomorphic Po	
Inundation Visible on Aerial Imagery (B7)		-	Shallow Aquita	
Water-Stained Leaves (B9)		-	Microtopograph	
Aquatic Fauna (B13)		<u>-</u>	FAC-Neutral Te	est (D5)
Field Observations:	Donath (in the co)			
	Depth (inches):			
	Depth (inches):			
Saturation Present? Yes No	Depth (inches):	Wetland Hy	drology Present?	Yes No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, pre	vious inspections), if avail	able:	
Remarks:				
No indicators are present.				

/EGETATION (Four Strata) – Use scientific i	names of	plants.		Sampling Point: SP-B020
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1)		Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2			-	
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 0.00 (A/B)
6				That Are OBL, FACW, or FAC: 0.00 (A/B)
7				Prevalence Index worksheet:
· ·		= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover:				OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species $0 x 2 = 0$
1				FAC species $0 \times 3 = 0$
2.			-	FACU species 70 x 4 = 280
			<u> </u>	UPL species <u>5</u> x 5 = <u>25</u>
3				Column Totals: <u>75</u> (A) <u>305</u> (B)
4 5.				
				Prevalence Index = B/A = 4.06
6		· -		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
500/ of total acres		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: Herb Stratum (Plot size: 5 ft r)	20% 01	total cover		data in Remarks or on a separate sheet)
1. Lolium perenne	40	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
_{1.} Lonum perenne _{2.} Plantago aristata	25		1/100	
2. Poa pratensis	20		FACU	¹ Indicators of hydric soil and wetland hydrology must
3. Foa praterisis 4 Allium vineale	5		FACU	be present, unless disturbed or problematic.
	- 5	·	UPL	Definitions of Four Vegetation Strata:
5. Gamochaeta pensylvanica 6. Solanum carolinense	- <u>5</u>	-	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
·			FACO	more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9	_	-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
	20% of	total cover	: 20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5	_			Vegetation
		= Total Cov		Present? Yes No
50% of total cover:	20% of	total cover	<u> </u>	
Remarks: (Include photo numbers here or on a separate	sheet.)			
No indicators are present.				
to indicators are present.				

Profile Desc	ription: (Describe	to the dep	th needed to docun	ent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redox	K Features	3				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0 - 21	10YR 6/4	40					Silty Clay	·	
0 - 21	10YR 7/1	25					Silty Clay		
0 - 21	10YR 7/4	35					Silty Clay		
-									
-								-	
_									
					-			-	_
¹ Type: C=Co	oncentration D=De	nletion RM:	=Reduced Matrix, MS	=Masked	Sand Gra	ins	² I ocation: PI	 L=Pore Lining, M=Matrix	,
Hydric Soil		piction, raw	Treduced Matrix, Mc	Madrica	Odrid Oil			ators for Problematic H	
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA	147)
	oipedon (A2)		Polyvalue Be		ce (S8) (N	LRA 147,		oast Prairie Redox (A16	•
	stic (A3)		Thin Dark Su					(MLRA 147, 148)	,
	n Sulfide (A4)		Loamy Gleye			, -,	Pi	iedmont Floodplain Soils	s (F19)
	d Layers (A5)		Depleted Mat		-/			(MLRA 136, 147)	,
	ick (A10) (LRR N)		Redox Dark S		6)		V	ery Shallow Dark Surfac	e (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Dar	•	•			ther (Explain in Remark	
	ark Surface (A12)	00 (/ (/ / /	Redox Depre					arer (Explain in Remark	5)
	lucky Mineral (S1)	(I DD N	Iron-Mangane			DD N			
	147, 148)	(LIXIX IV,	MLRA 13		55 (1 12) (1	-IXIX I V ,			
					MI DA 42	6 400\	3 Indi	icatora of budranbutia us	actation and
	Gleyed Matrix (S4)		Umbric Surfa					icators of hydrophytic ve	-
	ledox (S5)		Piedmont Flo					tland hydrology must be	•
	Matrix (S6)		Red Parent N	laterial (F	21) (MLR	4 127, 147	/) uni	ess disturbed or probler	natic.
	_ayer (if observed):							
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No
Remarks:	- :1: +								
IN	o indicators	are pre	esent.						

Project/Site: MVP Southgat	e Project NC		City/C	ounty: Eden/Rock	kinghan	n	Sampling Da	te: 2024-06-05
Applicant/Owner: Mountain V			-					
Investigator(s):ES, LC				on, Township, Range				
Landform (hillslope, terrace, etc.								Slone (%)· 1
Subregion (LRR or MLRA): P 1				Long: _				
Soil Map Unit Name: BaB - Ba								
Are climatic / hydrologic condition								
Are Vegetation, Soil	, or Hydrology	' 	significantly disturb	oed? Are "No	rmal Circ	cumstances" p	resent? Yes	No
Are Vegetation, Soil	, or Hydrology		_ naturally problema	itic? (If neede	ed, expla	ain any answe	rs in Remarks	.)
SUMMARY OF FINDING	S – Attach sit	te map	o showing sam	pling point loca	ations	, transects	, importan	t features, etc.
Hydrophytic Vegetation Preser	nt? Yes	v	No					
Hydric Soil Present?		<u> </u>	No	Is the Sampled Ar		Yes 🗸	No	
Wetland Hydrology Present?	Yes	<u> </u>	No	within a Wetland?		103	_	_
Remarks:								
Matlend comple	a wishin DE		D010 The I	ICAOE Amto	d - "	at Dua airei	:+-+: T	1
Wetland sample plo						•	itation i	001
indicates normal co	nditions we	ere p	resent 3 mo	nths prior to	surv	ey.		
								_
HYDROLOGY								
Wetland Hydrology Indicator								n of two required)
Primary Indicators (minimum o	f one is required;			= 1.0		Surface Soil	, ,	
Surface Water (A1)			ue Aquatic Plants (I					ive Surface (B8)
High Water Table (A2)			drogen Sulfide Odd			Drainage Pat		
Saturation (A3)				es on Living Roots (C	C3)			00)
Water Marks (B1)			esence of Reduced			-	Water Table (0	52)
Sediment Deposits (B2)				n in Tilled Soils (C6)		Crayfish Burr		I Imagany (CO)
Drift Deposits (B3) Algal Mat or Crust (B4)			nin Muck Surface (C ther (Explain in Rem				tressed Plants	I Imagery (C9)
Iron Deposits (B5)		0	inei (Expiain in Neii	iaiks)		Geomorphic		(D1)
Inundation Visible on Aeria	al Imagery (B7)					Shallow Aqui		
Water-Stained Leaves (B9					_		phic Relief (D	4)
Aquatic Fauna (B13)	,				~	FAC-Neutral		.,
Field Observations:								
Surface Water Present?	Yes No	✓ D	epth (inches):					
Water Table Present?			epth (inches):					
Saturation Present?			epth (inches):		nd Hvdr	ology Presen	ıt? Yes ✔	, No
(includes capillary fringe)								
Describe Recorded Data (strea	in gauge, monitor	illig well	i, aeriai priotos, pre	vious irispections), ii	i avallabl	e.		
Remarks:								
Indicators D2 and D)5 are pres	ont						
	o are prese	CIIC.						
I								

/EGETATION (Four Strata) – Use scientific	names of	plants.		Sampling Point: SP-B021
	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u>) 1	% Cover		Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4		-		opecies Across Air otrata.
5			· ——	Percent of Dominant Species That Are OBL FACW or FAC: 100.00 (A/B)
**			· ——	That Are OBL, FACW, or FAC: 100.00 (A/B)
6				Prevalence Index worksheet:
·		= Total Cov	/or	Total % Cover of: Multiply by:
50% of total cover:				OBL species $0 x 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species <u>75</u> x 2 = <u>150</u>
1				FAC species 25 x 3 = 75
2.				FACU species <u>0</u> x 4 = <u>0</u>
3			· ——	UPL species 0 x 5 = 0
				Column Totals: 100 (A) 225 (B)
4 5.				
				Prevalence Index = B/A = 2.25
6				Hydrophytic Vegetation Indicators:
		-		1 - Rapid Test for Hydrophytic Vegetation
8			· <u></u>	✓ 2 - Dominance Test is >50%
9		= Total Cov		✓ 3 - Prevalence Index is ≤3.0¹
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 /0 01	total cover		data in Remarks or on a separate sheet)
1. Juncus effusus	50	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Calystegia sepium	25	~	FAC	
3. Carex triangularis	25		FACW	¹ Indicators of hydric soil and wetland hydrology must
			· ——	be present, unless disturbed or problematic.
4 5				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.
8		-		Sapling/Shrub – Woody plants, excluding vines, less
		-		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10		-		
11	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of			of size, and woody plants less than 5.25 it tail.
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in
1				height.
2				
3		-		
4				
5				Hydrophytic Vegetation
v		= Total Cov	ver	Present? Yes V No No
50% of total cover:				
Remarks: (Include photo numbers here or on a separate				
	,			
Dominance test and prevalence inde	ex are m	et.		

	Matrix	01		ox Feature		. 2	T	5
inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 2	7.5YR 4/2	100		-	· ·	·		
2 - 8	7.5YR 5/2	95	2.5YR 5/8	5	<u>C</u>	<u>M</u>	Silty Clay	
8 - 21	7.5YR 6/2	90	7.5YR 6/8	10	С	М	Silty Clay	
-								
			-	· -				
	-		· -	· 				
	-		· ·		· ——			
-				<u> </u>				
-				<u> </u>				
-								
					•			
		nlotion DA	4-Doduced Matrix N	- Mooko	d Cond Cr		2l costion: DI	-Dara Lining M-Matrix
	Indicators:	epietion, Riv	1=Reduced Matrix, M	iS=iviaske	u Sanu Gr	ains.	Location: PL	=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
_ Histosol			Dark Surfac	e (S7)				cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue B		ace (S8) (I	/ILRA 147.		past Prairie Redox (A16)
_ Histic Ep _ Black His			Thin Dark S		. , .		. —	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gley			, ,		edmont Floodplain Soils (F19)
	d Layers (A5)		<u>✓</u> Depleted M		` ,			(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark		F6)			ry Shallow Dark Surface (TF12)
	d Below Dark Surfa	ice (A11)	Depleted Da	ark Surfac	e (F7)		Ot	her (Explain in Remarks)
	ark Surface (A12)		Redox Depr					
	lucky Mineral (S1)	(LRR N,	Iron-Manga		ses (F12) (LRR N,		
	147, 148)		MLRA 1	-			3	
	Gleyed Matrix (S4)		Umbric Surf					cators of hydrophytic vegetation and
	Redox (S5)		Piedmont F					land hydrology must be present,
	Matrix (S6) _ayer (if observed)	١١٠-	Red Parent	iviateriai (i	-21) (IVILR	A 127, 14	7) unie	ess disturbed or problematic.
	Layer (II Observed	·)·						
							Unadaia Cail I	2000-0042 Voc V
Type:	-l \.						Hydric Soil I	Present? Yes 🗸 No
Depth (inc	ches):						l .	
Depth (inc								
Depth (incention of the contract of the contra	ches):	s prese	ent.					
Depth (incertains)		s prese	ent.				1	
Depth (incernation)		s prese	ent.					
Depth (inc		s prese	ent.				,	
Depth (incention of the contract of the contra		s prese	ent.				,	
Depth (incention of the contract of the contra		s prese	ent.					
Depth (incention of the contract of the contra		s prese	ent.					
Depth (incention of the contract of the contra		s prese	ent.					
Depth (incertains)		s prese	ent.					
Depth (incernation)		s prese	ent.					
Depth (incention)		s prese	ent.					
Depth (incention)		s prese	ent.					
Depth (incertains)		s prese	ent.					
Depth (incention of the contract of the contra		s prese	ent.					
Depth (inc		s prese	ent.					
Depth (inc		s prese	ent.					
Depth (inc		s prese	ent.					
Depth (inc		s prese	ent.					
Depth (incention of the contract of the contra		s prese	ent.					
Depth (incention of the contract of the contra		s prese	ent.					
Depth (incertains)		s prese	ent.					

Project/Site: MVP Southgate Project N	C Citv/C	ounty: Eden/Rockingham	Sampling Date: 2024-06-05
Applicant/Owner: Mountain Valley Pipelin		-	North Carolina Sampling Point: SP-B022
		on, Township, Range:	
Landform (hillslope, terrace, etc.): Upland			
Subregion (LRR or MLRA): P 136		· · · · · · · · · · · · · · · · · · ·	571 Datum: NAD 83
Soil Map Unit Name: BaB - Banister Ioan			
Are climatic / hydrologic conditions on the site			
Are Vegetation, Soil, or Hydrol			
Are Vegetation, Soil, or Hydrol	ogy naturally problema	atic? (If needed, explain a	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing sam	pling point locations, tra	ansects, important features, etc.
Hydrophytic Vegetation Present? Yes	s No 🗸		
Hydric Soil Present?	No 🗸	Is the Sampled Area within a Wetland?	Yes No ✔
Wetland Hydrology Present? Yes	No 🗸	within a wettand:	
Remarks:			
Upland sample plot adjacen	t to PEM W-R010	The USACE Anteced	ent Precinitation Tool
' ' ' '			•
indicates normal conditions	were present 3 mc	onths prior to survey.	•
HYDROLOGY			
Wetland Hydrology Indicators:		Second	dary Indicators (minimum of two required)
Primary Indicators (minimum of one is require	ed: check all that apply)		rface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (arsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Od		ainage Patterns (B10)
Saturation (A3)			oss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced		y-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reductio	n in Tilled Soils (C6) Cra	ayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C	(7) Sa	turation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rer	narks) Stu	unted or Stressed Plants (D1)
Iron Deposits (B5)			eomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		allow Aquitard (D3)
Water-Stained Leaves (B9)			crotopographic Relief (D4)
Aquatic Fauna (B13)		FA	C-Neutral Test (D5)
Field Observations:	In V Danth (inches)		
	lo Depth (inches): lo Depth (inches):		
	lo _ Depth (inches):		gy Present? Yes No
(includes capillary fringe)			gy Fresent? Tes NO
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, pre	vious inspections), if available:	
Remarks:			
No indicators are present			
No indicators are present.			

/EGETATION (Four Strata) – Use scientific i	names of p	plants.		Sampling Point: SP-B022
		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u>)	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.00 (A/B)
6				Prevalence Index worksheet:
7		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:				OBL species $0 x 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species $0 x 2 = 0$
1				FAC species 10 x 3 = 30
2.				FACU species 90 x 4 = 360
3.				UPL species <u>0</u>
4				Column Totals: 100 (A) 390 (B)
5				Prevalence Index = B/A = 3.90
6				
7				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	=	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)			E4011	Problematic Hydrophytic Vegetation¹ (Explain)
1. Dichanthelium aciculare	80		FACU	Troblematic Hydrophytic Vegetation (Explain)
2. Diospyros virginiana	10		FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Verbena incompta	10		FACU	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5. <u> </u>				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				THY Can.
11	100 =	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover:		of size, and woody plants less than 5.25 it tail.
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
				noight.
2				
3				
4				Hydrophytic
5				Vegetation
	=	= Total Cov	er	Present? Yes No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)			
No indicators are present.				

Depth	Matrix	0/		x Feature		1 2	T 4	Develope
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 2	7.5YR 3/1	100					Clay Loam	
2 - 21	10YR 5/3	95	7.5YR 5/6	5	С	M	Clay Loam	
-								
-								
					-			
						<u> </u>		
-								
_	-							
		_			-			
	-							
ype: C=Co	oncentration, D=De	pletion, RN	1=Reduced Matrix, M	S=Masked	Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
	Indicators:						Indic	ators for Problematic Hydric Soils ³
_ Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ce (S8) (I	VILRA 147,		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				, <u>—</u>	(MLRA 147, 148)
_ Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		F	Piedmont Floodplain Soils (F19)
_ Stratified	d Layers (A5)		Depleted Ma	ıtrix (F3)				(MLRA 136, 147)
_ 2 cm Mu	ıck (A10) (LRR N)		Redox Dark	Surface (F	⁻ 6)		\	ery Shallow Dark Surface (TF12)
_ Depleted	d Below Dark Surfa	ce (A11)	Depleted Da	rk Surface	(F7)		0	Other (Explain in Remarks)
_ Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)			
_ Sandy M	lucky Mineral (S1)	(LRR N,	Iron-Mangan	ese Mass	es (F12) ((LRR N,		
	A 147, 148)		MLRA 13	•				
Sandy G	Sleyed Matrix (S4)		Umbric Surfa	200 (E13)	MIRA 13	36, 122)	³ Inc	licators of hydrophytic vegetation and
, -	oleyed Matrix (O+)		Onlone cane	10 0 (1 13)	(, , ,
_ Sandy R	Redox (S5)		Piedmont Flo	oodplain S	oils (F19)			etland hydrology must be present,
_ Sandy R _ Stripped	Redox (S5) Matrix (S6)			oodplain S	oils (F19)			
Sandy R Stripped	Redox (S5)) :	Piedmont Flo	oodplain S	oils (F19)			etland hydrology must be present,
_ Sandy R _ Stripped	Redox (S5) Matrix (S6)):	Piedmont Flo	oodplain S	oils (F19)			etland hydrology must be present,
Sandy R Stripped estrictive I	Redox (S5) Matrix (S6) Layer (if observed):	Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present,
_ Sandy R _ Stripped estrictive I Type: Depth (ind	Redox (S5) Matrix (S6) Layer (if observed):	Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indexing)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped Restrictive I Type: Depth (inc	Redox (S5) Matrix (S6) Layer (if observed		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indexing)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped estrictive I Type: Depth (indexed)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped estrictive I Type: Depth (indexed)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indexing)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped Restrictive I Type: Depth (inc	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indexing)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped Restrictive I Type: Depth (inc	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped Restrictive I Type: Depth (inc	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped estrictive I Type: Depth (indexed)	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive I Type: Depth (indemarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont Flo	oodplain S	oils (F19)		7) un	etland hydrology must be present, less disturbed or problematic.

Project/Site: MVP Southgate Project NC	City/County: Rockingham County Sampling Date: 2024-06-06
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B023
F0.10	Section, Township, Range:
• , , —	Local relief (concave, convex, none): Convex Slope (%): 2
	8134 Long: -79.636323 Datum: NAD 83
CmB - Clover sandy loam 2 to 8	percent slopes NWI classification:
	ne of year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sign	ficantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No	
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No	Is the Sampled Area
Wetland Hydrology Present? Yes ✓ No	— within a Wetland? Yes <u>✓</u> No
Remarks:	 L
Motional commission of their DEMANAL DC	11. The LICAGE Automodeus Duncinitation Tool
	11. The USACE Antecedent Precipitation Tool
indicates normal conditions were pres	ent 3 months prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	- · · · · · · · · · · · · · · · · · · ·
	uatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
	en Sulfide Odor (C1) Drainage Patterns (B10)
	d Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)
	te of Reduced Iron (C4) Dry-Season Water Table (C2)
	Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)
	ck Surface (C7) Saturation Visible on Aerial Imagery (C9) Explain in Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth	(inches):
Water Table Present? Yes No Depth	(inches):
Saturation Present? Yes No Depth	(inches): Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aer	al photos, previous inspections), if available:
, g g .	
Remarks:	
Indicators D2 and D5 are present.	
·	

/EGETATION (Four Strata) – Use scientific na		piarits.		Sampling Point: SP-B023
	Absolute	Dominant	Indicator	Dominance Test worksheet:
		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B
6				December of the december of
7				Prevalence Index worksheet:
	:	= Total Cov	er	
50% of total cover:	20% of	total cover:		<u> </u>
Sapling/Shrub Stratum (Plot size: 15 ft r				FACW species 20 $x 2 = 40$ $x 3 = 195$
1				1 Ao species x
2				FACU species $\frac{0}{0}$ $x = 4$
3				UPL species $0 \times 5 = 0$
4				Column Totals: 100 (A) 250 (B)
5				Prevalence Index = B/A = 2.50
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation✓ 2 - Dominance Test is >50%
9.				
		= Total Cov	er	✓ 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:	20% of	total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)				data in Remarks or on a separate sheet)
1. Dichanthelium clandestinum	35	~	FAC	Problematic Hydrophytic Vegetation¹ (Explain)
_{2.} Campsis radicans	20	~	FAC	
3. Juncus effusus	20	~	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Galium palustre	15		OBL	Definitions of Four Vegetation Strata:
Rumex crispus	10		FAC	Definitions of Four Vegetation Strata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
7				more in diameter at breast height (DBH), regardless of height.
8.				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				, in the second
• • • • • • • • • • • • • • • • • • • •	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00				
Woody Vine Stratum (Plot size: 30 ft r				Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2.				
3.				
4				
5				Hydrophytic Vegetation
<u>. </u>		= Total Cov		Present? Yes V No No
50% of total cover:				
	,			
Remarks: (Include photo numbers here or on a separate sh Dominance test and prevalence index	neet.)			

Depth inches)	Matrix Color (moist)	%		ox Feature	es Type ¹	Loc ²	Texture	Romarka
0 - 4	10YR 4/2	90	2.5YR 4/4	<u>%</u> 10	C Type	M	Silty Clay Loam	Remarks
4 - 21	10YR 5/2	85	7.5YR 6/8	15	<u>C</u>	<u> M</u>	Silty Clay Loam	
-		_		_	_			
-								
		-	-	_				
	-		<u> </u>				<u> </u>	
			<u></u>					
-								
-								
		_	<u> </u>					
				_				
/pe: C=Cc	oncentration, D=De	pletion, RN	/I=Reduced Matrix, M	/IS=Maske	d Sand G	rains.	² Location: P	L=Pore Lining, M=Matrix.
dric Soil I	Indicators:						Indica	ators for Problematic Hydric Soils ³
Histosol	(A1)		Dark Surfac	e (S7)			2	cm Muck (A10) (MLRA 147)
_ Histic Ep	oipedon (A2)		Polyvalue B	elow Surfa	ace (S8) (MLRA 147,	148) C	Coast Prairie Redox (A16)
_ Black His	stic (A3)		Thin Dark S	Surface (S) (MLRA	147, 148)		(MLRA 147, 148)
_ Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		P	Piedmont Floodplain Soils (F19)
	d Layers (A5)		✓ Depleted Management	atrix (F3)				(MLRA 136, 147)
_ 2 cm Mu	ick (A10) (LRR N)		Redox Dark	Surface (F6)			ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Da		. ,		C	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depr					
	lucky Mineral (S1)	(LRR N,	Iron-Manga		ses (F12)	(LRR N,		
	\ 147, 148)		MLRA 1	-			•	
Sandy G	Novad Matrix (C4)		Umbric Surf	face (F13)	/MIDA 1	36 122)	³ Ind	ligators of hydrophytic vagatation and
	Sleyed Matrix (S4)							licators of hydrophytic vegetation and
_ Sandy R	Redox (S5)		Piedmont F	loodplain	Soils (F19) (MLRA 14	8) we	etland hydrology must be present,
_ Sandy R _ Stripped	Redox (S5) Matrix (S6)			loodplain	Soils (F19) (MLRA 14	8) we	
_ Sandy R _ Stripped	Redox (S5)) :	Piedmont F	loodplain	Soils (F19) (MLRA 14	8) we	etland hydrology must be present,
_ Sandy R _ Stripped	Redox (S5) Matrix (S6)):	Piedmont F	loodplain	Soils (F19) (MLRA 14	8) we	etland hydrology must be present,
_ Sandy R _ Stripped estrictive L Type:	Redox (S5) Matrix (S6) Layer (if observed):	Piedmont F	loodplain	Soils (F19) (MLRA 14	8) we	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped estrictive L Type: Depth (inc	Redox (S5) Matrix (S6) Layer (if observed):	Piedmont F	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
_ Sandy R _ Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.
Sandy R Stripped estrictive L Type: Depth (incommarks:	Redox (S5) Matrix (S6) Layer (if observed ches):		Piedmont F Red Parent	loodplain	Soils (F19) (MLRA 14	(8) we	etland hydrology must be present, less disturbed or problematic.

Project/Site: MVP Southg	ate Project I	1C	City/C	county: Eden/Rocking	jham	Sampling Date: 2024-06-06
Applicant/Owner: Mountain				-		na Sampling Point: SP-B024
Investigator(s):ES, LC				on, Township, Range:		_ ,
Landform (hillslope, terrace, e						Slope (%): 1
Subregion (LRR or MLRA): P	136	La	t: 36.53820512	Long: -79	9.63626283	Datum: NAD 83
Soil Map Unit Name: CmB -	Clover sand	ly loan	n, 2 to 8 percent s	lopes	NWI classific	eation:
Are climatic / hydrologic condi						
						present? Yes No
Are Vegetation, Soil _					explain any answe	
-	•					, important features, etc.
				ipinig point localit	J.110, 11 41100010	,portaint routaros, etc.
Hydrophytic Vegetation Pres	ent? Ye		No	Is the Sampled Area		
Hydric Soil Present?			No 🗸	within a Wetland?	Yes	No
Wetland Hydrology Present? Remarks:	Ye	:5 	No 🗸			
Upland sample plo indicates normal o	•					ecipitation Tool
HYDROLOGY						
Wetland Hydrology Indicat						tors (minimum of two required)
Primary Indicators (minimum	of one is requi				Surface Soil	
Surface Water (A1)			_ True Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)			_ Hydrogen Sulfide Od		Drainage Pat	
Saturation (A3)			Oxidized RnizospherPresence of Reduced	es on Living Roots (C3)		
Water Marks (B1)Sediment Deposits (B2)			Recent Iron Reduction		Crayfish Buri	Water Table (C2)
Drift Deposits (B3)		-	Thin Muck Surface (0			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Rer			tressed Plants (D1)
Iron Deposits (B5)			_	,		Position (D2)
Inundation Visible on Ae	erial Imagery (B	7)			Shallow Aqui	itard (D3)
Water-Stained Leaves (B9)				Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)					FAC-Neutral	Test (D5)
Field Observations:		.,				
Surface Water Present?			Depth (inches):			
Water Table Present?			Depth (inches):			.,
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):	Wetland I	Hydrology Presen	nt? Yes No
Describe Recorded Data (str	ream gauge, mo	nitoring	well, aerial photos, pre	vious inspections), if ava	ailable:	
Remarks:						
No indicators are	present.					

/EGETATION (Four Strata) – Use scientific	names of	plants.		Sampling Point: SP-B024	
		Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft r) 1)	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)	
2.					
3				Total Number of Dominant Species Across All Strata: 4 (B)	
				Openies Across All Ottata.	
4 5				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 75.00 (A/B)	
6		-		Prevalence Index worksheet:	
7		T-4-1 O		Total % Cover of:Multiply by:	
50% of total cover:		= Total Cov		OBL species $0 x 1 = 0$	
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /6 01	lotal cover		FACW species 10 $\times 2 = 20$	
				FAC species 70 x 3 = 210	
1				FACU species 20 x 4 = 80	
2				UPL species $0 \times 5 = 0$	
3				Column Totals: 100 (A) 310 (B)	
4			·	Column Totals. (A) (B)	
5				Prevalence Index = $B/A = 3.10$	
6		-		Hydrophytic Vegetation Indicators:	
7			·	1 - Rapid Test for Hydrophytic Vegetation	
8				✓ 2 - Dominance Test is >50%	
9				3 - Prevalence Index is ≤3.0 ¹	
	=	= Total Cov	er er	4 - Morphological Adaptations¹ (Provide supporting	
50% of total cover:	20% of	total cover		data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation (Explain)	
_{1.} Holcus lanatus	30		FAC	Problematic Trydrophytic Vegetation (Explain)	
2. Dichanthelium clandestinum	20		FAC	Indicators of hydric call and wattened hydrology may t	
_{3.} Solidago canadensis	20		FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
4. Toxicodendron radicans	20		FAC	Definitions of Four Vegetation Strata:	
_{5.} Juncus effusus	5		FACW		
_{6.} Tripsacum dactyloides	5		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of	
7				height.	
8.					
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1	
10				m) tall.	
11.			·		
· ··		= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 50					
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in	
1,				height.	
2			·		
3					
4					
				Hydrophytic	
J				Vegetation Present? Yes ✓ No	
50% of total cover:		= Total Cov total cover			
Remarks: (Include photo numbers here or on a separat	,	total cover			
Remarks. (include photo numbers here or on a separat	e sneet.)				
Dominance test is passed.					

Profile Desc	ription: (Describe	to the de	pth needed to docur	ment the	indicator	or confirm	n the absence of	indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 2	10YR 4/3	100			<u> </u>		Silt Loam	
2 - 11	10YR 4/3	97	10YR 6/6	3	С	М	Silty Clay Loam	
11 - 21	2.5Y 6/1	80	7.5YR 6/8	20	С	М	Silty Clay	
-								
_				'				
_					-			
					-			
				-				
		_		-				
		_	· -	-				
1- 0.0							21 11 12	
Hydric Soil		oletion, RN	1=Reduced Matrix, M	S=Maske	d Sand Gi	rains.		Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
-			Dork Curfood	(07)				
Histosol			Dark Surface		200 (89) (1	MI DA 147		n Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be					st Prairie Redox (A16)
	stic (A3)		Thin Dark Su			147, 148)		MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)			lmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma				•	/ILRA 136, 147)
	ıck (A10) (LRR N)		Redox Dark	•	,			Shallow Dark Surface (TF12)
	d Below Dark Surfac	ce (A11)	Depleted Da		. ,		Othe	er (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
Sandy N	lucky Mineral (S1) (LRR N,	Iron-Mangan	ese Mass	ses (F12)	(LRR N,		
MLRA	\ 147, 148)		MLRA 13	6)				
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 1	36, 122)	³ Indica	tors of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 1	48) wetlar	nd hydrology must be present,
-	Matrix (S6)		Red Parent I					s disturbed or problematic.
	Layer (if observed)):		`	, ,	· · ·	Í	· ·
Type:	,							
Depth (in	ches):						Hydric Soil Pr	esent? Yes No 🗸
Remarks:	, -							
	o indicators	are nr	esent					
13	o indicators	are pr	esent.					

Project/Site: MVP Southgate Project NC Cit	y/County: Eden/Rockingham Sampling Date: 2024-06-06
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B025
FC 1.0	ection, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local	
Soil Map Unit Name: CmB - Clover sandy loam, 2 to 8 percent	t slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	
	sturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally proble	
SUMMARY OF FINDINGS – Attach site map snowing s	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes _ No	within a Wetland? Yes V No
Wetland Hydrology Present? Yes No	
Remarks:	
Wetland sample plot within PEM W-B012. Vegetation	and hydrology significantly disturbed by logging. The
USACE Antecedent Precipitation Tool indicates norma	al conditions were present 3 months prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plan	
High Water Table (A2) Hydrogen Sulfide	
Saturation (A3) Oxidized Rhizosph	neres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Redu	ced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduc	ction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface	e (C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in F	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Pepth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes Vo No
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	
Indicators D2 and D5 are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B025
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1		Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
				That Ald OBE, I AOW, OF I AO.
2 3				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B)
6				Prevalence Index worksheet:
7		- Total Cav		Total % Cover of: Multiply by:
50% of total cover:		= Total Cov		OBL species 40 x 1 = 40
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /0 01	total cover.		FACW species 15 x 2 = 30
				FAC species 35 x 3 = 105
1				FACU species 10
2				UPL species $0 \times 5 = 0$
3				Column Totals: 100 (A) 215 (B)
4				(-)
5				Prevalence Index = B/A = 2.15
6		· -		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
FOOV of total covers		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: Herb Stratum (Plot size: 5 ft r)	20% 01	total cover.	·	data in Remarks or on a separate sheet)
1. Dulichium arundinaceum	40	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Microstegium vimineum	25	<u> </u>	FAC	
3. Juncus effusus	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
Lonicera japonica	10		FACU	be present, unless disturbed or problematic.
5 Persicaria longiseta	10		FAC	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
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11	100	· 		Herb – All herbaceous (non-woody) plants, regardless
500% - \$4-4-1 50 00		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00	20% of	total cover	20.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes ✓ No
50% of total cover:		= Total Cov		105 <u>105 105 105 105 105 105 105 105 105 105 </u>
Remarks: (Include photo numbers here or on a separate s		total cover.		
remarks. (molude prioto numbers here of on a separate s	ncci.)			
Dominance test and prevalence inde	x are m	iet.		

Depth	Matrix	%		x Feature		Loc ²	T 4	Develope
(inches)	Color (moist)		Color (moist)	%	Type ¹	LOC	Texture	Remarks
0 - 6	10YR 5/2	100			-		Sandy Loam	
6 - 21	10YR 6/2	98	10YR 6/6	2	С	M	Sandy Loam	
-								
_					-			
					-			
	-							
-								
-								
				-	-			
								
			. ,					
vpe: C=Cc	oncentration, D=De	pletion, RM	1=Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
	Indicators:		,				Indic	ators for Problematic Hydric Soils ³
_ Histosol	(A1)		Dark Surface	e (S7)				cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be	. ,	ce (S8) (N	/ILRA 147,		Coast Prairie Redox (A16)
Black His			Thin Dark Su				, <u> </u>	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye	•	•	, ,	F	Piedmont Floodplain Soils (F19)
	d Layers (A5)		✓ Depleted Ma		,			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		6)		\	/ery Shallow Dark Surface (TF12)
Depleted	d Below Dark Surfa	ice (A11)	Depleted Da	rk Surface	(F7)			Other (Explain in Remarks)
_ Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)			
_ Sandy M	lucky Mineral (S1)	(LRR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
MLRA	A 147, 148)		MLRA 13	6)				
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 13	36, 122)	³ Inc	licators of hydrophytic vegetation and
	1-d-1 (CE)		Piedmont Flo	odolain S	oils (F19)	(MLRA 14	8) we	etland hydrology must be present,
Sandy R	edox (S5)		1 1001110111111	, o a p . a o	(- ,			
_ Stripped	Matrix (S6)		Red Parent N			A 127, 147	') un	lless disturbed or problematic.
Stripped):				A 127, 147	7) un	lless disturbed or problematic.
_ Stripped	Matrix (S6)	l):				A 127, 147	7) un	lless disturbed or problematic.
Stripped lestrictive L Type:	Matrix (S6) _ayer (if observed	l):				A 127, 147	Hydric Soil	
Stripped estrictive L Type: Depth (inc	Matrix (S6) _ayer (if observed	i):				A 127, 147		,
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 147		
Stripped Restrictive L Type: Depth (inc	Matrix (S6) _ayer (if observed		Red Parent N			A 127, 147		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped cestrictive L Type: Depth (inclemarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped Restrictive L Type: Depth (inc	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inclemarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inclemarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inclemarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
Stripped estrictive L Type: Depth (inc emarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14 ⁷		
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed ches):		Red Parent N			A 127, 14		

EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B026
00.6		Dominant		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2. 3.				Total Number of Dominant Species Across All Strata: 6 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 66.66 (A/B)
6		-		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
500/ 51 1 1		= Total Cov		OBL species <u>5</u> x 1 = <u>5</u>
50% of total cover:	20% of	total cover	<u>:</u>	FACW species $0 \times 2 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FAC species 15 x 3 = 45
1				FACU species 10
2				
3				· — — — — — — — — — — — — — — — — — — —
4				Column Totals: <u>30</u> (A) <u>90</u> (B)
5		-		Prevalence Index = B/A = 3.00
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	ver	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover	:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				✓ Problematic Hydrophytic Vegetation¹ (Explain)
1. Eleocharis acicularis	5		OBL	Problematic hydrophytic vegetation (Explain)
2. Lonicera japonica	5		FACU	1
3. Pinus taeda	5		FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Rumex crispus	5	~	FAC	Definitions of Four Vegetation Strata:
5. Solidago canadensis	5	~	FACU	Definitions of Four Vegetation Strata.
6. Vitis rotundifolia	5	~	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15.00 Woody Vine Stratum (Plot size: 30 ft r)	20% of total cover: 6.00			Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2		_		
3.				
				Hydrophytic
5				Vegetation Present? Yes <u>✓</u> No
EON of total cover		= Total Cov		100
50% of total cover:		lotal cover		
Remarks: (Include photo numbers here or on a separate sl	neet.)			

Dominance test is passed. Clear cut area with large amounts of tree debris covering large portion of both upland and wetland sample plots. upland vegetation is scarce due to heavy tree debris.

0 - 21 10YR 5/2 10 10YR 6/6 2 C M Sandy Loam 0 - 21 10YR 6/3 88 Sandy Loam Sandy Loam - - - - - - - - - - - - - - - - - - - - - - - - <th>Depth (inches)</th> <th>Matrix</th> <th>%</th> <th></th> <th>x Featur</th> <th></th> <th>Loc²</th> <th>Toytura</th> <th>Dom</th> <th>orko</th>	Depth (inches)	Matrix	%		x Featur		Loc ²	Toytura	Dom	orko
O - 21		Color (moist)		Color (moist)	2	Type ¹		<u>Texture</u>	Rem	arks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1				10111070			- IVI			
Indicators for Problematic Hydric Soi	0 - 21	10YR 6/3	_ <u>88</u>					Sandy Loam	-	
ydric Soil Indicators: Histosol (A1)	-									
ydric Soil Indicators: Histosol (A1)	-									
ydric Soil Indicators: Histosol (A1)			_			-				
ydric Soil Indicators: Histosol (A1)										
Histosol (A1)	-								-	
ydric Soil Indicators: Histosol (A1)										
ydric Soil Indicators: Histosol (A1)	-									
ydric Soil Indicators: Histosol (A1)				-		-			-	
ydric Soil Indicators: Histosol (A1)										
ydric Soil Indicators: Histosol (A1)									-	
Histosol (A1)	ype: C=Co	oncentration, D=De	pletion, RN	/I=Reduced Matrix, M	S=Maske	d Sand G	rains.	² Location: P	L=Pore Lining, M=M	latrix.
Histic Epipedon (A2)	ydric Soil I	Indicators:						Indica	ators for Problemat	tic Hydric Soils ³
								, 148) C		(A16)
Stratified Layers (A5) Depleted Matrix (F3) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Dark Surface (F7) Other (Explain in Remarks)		, ,					147, 148)		•	
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (F13)						(F2)		P		Soils (F19)
			(8.4.4)							
Sandy Mucky Mineral (S1) (LRR N,			ce (A11)			. ,			otner (Explain in Ren	narks)
MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Red Parent Material (F21) (MLRA 127, 147) _ Unless disturbed or problematic. Soil Present? Yes No			/I DD N				/I DD N			
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5)			(LKK N,			ses (F12)	(LKK N,			
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Remarks:					•	/MIDA 1	26 122\	³ Ind	licators of hydrophyti	ic vogotation and
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Remarks:										-
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Remarks:		redux (33)								
Type: Depth (inches):		Matrix (S6)		Red Parent			\^ I <i>EI</i> , IT		icoo diotalbed of pre	bicinatic.
Depth (inches): No	Stripped)-	Red Parent					· ·	
Remarks:	Stripped Restrictive L):	Red Parent		/ (<u> </u>		·	
	Stripped estrictive L Type:	Layer (if observed):	Red Parent			<u> </u>		-	No V
	Stripped estrictive L Type: Depth (incline) emarks:	Layer (if observed							-	No V
	Stripped estrictive L Type: Depth (included)	Layer (if observed							-	No <u>✓</u>
	Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed							-	No <u>~</u>
	Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed							-	No V
	Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed							-	No V
	Stripped estrictive L Type: Depth (inc emarks:	Layer (if observed							-	No_V
	Stripped estrictive L Type: Depth (included)	Layer (if observed							-	No_ <u>v</u>
	Stripped Restrictive L Type: Depth (inc Remarks:	Layer (if observed							-	No V
	Stripped Restrictive L Type: Depth (inc Remarks:	Layer (if observed							-	No V
	Stripped Restrictive L Type: Depth (incesterm)	Layer (if observed							-	No V
	Stripped Restrictive L Type: Depth (incested a content of the	Layer (if observed							-	No
	Stripped lestrictive L Type: Depth (incommerce)	Layer (if observed							-	No
	Stripped estrictive L Type: Depth (included)	Layer (if observed							-	No <u>~</u>
	Stripped estrictive L Type: Depth (incline) emarks:	Layer (if observed							-	No V

Project/Site: MVP Southgate Project NC City/C	County: Eden/Rockingham Sampling Date: 2024-06-11
•	State: North Carolina Sampling Point: SP-B056
EC LO DM	on, Township, Range:
	ief (concave, convex, none): Convex Slope (%): 2
	Long: -79.64604124 Datum: NAD 83
Soil Map Unit Name: DaA - Dan River loam, 0 to 2 percent slope	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	
	npling point locations, transects, important features, etc.
Year of No.	
Trydrophytic vegetation i resent:	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No No No	within a Wetland? Yes No
Remarks:	
Upland sample plot adjacent to PFO W-B027. Vegetation	n and hydrology significantly disturbed by natural gas
pipeline right-of-way. The USACE Antecedent Precipita	tion Tool indicates normal conditions were present 3
months prior to survey.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Od	
Saturation (A3) Oxidized Rhizospher	es on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced	d Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction	on in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C	C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Rer	marks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
No indicators are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B056
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover		Status	Number of Dominant Species
1. Acer rubrum	60		FAC	That Are OBL, FACW, or FAC: 3 (A)
2. Liquidambar styraciflua	20		FAC	Total Number of Dominant
3. Juglans nigra	10		FACU	Species Across All Strata: 5 (B)
4. Acer saccharum	5		FACU	
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 60.00 (A/B)
6				That Are OBE, I ACW, OF AC.
7				Prevalence Index worksheet:
·	95	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 47.5		total cover:		OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 70 0.	10101 00101.		FACW species $0 x 2 = 0$
1. Acer negundo	20	~	FAC	FAC species 115 x 3 = 345
2. Juglans nigra	5	· <u></u>	FACU	FACU species 2020 x 4 = 8080
3. Liquidambar styraciflua	5	· 	FAC	UPL species 10 x 5 = 50
	5		FAC	Column Totals: 2145 (A) 8475 (B)
4. Acer negundo		·		Column Totals (A) (B)
5. Acer saccharum			FACU	Prevalence Index = $B/A = 3.95$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	35	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>17.5</u>	20% of	total cover:	7	
Herb Stratum (Plot size: 5 ft r)				data in Remarks or on a separate sheet)
1. Rubus trivialis	20		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Elymus hystrix	10	~	UPL	
3. Smilax rotundifolia	5		FAC	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
_				Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8		· 		Sapling/Shrub – Woody plants, excluding vines, less
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>17.5</u>	20% of	total cover:	/	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Livelyanhydia
5				Hydrophytic Vegetation
		= Total Cov	er	Present? Yes _ No
50% of total cover:				
Remarks: (Include photo numbers here or on a separate s				
Tremaine. (molade photo hambers here of on a separate s	11001.)			
Dominance test is passed.				

Profile Desc	ription: (Describe	to the dep	th needed to docum	ent the i	ndicator	or confirn	n the absence	e of indicators.)	
Depth	Matrix		Redox	C Features	3				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 7	10YR 4/3	100					Sandy Loam		
7 - 14	7.5YR 5/4	100					Sandy Loam		_
14 - 21	7.5YR 4/6	100					Sandy Loam		_
-									
-									_
_									
	-								-
	-				-				
1 _{Type:} C=C	ancentration D-Dec	olotion DM-	-Doduced Metrix MC		Cond Cr		² l continu		
Hydric Soil		pietion, Rivi	Reduced Matrix, MS	=iviasked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.cators for Problematic Hy	
Histosol			Dark Surface	(\$7)				2 cm Muck (A10) (MLRA 1	
	oipedon (A2)		Polyvalue Bel		ce (S8) (N	II RA 147		Coast Prairie Redox (A16)	
	stic (A3)		Thin Dark Su				, 140) \	(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye			77, 170)		Piedmont Floodplain Soils	(F10)
	` '				(2)		<u> </u>		(1 19)
	d Layers (A5)		Depleted Mat		0)		,	(MLRA 136, 147)	(TE40)
	ick (A10) (LRR N)	(Δ11)	Redox Dark S	•	•			Very Shallow Dark Surface	
	d Below Dark Surfac	æ (ATT)	Depleted Dar				— '	Other (Explain in Remarks	5)
	ark Surface (A12)		Redox Depre						
	lucky Mineral (S1) (LRR N,	Iron-Mangane		es (F12) (I	LRR N,			
	A 147, 148)		MLRA 136	•			2		
	Bleyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic veg	_
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	48) w	etland hydrology must be	present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR .	A 127, 147	7) uı	nless disturbed or problem	natic.
Restrictive I	Layer (if observed)	:							
Type:									
Depth (in	ches):		<u></u>				Hydric Soi	il Present? Yes	No <u>′</u>
Remarks:									
N	o indicators	are pre	sent.						
		•							

Project/Site: MVP Southgate City/C	County: Rockingham County Sampling Date: 2024-06-12
Applicant/Owner: Mountain Valley PIPELINE LLC	State: North Carolina Sampling Point: SP-B057
Investigator(s).P.Meier, E.Sanchez, L.Cooper Section	
Landform (hillslope, terrace, etc.): Drainageway Local rel	
	Long: -79.6461866 Datum: WGS 84
Soil Map Unit Name: DaA - Dan River loam, 0 to 2 percent slope	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly disturbed.	bed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes ✓ No	within a Wetland?
Remarks:	<u>l</u>
Wetland bench along UNT to Cascade Creek	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants	
High Water Table (A2) Hydrogen Sulfide Od	
Saturation (A3) Oxidized Rhizospher	
Water Marks (B1) Presence of Reduce	
Sediment Deposits (B2) — Recent Iron Reduction Thin Muck Surface (I	
Drift Deposits (B3) Thin Muck Surface (Algal Mat or Crust (B4) Other (Explain in Rel	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
WETLAND HYDROLOGY INDICATORS B10, D2,	AND D5 ARE MET.
, ,	

50% of total cover: 50.00

50% of total cover: 20.00 20% of total cover: 8.00

50% of total cover: 50.00 20% of total cover: 20.00

50% of total cover: 2.50 20% of total cover: 1.00

Tree Stratum (Plot size: 30 ft r)

Sapling/Shrub Stratum (Plot size: 15 ft r)

Herb Stratum (Plot size: 10 ft r

5. Cinna arundinacea

Woody Vine Stratum (Plot size: 30 ft r) 1. Smilax rotundifolia

2. Fraxinus pennsylvanica

2. Platanus occidentalis

4. Liquidambar styraciflua

1. Carpinus caroliniana

3. Ligustrum sinense

1. Persicaria virginiana

2. Carex radiata

3. Carex scoparia 4. Glyceria striata

1. Acer negundo

3. Acer rubrum

ames of	plants.		Sampling Point: SP-B057							
Absolute	Dominant		Dominance Test worksheet:							
% Cover 30	Species? ✓	<u>Status</u> FAC	Number of Dominant Species That Are OBL FACW or FAC: 11 (
30		FACW	That Are OBL, FACW, or FAC: 11 (A	(A)						
20		FAC	Total Number of Dominant Species Across All Strata: 12	·D)						
20	~	FAC	Species Across All Strata: 12 (I	(B)						
			Percent of Dominant Species That Are OBL, FACW, or FAC: 91.66	A/B)						
			Prevalence Index worksheet:							
100	= Total Cov	er	Total % Cover of: Multiply by:							
	total cover:		OBL species 20 x 1 = 20							
			FACW species $\frac{70}{100}$ x 2 = $\frac{140}{100}$							
20		FAC	FAC species 145 x 3 = 435							
10		FACW	FACU species $\frac{10}{2}$ $x = 40$							
10		FACU	UPL species $0 \times 5 = 0$							
			Column Totals: 245 (A) 635	(B)						
			Prevalence Index = B/A = 2.59							
			Hydrophytic Vegetation Indicators:							
			1 - Rapid Test for Hydrophytic Vegetation							
			✓ 2 - Dominance Test is >50%							
40			✓ 3 - Prevalence Index is ≤3.0 ¹							
	= Total Cov total cover:		4 - Morphological Adaptations ¹ (Provide supporting							
20% 01	lotal cover.		data in Remarks or on a separate sheet)							
30	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain))						
20	~	FAC								
20	~	FACW	¹ Indicators of hydric soil and wetland hydrology mu be present, unless disturbed or problematic.	ıst						
20	~	OBL	Definitions of Four Vegetation Strata:							
10		FACW	Definitions of Four Vegetation Strata.							
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm more in diameter at breast height (DBH), regardles height.							
			Sapling/Shrub – Woody plants, excluding vines, lethan 3 in. DBH and greater than or equal to 3.28 ft m) tall.							
	= Total Cov		Herb – All herbaceous (non-woody) plants, regardl of size, and woody plants less than 3.28 ft tall.	less						
	total cover:		Woody vine – All woody vines greater than 3.28 ft height.	in						
	= Total Cov total cover:		Hydrophytic Vegetation Present? Yes _ ✓ No							

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

DOMINANCE TEST AND PREVALENCE INDEX ARE MET.

0 - 6 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	5/1 80	Color (moist) 10YR 3/6 10YR 4/6	% Type 20 C 20 C	M M	Sandy Loam Sandy Loam	Remarks
6 - 20 10YR	5/1 80					
		10YR 4/6	20 C	M	Sandy Loam	
		-				
		<u> </u>				
lydric Soil Indicator	ion, D=Depletion,	RM=Reduced Matrix, M	S=Masked Sand	Grains.		ore Lining, M=Matrix.
	rs:				Indicators	s for Problematic Hydric Soils ³
Histosol (A1)		Dark Surface				Muck (A10) (MLRA 147)
Histic Epipedon (A	A2)		elow Surface (S8)		148) Coast	t Prairie Redox (A16)
Black Histic (A3)			urface (S9) (MLR	A 147, 148)		LRA 147, 148)
Hydrogen Sulfide			ed Matrix (F2)			nont Floodplain Soils (F19)
Stratified Layers (Depleted Ma				LRA 136, 147)
2 cm Muck (A10)			Surface (F6)			Shallow Dark Surface (TF12)
	Dark Surface (A11		rk Surface (F7)		Other	(Explain in Remarks)
Thick Dark Surface		Redox Depr				
	neral (S1) (LRR N ,		nese Masses (F12	2) (LRR N,		
MLRA 147, 14		MLRA 13	•		3	
Sandy Gleyed Ma			ace (F13) (MLRA			ors of hydrophytic vegetation and
Sandy Redox (S5			oodplain Soils (F1			d hydrology must be present,
Stripped Matrix (S		Red Parent	Material (F21) (M	LRA 127, 147	7) unless	disturbed or problematic.
Restrictive Layer (if	observed):					
Type:						
Depth (inches):					Hydric Soil Pre	sent? Yes 🗸 No
monte		CATOR F3 IS M				

Project/Site: MVP Southgat	te	City/C	ounty: Rockingham C	ounty	Sampling Date: 2024-08-27		
Applicant/Owner: Mountain V		•			Sampling Point: SP-B057a		
nvestigator(s):AC, LC Section, Township, Range:							
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 3							
Subregion (LRR or MLRA): P 136 Lat: 36.52808705 Long: -79.64613422 Date							
Soil Map Unit Name: DaA - D							
Are climatic / hydrologic condition							
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal of	Circumstances" p	present? Yes No		
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed, ex	xplain any answe	rs in Remarks.)		
SUMMARY OF FINDING	SS – Attach site r	map showing sam	pling point location	ns, transects	, important features, etc.		
Hydrophytic Vegetation Preser	nt? Yes	No 🗸					
Hydric Soil Present?	Yes	No ✓	Is the Sampled Area	Yes	No 🗸		
Wetland Hydrology Present?	Yes	No 🗸	within a Wetland?				
Remarks:							
		DEO W DOOZ T		a a danat Du	initation Tool		
Upland sample plot	adjacent to F	PFO W-B027. I	ne USACE Ante	ceaent Pre	ecipitation Looi		
indicates wetter that	an normal cor	nditions 3 mon [.]	ths prior to surv	ey.			
HYDROLOGY							
Wetland Hydrology Indicator	rs:		-		ators (minimum of two required)		
Primary Indicators (minimum c	•			Surface Soil Cracks (B6)			
Surface Water (A1)		_ True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2)		_ Hydrogen Sulfide Odd		Drainage Pa			
Saturation (A3)			-	Moss Trim L			
Water Marks (B1)		Presence of Reduced			Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur			
Drift Deposits (B3) Algal Mat or Crust (B4)	_	Thin Muck Surface (COther (Explain in Ren			isible on Aerial Imagery (C9) tressed Plants (D1)		
Iron Deposits (B5)			idiko)				
Inundation Visible on Aeria	al Imagery (B7)		-	Geomorphic Position (D2) Shallow Aquitard (D3)			
Water-Stained Leaves (B9			•	Microtopographic Relief (D4)			
Aquatic Fauna (B13)	,			FAC-Neutral	. , ,		
Field Observations:					· '		
Surface Water Present?	Yes No	Depth (inches):					
Water Table Present?	Yes No	Depth (inches):					
Saturation Present?		Depth (inches):		ydrology Preser	nt? Yes No		
(includes capillary fringe) Describe Recorded Data (stream)	om gauga manitaring	well periol photos pro	vious inspections) if avail	labla			
Describe Recorded Data (Stream	ani gauge, monitoring	well, aeriai priotos, pre	vious irispections), ii avaii	iable.			
Remarks:							
No indicators met.							
no maicators met.							

EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B057a
20 ft r	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
Acer saccharum	10		FACU	That Are OBL, FACW, or FAC: 1 (A)
)				Total Number of Dominant
3				Species Across All Strata: 4 (B)
l				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25.00 (A/B)
6				Prevalence Index worksheet:
7	40			Total % Cover of:Multiply by:
500		= Total Cov		OBL species 0 x 1 = 0
50% of total cover: <u>5.00</u>	20% of	total cover:	2.00	FACW species 0 x 2 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)	20	.,	FACIL	FAC species 25 x 3 = 75
Lonicera japonica			FACU FACU	FACU species 55 x 4 = 220
2 Celtis occidentalis	15			
Nitis rotundifolia	15		FAC	
4. Chasmanthium latifolium	10		FACU	Column Totals: <u>80</u> (A) <u>295</u> (B)
5. Smilax rotundifolia	10		<u>FAC</u>	Prevalence Index = B/A = 3.68
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
3				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations¹ (Provide supporting
50% of total cover: <u>35.00</u>	20% of	total cover:	14.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation ¹ (Explain)
1				1 Toblematic Trydrophlytic vegetation (Explain)
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of	total cover:		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				-
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
la indiantara mat				
No indicators met.				

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docum	ent the i	ndicator	or confirm	the absence	of indicat	ors.)	
Depth	Matrix		Redox	Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	KS .
0 - 20	10YR 3/6	100					Clay Loam			
-										
					-			-		
-										
	-		-		-					
	-									
¹Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: P	L=Pore Lin	ing, M=Matı	rix.
Hydric Soil I		•	,							Hydric Soils ³ :
Histosol			Dark Surface	(S7)					(A10) (MLR	
· 	oipedon (A2)		Polyvalue Bel		ce (S8) (N	ILRA 147			e Redox (A1	
Black His			Tolyvalde Bel				,	MLRA 14		,
	n Sulfide (A4)		Loamy Gleye			,0,	F		oodplain So	ils (F19)
	Layers (A5)		Depleted Mat		-,		<u> </u>	(MLRA 1	•	(1 10)
	ck (A10) (LRR N)		Redox Dark S		6)		V		w Dark Surfa	ace (TF12)
· · · · · · · · · · · · · · · · · · ·	Below Dark Surfac	e (A11)	Depleted Dark		,				ain in Remai	
	ark Surface (A12)	- (/	Redox Depre					(=		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	lucky Mineral (S1) (I	LRR N.	Iron-Mangane			LRR N.				
	147, 148)	,	MLRA 136		,,,	,				
	leyed Matrix (S4)		Umbric Surfac	•	MLRA 13	6. 122)	³ Ind	icators of h	vdrophytic v	vegetation and
	ledox (S5)		Piedmont Flo						ology must b	-
-	Matrix (S6)		Red Parent M					-	ped or proble	
	_ayer (if observed):					•	Í			
Type:	, ,									
Depth (inc	shoe):						Hydric Soil	Drocont?	Yes	No <u> </u>
	JIIES)						Hydric 30ii	rieseiit:	169	
Remarks:	- !!! 4									
IN	o indicators	met.								

Project/Site: MVP Southgate City/C	county: Rockingham County Sampling Date: 2024-06-12
· · · · · · · · · · · · · · · · · · ·	State: North Carolina Sampling Point: SP-B058
Investigator(s):P.Meier, E.Sanchez, L.Cooper Section	
Landform (hillslope, terrace, etc.): Flat Local reli	
	Long:79.6448313 Datum: WGS 84
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes,	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No	
Hydrophytic Vegetation Present? Hydric Soil Present? Yes Yes No No	Is the Sampled Area
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No
Remarks:	
PEM W-B028 IN FIELD SOUTH OF CIRCLE D BA	AR ROAD
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Od	
Saturation (A3) Oxidized Rhizosphere	
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reductio	
Drift Deposits (B3) Thin Muck Surface (C	
Algal Mat or Crust (B4) Other (Explain in Rer Iron Deposits (B5)	narks) Stunted or Stressed Plants (D1) V Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections) if available:
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Remarks:	
WETLAND HYDROLOGY INDICATORS C3, D2, A	AND D5 ARE MET.
, ,	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B058
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Descent of Descinant Coasias
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				
7				Prevalence Index worksheet:
		= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:				OBL species 20 x 1 = 20
Sapling/Shrub Stratum (Plot size: 15 ft r			_	FACW species <u>65</u> x 2 = <u>130</u>
1. Platanus occidentalis	5	~	FACW	FAC species 20 x 3 = 60
2				FACU species <u>0</u>
3				UPL species $0 x 5 = 0$
				Column Totals: 105 (A) 210 (B)
4 5.				
				Prevalence Index = $B/A = 2.00$
**				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
700/ 6/ / 2 70		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>2.50</u>	20% of	total cover:	1.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft r)	40		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus	40			
2. Arthraxon hispidus	20		FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Murdannia keisak	20		OBL	be present, unless disturbed or problematic.
4. Bidens aristosa	10		FACW	Definitions of Four Vegetation Strata:
_{5.} Solidago gigantea	10		FACW	_
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				Horte All bank assaure (non-unade) before assaudless
	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50.00</u>				
Woody Vine Stratum (Plot size: 30 ft r)			_	Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3				
4				
				Hydrophytic
5				Vegetation Present? Yes ✓ No
50% of total cover:		= Total Cover:		100
	·	lotal cover.		
Remarks: (Include photo numbers here or on a separate s	ineet.)			
DOMINANCE TEST AND PREVALENC	E INDE	X ARE N	MET.	

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	m the absence of	indicators.)		
Depth	Matrix		Redo	x Feature	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 8	10YR 4/2	80	10YR 4/6	10	С	М	Sandy Clay Loam			
0 - 8		_	10YR 4/6	10	<u>C</u>	PL	Sandy Clay Loam			
8 - 20	10YR 7/1	80	10YR 6/8	20	С	М	Silty Clay Loam			
-										
-		-				_				
-										
		_								
				-						
		_			_		· <u></u> -			
¹Type: C=Co	ncentration D=Der	letion RM	1=Reduced Matrix, M	S=Maske	d Sand G	ains	² Location: PL=	Pore Lining, M=Matrix.		
Hydric Soil		ordion, raiv	T Treduced Matrix, IVI	o maone	u cana ci	umo.		ors for Problematic Hydric Soils ³ :		
Histosol	(A1)		Dark Surface	e (S7)			2 cn	m Muck (A10) (MLRA 147)		
	pipedon (A2)		Polyvalue Be		ace (S8) (I	MLRA 147		ast Prairie Redox (A16)		
Black Hi			Thin Dark Su		. , .		· · · · · · · · · · · · · · · · · · ·	MLRA 147, 148)		
	n Sulfide (A4)		Loamy Gleye	•	, .	· · · , · · · · ,		dmont Floodplain Soils (F19)		
	Layers (A5)		<u>✓</u> Depleted Ma		(-/			MLRA 136, 147)		
	ck (A10) (LRR N)		Redox Dark		F6)			y Shallow Dark Surface (TF12)		
	Below Dark Surfac	·e (Δ11)	Depleted Da	,	,			er (Explain in Remarks)		
	ark Surface (A12)	<i>(</i> ,)	Redox Depre					5. (2.xp.a toae)		
	lucky Mineral (S1) (I RR N	Iron-Mangan			(I RR N.				
	147, 148)	,	MLRA 13		300 (1 12)	(=::::,				
	eleyed Matrix (S4)			•	(MIRA1	36 122)	3Indica	ators of hydrophytic vegetation and		
	edox (S5)									
	Matrix (S6)			Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.						
	_ayer (if observed)		Red Faleliti	viateriai (FZ1) (IVILE	KA 127, 14	unies	s disturbed of problematic.		
	-ayer (ii observed)	•								
Type:										
Depth (inc	ches):						Hydric Soil Pr	resent? Yes V No No		
Remarks:	YDRIC SOIL	INDIC	ATOR F3 IS M	IFT						
	I DINIO SOIL	IIIDICA	~ 1 OK 1 3 13 W	L.						

Project/Site: MVP Southgate Project NC	City/County: Eden/Rockingham Sampling Date	ie: 2024-06-12				
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling P					
	Section, Township, Range:					
andform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 1						
Subregion (LRR or MLRA): P 136 Lat: 36.5145835 Long:79.6592419 Datum: NA						
Soil Map Unit Name: CmD - Clover sandy loam, 8 to 15 percent slopes NWI classification:						
	ne of year? Yes No (If no, explain in Remarks.)					
	ficantly disturbed? Are "Normal Circumstances" present? Yes_	No 🗸				
	rally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point locations, transects, important	reatures, etc.				
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area					
Hydric Soil Present? Yes ✓ No	within a Wetland?	•				
Wetland Hydrology Present? Yes No	<u> </u>	_				
Remarks:						
Upland sample plot adjacent to PEM W-B028.	Vegetation and hydrology significantly disturbed by	natural gas				
pipeline right-of-way. The USACE Antecedent	Precipitation Tool indicates normal conditions were	present 3				
months prior to survey.						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum	of two required)				
Primary Indicators (minimum of one is required; check all that						
		Sparsely Vegetated Concave Surface (B8)				
	en Sulfide Odor (C1) Drainage Patterns (B10)	(= 0,				
	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)					
	e of Reduced Iron (C4) Dry-Season Water Table (C	02)				
Sediment Deposits (B2) Recent	ron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)					
Drift Deposits (B3) Thin Mu	ck Surface (C7) Saturation Visible on Aerial	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Other (B	Explain in Remarks) Stunted or Stressed Plants	(D1)				
Iron Deposits (B5)	Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No Depth						
Water Table Present? Yes No Depth						
Saturation Present? Yes No Depth (includes capillary fringe)	inches): Wetland Hydrology Present? Yes	No				
Describe Recorded Data (stream gauge, monitoring well, aeri	al photos, previous inspections), if available:					
Remarks:		_				
No indicators are present.						

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B059
20.4		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2				matale obe, raow, or rao.
3				Total Number of Dominant Species Across All Strata: 4 (B)
4				Species Across Air Strata.
5				Percent of Dominant Species That Are OBL FACW or FAC: 25.00 (A/R)
5				That Are OBL, FACW, or FAC: 25.00 (A/B)
7.				Prevalence Index worksheet:
	·	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:				OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species 20 x 2 = 40
1				FAC species $0 \times 3 = 0$
2				FACU species <u>75</u> x 4 = <u>300</u>
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>95</u> (A) <u>340</u> (B)
5				Prevalence Index = B/A = 3.57
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
		= Total Cov	er	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:	20% of	total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	00		FACIL	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Solidago canadensis	20 15	·	FACU FACU	<u> </u>
2. Lespedeza cuneata	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
3 Bidens frondosa	15	·	FACU	be present, unless disturbed or problematic.
4. Schizachyrium scoparium 5. Rubus trivialis	10		FACU	Definitions of Four Vegetation Strata:
5. Cyperus echinatus	10	-	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Cyperus ecrimatus 7. Eupatorium capillifolium	5		FACU	more in diameter at breast height (DBH), regardless of
7. Lupatonum capilinolium 8. Juncus effusus	5		FACW	height.
		-	.,,,,,,,	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				THY Can.
11	95	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 47.50				, , , , , , , , , , , , , , , , , , , ,
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in
1				height.
2.				
3				
4				Underskutte
5				Hydrophytic Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:	20% of	total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			
No tasts are passed				
No tests are passed.				

Depth	Matrix	%		ox Featur		Loc ²	T = 1 + 1 + 1 = 2		Damarka
nches) 0 - 18	Color (moist) 7.5YR 6/2	 99	Color (moist) 7.5YR 7/6	<u>%</u> 1	Type ¹	M	Texture Sandy Loam		Remarks
			7.5TK 7/0	- '		<u> </u>			
18 - 21	7.5YR 6/2	75	_				Sandy Loam		
18 - 21	7.5YR 7/1	20	5YR 6/6	5	_ <u>C</u>	M	Sandy Loam		
-									
-			-	_					
		_	-						
						_	-		
								_	
-									
vne: C=Cc	oncentration D=De	enletion RN	M=Reduced Matrix, N	- IS=Maske	ed Sand G	rains	² Location: P	L=Pore Lining	M=Matrix
	Indicators:	piction, ra	VI TREGUECE WIGHTA, IN	io ividoliti	ou ound o	iulio.	Indica	ators for Prob	plematic Hydric Soils ³ :
_ Histosol			Dark Surfac	e (S7)					0) (MLRA 147)
	oipedon (A2)		Polyvalue B		face (S8) (I	MLRA 147		oast Prairie R	
Black His			Thin Dark S		. , .		, <u>—</u>	(MLRA 147,	
_ Hydroge	en Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		P	iedmont Flood	Iplain Soils (F19)
	d Layers (A5)		Depleted M	atrix (F3)				(MLRA 136,	
	uck (A10) (LRR N)		Redox Dark		. ,			•	ark Surface (TF12)
	d Below Dark Surfa	ice (A11)	Depleted Da				c	ther (Explain i	n Remarks)
	ark Surface (A12)	// DD 11	Redox Dep			# DD 11			
-	Mucky Mineral (S1)	(LRR N,	Iron-Manga		sses (F12)	(LRR N,			
	A 147, 148)		MLRA 1	-	MIDA 1	26 422\	3Ind	icators of bud	condutio vogotation and
	Gleyed Matrix (S4)		Umbric Surf						rophytic vegetation and gy must be present,
Sandy D			i leditiont i						or problematic.
Sandy R Stripped			Red Parent	Material	(F21) (WILE		/) un	1655 015101060	
_ Stripped	Matrix (S6)	l):	Red Parent	Material	(F21) (MLF	XA 121, 14	/) un	less disturbed	or problematic.
_ Stripped estrictive L		l):	Red Parent	Material	(F21) (MLF	XA 121, 14	r) un	less disturbed	or problematic.
_ Stripped estrictive L Type:	Matrix (S6) Layer (if observed	l):	Red Parent	Material	(F21) (MLF	XM 121, 14			·
Stripped estrictive L Type: Depth (inc	Matrix (S6) Layer (if observed	I):	Red Parent	Material	(F21) (MLF	XM 121, 14	Hydric Soil		res No
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 127, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (ML F	XX 127, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	NA 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material ((F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·
Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incemarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	F21) (MLF	XX 121, 14			·
Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed			Material	(F21) (MLF	XX 121, 14			·

Project/Site: MVP Southgate Project NC City/C	County: Eden/Rockingham Sampling Date: 2024-06-12					
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B060					
Investigator(s):ES, LC, PM Section	on, Township, Range:					
Landform (hillslope, terrace, etc.): Depression Local rel	ief (concave, convex, none): Concave Slope (%): 0-1					
Subregion (LRR or MLRA): P 136 Lat: 36.53054083	Long: -79.64263374 Datum: NAD 83					
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? $^{}$	′es No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes V No No No	Is the Sampled Area within a Wetland? Yes No					
Remarks:						
Wetland sample plot within PEM W-B029. Vegetation are pipeline right-of-way. The USACE Antecedent Precipitation months prior to survey.						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) True Aquatic Plants (
High Water Table (A2) Hydrogen Sulfide Od						
Saturation (A3) Oxidized Rhizospher						
Water Marks (B1) Presence of Reduced						
Sediment Deposits (B2) Recent Iron Reduction						
Drift Deposits (B3) Thin Muck Surface (C						
Algal Mat or Crust (B4) Other (Explain in Rer						
Iron Deposits (B5)	Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
Water-Stained Leaves (B9)	Microtopographic Relief (D4)					
Aquatic Fauna (B13)	FAC-Neutral Test (D5)					
Field Observations: Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No Depth (inches): Depth (inches):						
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
Indicators D2 and D5 are present.						
indicators be and bo are present.						

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B060
20.4		Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: $\underline{2}$ (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4	-			Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 66.66 (A/B)
6				Prevalence Index worksheet:
/	·	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover:				OBL species 20 x 1 = 20
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species 20 x 2 = 40
1				FAC species $\frac{35}{27}$ $\times 3 = \frac{105}{100}$
2				FACU species 25 x 4 = 100
3				UPL species $0 \times 5 = 0$
4				Column Totals: 100 (A) 265 (B)
5				Prevalence Index = B/A = 2.65
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover	·	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	25	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Arthraxon hispidus 2. Carex vulpinoidea	20		OBL	
2. Cyperus echinatus	15		FACU	¹ Indicators of hydric soil and wetland hydrology must
Rumex crispus	10	·	FAC	be present, unless disturbed or problematic.
5. Juncus effusus	10		FACW	Definitions of Four Vegetation Strata:
_{5.} Diodia virginiana	10		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Andropogon virginicus	10		FACU	more in diameter at breast height (DBH), regardless of
8.				height.
9.			-	Sapling/Shrub – Woody plants, excluding vines, less
10				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.			·	Harb All barbassas (non usadis) planta sassadilasa
· ·	100	= Total Cov	/er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50.00</u>	20% of	total cover	20.00	Weeds sine All woods since greater than 2.29 ft in
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes No
50% of total cover:		total cover	·	
Remarks: (Include photo numbers here or on a separate s	heet.)			
Dominance test is passed.				
•				

Profile Desc	ription: (Describe	to the dep	oth needed to docur	nent the	indicator	or confirm	n the absence of indi	cators.)
Depth	Matrix		Redo	x Feature	:S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
8 - 0	10YR 4/2	75					Silt Loam	
0 - 8	10YR 5/2	22	10YR 5/8	3	С	M	Silt Loam	
8 - 16	10YR 4/3	30			· <u></u>		Silty Clay	
8 - 16	10YR 5/2	65	10YR 5/8	5	С	M	Silty Clay	
16 - 21	10YR 5/6	90	10YR 4/3	10	С	M	Sandy Clay	
	-				· <u></u>			
	-				· <u></u>			
	-							
		letion, RM	=Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Location: PL=Pore	
Hydric Soil I	ndicators:						Indicators fo	r Problematic Hydric Soils ³ :
Histosol			Dark Surface					ck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		. , .		· —	airie Redox (A16)
Black His	stic (A3)		Thin Dark Sເ			147, 148)		A 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmon	t Floodplain Soils (F19)
Stratified	l Layers (A5)		Depleted Ma	trix (F3)			(MLRA	A 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (I	- 6)		Very Sha	llow Dark Surface (TF12)
Depleted	d Below Dark Surface	e (A11)	Depleted Date	rk Surface	e (F7)		Other (Ex	kplain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)			
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) ((LRR N,		
	A 147, 148)		MLRA 13	6)				
Sandy G	leyed Matrix (S4)		Umbric Surfa	ice (F13)	(MLRA 13	36, 122)	³ Indicators	of hydrophytic vegetation and
	edox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	48) wetland hy	/drology must be present,
	Matrix (S6)		Red Parent N					turbed or problematic.
	_ayer (if observed):					<u> </u>	, 	·
Type:	,							
Depth (inc	ches):						Hydric Soil Preser	nt? Yes V No No
Remarks:								
	dicator F3 is	prese	nt.					
•••	aloator i o lo	p. 000						

Project/Site: MVP Southgate Project NC	City/County: Eden/Rockingham Sampling Date: 2024-06-12
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B061
Investigator(s):ES, LC, PM	Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Loc	cal relief (concave, convex, none): Convex Slope (%): 1
	4 Long:79.64269308 Datum: NAD 83
	ppes, rarely flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No ✔	
Trydrophytic vegetation resent:	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No V	within a Wetland? Yes No
Remarks:	
	tation and hydrology significantly disturbed by natural gas
pipeline right-of-way. The USACE Antecedent Preci	pitation Tool indicates normal conditions were present 3
months prior to survey.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Pl	ants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfice	de Odor (C1) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizo	spheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Re	duced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Re	duction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surf	
Algal Mat or Crust (B4) Other (Explain	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13) Field Observations:	FAC-Neutral Test (D5)
Surface Water Present? Yes No Depth (inches)	
Water Table Present? Yes No Depth (inches)	
Saturation Present? Yes No Depth (inches)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	
No indicators are present.	
indicators are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B061
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1)		Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 33.33 (A/B)
6				That Are OBL, FACW, or FAC: 33.33 (A/B)
		-		Prevalence Index worksheet:
· ·		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:				OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species <u>25</u> x 2 = <u>50</u>
1				FAC species $5 \times 3 = 15$
2.				FACU species 70 x 4 = 280
				UPL species 0 x 5 = 0
3				Column Totals: 100 (A) 345 (B)
4 5.				
				Prevalence Index = B/A = 3.45
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
EOO/ of total covers		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: Herb Stratum (Plot size: 5 ft r)	20% 01	total cover.	·	data in Remarks or on a separate sheet)
1. Lespedeza cuneata	25	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Lespedeza curieata 2. Solidago altissima	25		FACU	
3. Bidens frondosa	25		FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Bidens frondosa 4. Rubus trivialis	10		FACU	be present, unless disturbed or problematic.
4. Rubus trivialis 5. Arthraxon hispidus	5		FAC	Definitions of Four Vegetation Strata:
	5		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Cyperus echinatus	5		FACU	more in diameter at breast height (DBH), regardless of
7 _. Ambrosia artemisiifolia	· 	-	FACO	height.
8		-		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10	· <u></u>			m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
50.00		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50.00</u>	20% of	total cover:	20.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1		-		
2				
3	· <u></u>			
4	· <u></u>			Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	sheet.)			
No tests are passed.				
το τοστο από μασσσά.				

Depth (inches)			pili needed to docu	ment the	maicator	or commi	n the absence	or indicators.)
	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 10	10YR 4/4	50					Silty Clay Loam	
0 - 10	10YR 5/4	50		<u> </u>			Silty Clay Loam	
10 - 21	10YR 5/3	38	10YR 5/6	2	С	М	Sandy Clay	
10 - 21	10YR 4/3	60					Sandy Clay	
_	-	_						
-		_	· -	-		_		
		_						
-	-	_	· -	-		_		
-								
		_	-					
		oletion, RN	M=Reduced Matrix, M	S=Maske	d Sand G	rains.		=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	tors for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)
Histic Ep	oipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (I	MLRA 147	, 148) Co	oast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark S	urface (S9) (MLRA	147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gley					edmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma		` /			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		F6)			ery Shallow Dark Surface (TF12)
	d Below Dark Surfa	ra (Δ11)	Depleted Da	•				ther (Explain in Remarks)
	ark Surface (A12)	<i>(</i> A11)	Redox Depr		, ,		0.	THE (Explain in Nemarks)
		I DD N				(I DD N		
	lucky Mineral (S1)	LKK N,	Iron-Mangar		ses (F12)	(LKK N,		
	A 147, 148)		MLRA 13	•			3	
	Bleyed Matrix (S4)		Umbric Surfa					cators of hydrophytic vegetation and
	tedox (S5)		Piedmont FI					land hydrology must be present,
Stripped	Matrix (S6)		Red Parent	Material (I	-21) (MLF	RA 127, 14	7) unle	ess disturbed or problematic.
Restrictive I	_ayer (if observed)):						
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No 🗸
Remarks:							I.	
N	o indicators	are pr	esent.					
		а. о р.						

Project/Site: MVP Southgate City/C	ounty: Rockingham County Sampling Date: 2024-06-12
	State: North Carolina Sampling Point: SP-B062
Investigator(s):P.Meier, E.Sanchez, L.Cooper Section	
Landform (hillslope, terrace, etc.): Flat Local reli	
	Long:79.6431587 Datum: WGS 84
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes,	
Are climatic / hydrologic conditions on the site typical for this time of year? ${\sf Y}$	
Are Vegetation, Soil, or Hydrology significantly disturb	ped? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing same	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No	
Hydric Soil Present? Yes V No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No
Remarks:	
PSS WETLAND W-B030 SOUTHWEST OF CIRC	LE BAR D RANCH ROAD.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (I	
High Water Table (A2) Hydrogen Sulfide Odd	
Saturation (A3) Oxidized Rhizosphere	
Water Marks (B1) Presence of Reduced	
Sediment Deposits (B2) Recent Iron Reductio	
Drift Deposits (B3) Thin Muck Surface (C Algal Mat or Crust (B4) Other (Explain in Ren	
Iron Deposits (B5)	Geomorphic Position (D2)
Initial Deposits (B0) Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
WETLAND HYDROLOGY INDICATORS C3, D2, A	AND D5 ARE MET.

	plants.		Sampling Point: SP-B062
Absolute	Dominant		Dominance Test worksheet:
	Species?	Status	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: 100.00 (A/B)
	-		Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species 20 x 1 = 20
_ 20 /6 01	total cover.		FACW species 120 x 2 = 240
20	~	FACW	FAC species 10 x 3 = 30
			FACU species $0 \times 4 = 0$
			UPL species $0 \times 5 = 0$
			Column Totals: 150 (A) 290 (B)
			Prevalence Index = B/A = 1.93
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
50	- Total Cov		✓ 3 - Prevalence Index is ≤3.0¹
			4 - Morphological Adaptations ¹ (Provide supporting
		-	data in Remarks or on a separate sheet)
30	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
30	~	FACW	
20		FACW	¹ Indicators of hydric soil and wetland hydrology must
10		FACW	be present, unless disturbed or problematic.
10		FACW	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.
			Harb All harbaccous (non woody) plants, regardless
100	= Total Cov	 er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
20% of	total cover:	20.00	Weeds vine All woods vines greater than 2.29 ft in
			Woody vine – All woody vines greater than 3.28 ft in height.
			Hydrophytic
			Vegetation
	= Total Cov	or	Present? Yes No
		CI	110301111
	20% of 20 10 10 10 30 30 20 10 10 10 10 10 10 10 10 10 10 10 10 10	= Total Cover; 20	= Total Cover _ 20% of total cover: 20

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confire	m the absence of in	dicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 6	10YR 5/1	80	7.5YR 4/4	10	С	М	Sandy Clay Loam	
0 - 6		_	7.5YR 4/4	10	С	PL	Sandy Clay Loam	
6 - 20	10YR 5/2	80	10YR 3/4	10	С	М	Sandy Clay Loam	
6 - 20			10YR 4/4	10	С	M	Sandy Clay Loam	
-								
-								
-								
¹Type: C=Co	oncentration, D=Dep	oletion, RM	1=Reduced Matrix, M	S=Maske	d Sand G	rains.		re Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2 cm N	Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ace (S8) (I	MLRA 147		Prairie Redox (A16)
Black His			Thin Dark Su					RA 147, 148)
	n Sulfide (A4)		Loamy Gleye	•	, .	,,		ont Floodplain Soils (F19)
	, ,		<u>✓</u> Depleted Ma		(1 2)			
	Layers (A5)				5 0)		•	RA 136, 147)
	ck (A10) (LRR N)		Redox Dark					hallow Dark Surface (TF12)
	Below Dark Surfac	ce (A11)	Depleted Da		. ,		Other ((Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (LRR N,	Iron-Mangan		ses (F12)	(LRR N,		
MLRA	\ 147, 148)		MLRA 13	6)				
Sandy G	leyed Matrix (S4)		Umbric Surfa	ace (F13)	(MLRA 1	36, 122)	³ Indicator	rs of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	oodplain S	Soils (F19	(MLRA 1	48) wetland	hydrology must be present,
	Matrix (S6)		Red Parent I					disturbed or problematic.
	_ayer (if observed)	•			/ (1	problematics
	edyer (ii observed)	•						
Type:								
Depth (inc	ches):						Hydric Soil Pres	ent? Yes No
Remarks:	ADDIC SUII	INDIC	ATOR F3 IS M	IET				
	I DRIC SOIL	ואטוכוו	ATORTS IS IV	IL I .				

Project/Site: MVP Southgate Project NC	City/Count	ty: Rockingham County	y Sai	mpling Date: 2024-06-12		
Applicant/Owner: Mountain Valley Pipeline LLC		-		Sampling Point: SP-B063		
E0 10 D14		ownship, Range:		<u></u>		
• , ,		concave, convex, none): C	oncave	Slope (%): 0-2		
Subregion (LRR or MLRA): P 136 Lat: 36						
Soil Map Unit Name: BaB - Banister Ioam, 0 to 4 p						
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes _	✓ No (If no, €	explain in Rema	arks.)		
Are Vegetation, Soil, or Hydrology						
Are Vegetation, Soil, or Hydrology						
SUMMARY OF FINDINGS – Attach site map						
No.		31.		<u></u>		
Trydrophlytic vegetation i resent:	No Is t	the Sampled Area				
Trydric contricacint:	No wit	thin a Wetland?	Yes	No 🗸		
Remarks:	110					
Upland sample plot adjacent to PSS W-B03	•		-	•		
pipeline right-of-way. The USACE Anteced	lent Precipitation	Tool indicates norm	nal conditio	ns were present 3		
months prior to survey.						
HYDROLOGY						
Wetland Hydrology Indicators:		Secon	ndary Indicators	(minimum of two required)		
Primary Indicators (minimum of one is required; check all	that apply)	S	urface Soil Crad	cks (B6)		
Surface Water (A1) Tru	ue Aquatic Plants (B14)	S	parsely Vegetat	ted Concave Surface (B8)		
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)						
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)						
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)						
Sediment Deposits (B2) Re	cent Iron Reduction in	Tilled Soils (C6) C	rayfish Burrows	s (C8)		
	in Muck Surface (C7)			e on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Oth	ner (Explain in Remarks	s) S	tunted or Stress	sed Plants (D1)		
Iron Deposits (B5)			eomorphic Pos			
Inundation Visible on Aerial Imagery (B7)			hallow Aquitard			
Water-Stained Leaves (B9)			licrotopographic	' '		
Aquatic Fauna (B13)		<u>•</u> F	AC-Neutral Tes	t (D5)		
Field Observations:	and the Construction					
Surface Water Present? Yes No De						
Water Table Present? Yes No De						
Saturation Present? Yes No De (includes capillary fringe)	epth (inches):	Wetland Hydrold	ogy Present?	Yes No		
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous	s inspections), if available:				
Remarks:						
Indicator D5 is present.						

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B063
	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u>) 1.		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Openies Across All Otrata.
				Percent of Dominant Species That Are OBL FACW or FAC: 66.66 (A/B)
5				That Are OBL, FACW, or FAC: 66.66 (A/B)
6		-		Prevalence Index worksheet:
7		T-4-1 O-1		Total % Cover of: Multiply by:
50% of total cover:		= Total Cov		OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /6 01	total cover.		FACW species 40 $\times 2 = 80$
				FAC species $0 \times 3 = 0$
1				FACU species 60 x 4 = 240
2				UPL species 0 $x = 0$
3				100 220
4				Column Totals: 100 (A) 320 (B)
5				Prevalence Index = B/A = 3.20
6				Hydrophytic Vegetation Indicators:
7		-		1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation¹ (Explain)
1. Solidago altissima	60		FACU	Problematic Hydrophytic Vegetation (Explain)
2. Bidens frondosa	20		FACW	The disease of books and so allowed books become
3. Panicum dichotomiflorum	20	~	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Definitions of Four Vogetation Strata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				
9.		-		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00				or orze, and weday plante look than orze it tall.
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in
1				height.
2				
4				Hydrophytic
5				Vegetation Present? Yes V No
50% of total cover:		= Total Cov		
Remarks: (Include photo numbers here or on a separate si		total cover.		
Remarks. (include prioto numbers here or on a separate si	neet.)			
Dominance test is passed.				
•				

SOIL

0 - 11 2.5Y 4/4 100 Sandy Loam 11 - 21 2.5Y 4/4 65 Clay Loam 11 - 21 2.5Y 6/4 30 Clay Loam 11 - 21 2.5Y 4/2 5 Clay Loam - - - - - - - - - - - -	0 - 11	0 - 11 2.5Y 4/4 100 Sandy Loam 11 - 21 2.5Y 4/4 65 Clay Loam 11 - 21 2.5Y 6/4 30 Clay Loam 11 - 21 2.5Y 4/2 5 Clay Loam 11 - 21 2.5Y 4/2 5 Clay Loam	2.5Y 4/4 100 Sandy Loam Clay Loam	Depth	Matrix		Redox Features	T 4	Day 1
11-21 2.5Y 4/4 65	11-21 2.5Y 4/4 65	11-21 2.5Y 4/4 65	1-21 2.5 Y 4/4 65		Color (moist)	%	Color (moist) % Type ¹ Loc ²	<u>Texture</u>	Remarks
11-21 2.5Y 6/4 30 Clay Loam Clay	11-21 2.5Y 6/4 30 Clay Loam Clay	T1-21 2.5Y 6/4 30 Clay Loam Clay	1-21 2.5 Y 6/4 30						
11-21 2.5Y 4/2 5	Thin Dark Surface (S9) (MLRA 147, 148) Hydric Soil Layers (A10) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 146) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Deptht (inches): Pleyore Lining, M=Matrix. *Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soi *Location: PL=Pore Lining, M=Matrix. *Location: PL=Pore L	The contentration of the conte	Clay Loam Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Coast Prairie Coast Prairi	11 - 21	2.5Y 4/4	65		Clay Loam	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 146) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, 147) Other (Explain in Remarks) Alindicators for Problematic Hydric Soil 2 cm Muck (A10) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (F19) Other (Explain in Remarks) Alindicators of hydrophytic vegetation wetland hydrology must be present unless disturbed or problematic. Hydric Soil Present? Yes No emarks:	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Dark Surface (F7) Thick Dark Surface (A11) Depleted Dark Surface (A11) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Service Matrix (S6) Red Parent Material (F21) (MLRA 137, 147) Hydric Soil Present? Yes No emarks: PL=Pore Lining, M=Matrix. Location: PL=Pore Lining, M=Matrix. PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soil PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soil Indicators for Problematic Hydric Soil (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) All Cloamy Gleyed Matrix (F2) Wetland hydrology must be present, unless disturbed or problematic.	ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) (MLRA 147) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) MLRA 147, 148) MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox Dark Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S4) Sandy Redox (S5) Red Parent Material (F21) (MLRA 136, 122) Pindicators of hydrophytic vegetation are wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No ✓	De: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. De: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Description: Soil Indicators: Indicators for Problematic Hydric Soils (Histosol (A1)	11 - 21	2.5Y 6/4	30		Clay Loam	
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Bandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Red	ydric Soil Indicators: Histosol (A1)	ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Beleved Matrix (F3) MLRA 136, 147) MIRA 147, 148) MIRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) All Diagnost F19 (MLRA 136, 122) All Diagnost F19 (MLRA 136, 122) All Diagnost F19 (MLRA 136, 122) All Diagnost F19 (MLRA 148) MIRA 147, 148) MIRA 147, 148) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Emarks:	Histosol (A1)	11 - 21	2.5Y 4/2	5		Clay Loam	
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)	-	•				
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)	_		 _			
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)						
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)		-			-	
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)	-					
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Dark Surface (F7) Endown Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 136, 142) Jedicators for Problematic Hydric Science (S7) 2 cm Muck (A10) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Dermarks:	ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Depth (inches): Dark Surface (S7) Dark Surface (S8) (MLRA 147, 148) Mura 147, 148) Depleted Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sindicators of hydrophytic vegetation a wetland hydrology must be present, unless disturbed or problematic. Betrictive Layer (if observed): Type: Depth (inches): Depth (inches): Dermarks:	ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thic Dark Surface (F6) Depleted Below Dark Surface (A11) Thic Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Bestrictive Layer (if observed): Type: Depth (inches): Emarks: Indicators for Problematic Hydric Soils 2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A10) (MLRA 147) Poblematic Hydric Soils 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) (MLRA 136, 147) Piedmont Floodplain Soils (F19) Wetland 136, 147) Wetland 147, 148) Brindicators of hydrophytic vegetation are wetland hydrology must be present, unless disturbed or problematic. Wetland hydrology must be present, unless disturbed or problematic. Wetland 147, 147) Bestrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	Histosol (A1)	-					
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)						
Histosol (A1)	Histosol (A1)	Histosol (A1)	Histosol (A1)	ype: C=C	oncentration, D=D	epletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL	=Pore Lining, M=Matrix.
Histic Epipedon (A2)	Histic Epipedon (A2)	Histic Epipedon (A2)	Histic Epipedon (A2)			'			
	Black Histic (A3)	Black Histic (A3)	Black Histic (A3)	Histoso	l (A1)		Dark Surface (S7)	20	cm Muck (A10) (MLRA 147)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Stripped Matrix (S6) Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No_ Muck (A10) (LRR N,	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N,	Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3 Indicators of hydrophytic vegetation are wetland hydrology must be present, and hydrology must be present. Setrictive Layer (if observed): Type:	Hydrogen Sulfide (A4)	_ Histic E	pipedon (A2)			148) Co	past Prairie Redox (A16)
Stratified Layers (A5)	Stratified Layers (A5)	Stratified Layers (A5)	Stratified Layers (A5)						
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12 Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)	2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) A		2 cm Muck (A10) (LRR N)						
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Indicators of hydrophytic vegetation Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. **Estrictive Layer (if observed):** Type: Depth (inches): Hydric Soil Present? Yes No Red Parent Material (F21) (MLRA 127, 147) Depth (Inches): Piedmont Floodplain Soil Fresent? Yes No Red Parent Material (F21) (MLRA 127, 147) Depth (Inches): Piedmont Floodplain Soil Fresent? Yes No Piedmont Floodplain Soil Fresent? Yes Piedmont Floodplain Soil Fresent? Yes No Piedmont Floodplain Soil Fresent? Yes Piedmont Floodplain S	Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strippe	Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Depth (inches): Depth (inches): Depleted Dark Surface (F7) Depleted Dark Surface (F12) (LRR N, Dark 136) Dark 136 Dark 1	Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N,						
Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Umbric Surface (F13) (MLRA 136, 122)	Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Umbric Surface (F13) (MLRA 136, 122) ³Indicators of hydrophytic vegetation a wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Petrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.	Thick Dark Surface (A12)	Thick Dark Surface (A12)						•
		Sandy Mucky Mineral (S1) (LRR N,	Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Long-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Wetland hydrology must be present, unless disturbed or problematic. Wype: Depth (inches): Hydric Soil Present? Yes No			acc (/ /		•.	
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5)	Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)	Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5)	Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148)			(LRR N,			
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present unless disturbed or problematic. Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. trictive Layer (if observed): ype: Depth (inches): Hydric Soil Present? Yes No				MLRA 136)		
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. trictive Layer (if observed): ype: Depth (inches): Hydric Soil Present? Yes No narks:						
Estrictive Layer (if observed): Type:	estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes Noemarks:	estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No narks:	-					
Type: Depth (inches):	Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Type: Depth (inches): Hydric Soil Present? Yes No emarks:	Type:			۵۱۰.	Red Parent Material (F21) (MLRA 127, 147) unle	ess disturbed or problematic.
Depth (inches): No _emarks:	Depth (inches): Hydric Soil Present? Yes No emarks:	Depth (inches): No No Perarks:	Depth (inches): No		Layer (ii observe	u):			
emarks:	emarks:	emarks:	narks:					Unadaia Cail I	Dunnanda Van Na V
					icnes):			Hydric Soil I	Present? Yes No
				٨	lo indicators	s are pre	sent.		

Project/Site: MVP Southgate Project NC	City/County: Eden/Rockingham Sampling Date: 2024-06-12
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B064
Investigator(s):ES, LC	Section, Township, Range:
	al relief (concave, convex, none): Undulating Slope (%): 1-2
Subregion (LRR or MLRA): P 136 Lat: 36.53122267	Z Long: -79.64332934 Datum: NAD 83
	pes, rarely flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly of	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally prob	
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No ✓	Is the Sampled Area within a Wetland? Yes No ✓
Wetland Hydrology Present? Yes No ✔	within a wetland?
Remarks:	
	tation and hydrology significantly disturbed by natural gas bitation Tool indicates normal conditions were present 3
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Pla	ants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide	
	pheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Rec	· · ·
	uction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surfa	
Algal Mat or Crust (B4) Other (Explain ir	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Geomorphic Position (D2)
Water-Stained Leaves (B9)	Shallow Aquitard (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	The House Fox (50)
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	
(includes capillary fringe)	Wettaild Hydrology Fresent: Fes NO
Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if available:
Remarks:	
No indicators are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B064
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1)		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				(2)
5				Percent of Dominant Species That Are OBL FACW or FAC: 0.00 (A/B)
				That Are OBL, FACW, or FAC: 0.00 (A/B)
6 7				Prevalence Index worksheet:
7		= Total Cov		Total % Cover of: Multiply by:
50% of total cover:				OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /0 01	total cover		FACW species 15 x 2 = 30
				FAC species $5 \times 3 = 15$
1				FACU species 80 x 4 = 320
2				UPL species 0 $x = 0$
3				Column Totals: 100 (A) 365 (B)
4				Column Totals. (A)
5				Prevalence Index = $B/A = 3.65$
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	er	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:	20% of	f total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r				· · · · · · · · · · · · · · · · · · ·
_{1.} Lespedeza cuneata	25		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
_{2.} Eupatorium capillifolium	20	~	FACU	1
_{3.} Rubus trivialis	20	✓	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Bidens frondosa	15		FACW	
Solidago altissima	15		FACU	Definitions of Four Vegetation Strata:
Ranunculus hispidus	5		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				noight.
9.				Sapling/Shrub – Woody plants, excluding vines, less
		-		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10	-			in tail.
11	100	· 	· ——	Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 50.00		= Total Cov		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30 ft r)	20% 01	total cover	20.00	Woody vine - All woody vines greater than 3.28 ft in
				height.
1		· 		
2		-		
3		-		
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes No
50% of total cover:	20% of	f total cover	<u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			
No tosts are passed				
No tests are passed.				

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s .			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 11	10YR 4/4	100					Sandy Loam	
11 - 21	10YR 5/4	55	5YR 4/4	3	С	<u>M</u>	Sandy Loam	
11 - 21	10YR 4/4	42					Sandy Clay Loam	
-						- '		
-						- '		
-								
-								
		_	<u> </u>					
		oletion, RN	/I=Reduced Matrix, MS	S=Maske	d Sand Gi	ains.		L=Pore Lining, M=Matrix.
Hydric Soil I								ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148) C	coast Prairie Redox (A16)
Black His			Thin Dark Su			147, 148)	_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		P	iedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark	•				ery Shallow Dark Surface (TF12)
	l Below Dark Surfac	ce (A11)	Depleted Dar				0	other (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
	lucky Mineral (S1) (LRR N,	Iron-Mangan		es (F12)	LRR N,		
	147, 148)		MLRA 13	6)				
Sandy G	leyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	48) we	tland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	Material (F	21) (MLF	A 127, 14	7) unl	less disturbed or problematic.
Restrictive L	ayer (if observed)	:						
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:							1	
	o indicators	are pr	esent.					
		o p.						

Project/Site: MVP Southgate Project NC City/0	County: Eden/Rockingham Sampling Date: 2024-06-12					
	State: North Carolina Sampling Point: SP-B065					
FC 1.0	ion, Township, Range:					
Landform (hillslope, terrace, etc.): Depression Local re	lief (concave, convex, none): Concave Slope (%): 1					
Subregion (LRR or MLRA): P 136 Lat: 36.5311762 Long: -79.64350305 Datum: NAD 83						
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distu						
Are Vegetation, Soil, or Hydrology naturally problem						
	mpling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes V No						
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No No	Is the Sampled Area					
Wetland Hydrology Present? Yes No	within a Wetland? Yes No					
Remarks:						
Wetland sample plot within PSS W-B031b. Vegetation a						
pipeline right-of-way. The USACE Antecedent Precipita	tion Tool indicates normal conditions were present 3					
months prior to survey.						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) True Aquatic Plants	(B14) Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2) Hydrogen Sulfide Od	dor (C1) Drainage Patterns (B10)					
Saturation (A3) Oxidized Rhizosphe	res on Living Roots (C3) Moss Trim Lines (B16)					
Water Marks (B1) Presence of Reduce	ed Iron (C4) Dry-Season Water Table (C2)					
Sediment Deposits (B2) Recent Iron Reduction	on in Tilled Soils (C6) Crayfish Burrows (C8)					
Drift Deposits (B3) Thin Muck Surface (
Algal Mat or Crust (B4) Other (Explain in Re						
Iron Deposits (B5)	Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)					
Water-Stained Leaves (B9)	Microtopographic Relief (D4)					
Aquatic Fauna (B13)	FAC-Neutral Test (D5)					
Field Observations: Surface Water Present? Yes No Depth (inches):						
. 1						
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:					
Remarks:						
Indicators D2 and D5 are present.						
indicators bz and b5 are present.						

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B065
00.5	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 66.66 (A/B)
6				Prevalence Index worksheet:
7		- Total Cov		Total % Cover of: Multiply by:
50% of total cover:		= Total Cover		OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /0 01	total covor.		FACW species 115 x 2 = 230
1. Platanus occidentalis	60	~	FACW	FAC species <u>5</u> x 3 = <u>15</u>
2				FACU species 30 x 4 = 120
3				UPL species <u>0</u>
4				Column Totals: <u>150</u> (A) <u>365</u> (B)
5				Prevalence Index = B/A = 2.43
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>30.00</u>	20% of	total cover:	12.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)	00		E4011	Problematic Hydrophytic Vegetation¹ (Explain)
1. Solidago altissima	30		FACU	
2. Dichanthelium scoparium	30		FACW FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Juncus effusus	10 5		FAC	be present, unless disturbed or problematic.
4. Arthraxon hispidus 5. Carex tribuloides	5		FACW	Definitions of Four Vegetation Strata:
6. Bidens frondosa	5		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Platanus occidentalis	5		FACW	more in diameter at breast height (DBH), regardless of
·· ·			17.011	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10 11.				
	90	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45.00				
Woody Vine Stratum (Plot size: 30 ft r			_	Woody vine – All woody vines greater than 3.28 ft in height.
1				noight.
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:		total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
Dominance test is passed.				
•				

Depth	Matrix	%		ox Featur		Loc ²	Tandona		Daman	l-=
inches) 0 - 9	Color (moist) 10YR 4/2	 95	Color (moist) 5YR 5/6	<u>%</u> 5	Type ¹	M	Texture Sandy Clay		Remarl	KS
	-									
9 - 21	10YR 5/1	70	7.5YR 5/8	8	<u> C </u>	_ <u>M</u>	Sandy Clay			
9 - 21	10YR 6/4	22					Sandy Clay			
-										
-										
			-							
		_		-						
			· -							
			<u> </u>							
-					_					
vne: C=Cc	oncentration D=De	enletion RN	M=Reduced Matrix, M	IS=Maske	ed Sand G	rains	² Location: P	I =Pore Lin	ing M=Mat	rix
	Indicators:	opiction, ren	i reduced Matrix, IV	io masike	a cana c	raino.	Indica	ators for P	roblematic	Hydric Soils ³ :
_ Histosol			Dark Surfac	e (S7)					A10) (MLR .	
	oipedon (A2)		Polyvalue B	. ,	ace (S8) (MLRA 147,			e Redox (A	
Black His			Thin Dark S		. , ,		, <u>—</u>	(MLRA 14		•
_ Hydroge	en Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		P	iedmont Flo	oodplain Sc	oils (F19)
	d Layers (A5)		✓ Depleted Management	atrix (F3)				(MLRA 13	36, 147)	
	ıck (A10) (LRR N)		Redox Dark		,			•		ace (TF12)
	d Below Dark Surfa	ace (A11)	Depleted Da				0	ther (Expla	in in Rema	rks)
	ark Surface (A12)	(1 DD 11	Redox Depr			# DD 11				
-	Mucky Mineral (S1)	(LRR N,	Iron-Manga		ses (F12)	(LRR N,				
	147, 148)		MLRA 1	-	/MIDA 1	26 422\	3Ind	iontoro of h	vdrophytic	vocatation and
	Gleyed Matrix (S4)		Umbric Surf Piedmont F						ology must t	vegetation and
Sandy P			i icumoni i					-		
Sandy R Stripped				Material (F21) (ML I	RA 127. 147	7) un	less disturb	ed or probl	
_ Stripped	Matrix (S6)	d):	Red Parent	Material (F21) (ML I	RA 127, 147	7) unl	less disturb	ed or probl	ornatio.
_ Stripped estrictive L		i):		Material (F21) (ML I	RA 127, 147	7) un	less disturb	ed or probl	omatio.
_ Stripped estrictive L Type:	Matrix (S6) Layer (if observed	i):		Material (F21) (ML I	RA 127, 147			·	
Stripped estrictive L Type: Depth (inc	Matrix (S6) Layer (if observed	i):		Material (F21) (ML I	RA 127, 147	Hydric Soil		·	No
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 147			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 147			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
_ Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	
Stripped estrictive L Type: Depth (incommarks:	Matrix (S6) Layer (if observed		Red Parent	Material (F21) (ML I	RA 127, 14			·	

Project/Site: MVP Southgate Project NC City/County: Ede	en/Rockingham Sampling Date: 2024-06-12
	State: North Carolina Sampling Point: SP-B066
Investigator(s): ES, LC Section, Township	o, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave,	, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): P 136 Lat: 36.53093912	Long: -79.64380614 Datum: NAD 83
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes, rarely flo	oded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 1	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologynaturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling poi	int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes Yes No No Is the Sam within a W	·
Remarks: Wetland sample plot within PEM W-B031a. Vegetation and hydrol pipeline right-of-way. The USACE Antecedent Precipitation Tool i months prior to survey.	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living (C4) Sediment Deposits (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Science (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Other (Explain in Remarks) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Depth (inches): Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	Dry-Season Water Table (C2)
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	,
Remarks: Indicators D2 and D5 are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B066
20.4	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30 ft r)	% Cover		Status	Number of Dominant Species
1	<u> </u>	-	·	That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3			· -	Species Across All Strata: 2 (B)
4			· -	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B)
6			· -	Prevalence Index worksheet:
7			· -	Total % Cover of: Multiply by:
FOO/ of total covers		= Total Cov		OBL species 0 $x 1 = 0$
50% of total cover: Sapling/Shrub Stratum (Plot size: 15 ft r)	20% 01	total cover		FACW species 55 x 2 = 110
				FAC species 20 x 3 = 60
1			· · · · · · · · · · · · · · · · · · ·	FACU species 25 x 4 = 100
2			· · · · · · · · · · · · · · · · · · ·	UPL species 0 x 5 = 0
3				Column Totals: 100 (A) 270 (B)
4 5			· ——	(-)
5 6			· ——	Prevalence Index = B/A = 2.70
6			· ——	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		-	· -	∠ 2 - Dominance Test is >50%
9		Tatal Car		✓ 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		= Total Cov total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 /0 01	total cover		data in Remarks or on a separate sheet)
1. Juncus effusus	40	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Arthraxon hispidus	20	~	FAC	
3. Dichanthelium scoparium	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Eupatorium capillifolium	15		FACU	be present, unless disturbed or problematic.
5 Lespedeza cuneata	10		FACU	Definitions of Four Vegetation Strata:
6		-		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7		-	·	more in diameter at breast height (DBH), regardless of height.
8		-		noight.
9				Sapling/Shrub – Woody plants, excluding vines, less
10.				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11.		-		
· ·· <u> </u>	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00				
Woody Vine Stratum (Plot size: 30 ft r)	_			Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3				
4				Hodoobod's
5				Hydrophytic Vegetation
-		= Total Cov	er	Present? Yes V No No
50% of total cover:				
Remarks: (Include photo numbers here or on a separate s	heet.)			I .
Damainan aa kaak ia maasad				
Dominance test is passed.				

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	m the absence o	f indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 15	10YR 5/1	30	- · ·				Sandy Clay	
0 - 15	10YR 6/1	60	7.5YR 4/6	10	С	М	Sandy Clay	
15 - 21	10YR 6/2	85	10YR 5/6	15	С	М	Sandy Clay	
			<u> </u>				. <u></u> -	
					<u> </u>		·	
			- · ·					
					<u> </u>		·	
					<u> </u>		·	
			<u> </u>				. <u></u> -	
		oletion, RN	M=Reduced Matrix, M	S=Maske	d Sand G	rains.		=Pore Lining, M=Matrix.
Hydric Soil I								ors for Problematic Hydric Soils ³ :
Histosol			Dark Surface					m Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be					ast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	urface (S9) (MLRA	147, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Pie	edmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Ma	ıtrix (F3)			((MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (F6)		Vei	ry Shallow Dark Surface (TF12)
	Below Dark Surface	ce (A11)	Depleted Da	rk Surface	e (F7)			ner (Explain in Remarks)
	rk Surface (A12)	` ,	Redox Depre		, ,			,
	lucky Mineral (S1) (LRR N.	Iron-Mangan			(LRR N.		
	147, 148)	,	MLRA 13		/oo (<u>-</u>)	(=,		
	leyed Matrix (S4)		Umbric Surfa	•	/MI D A 1	26 122\	³ India	ators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					and hydrology must be present,
	Matrix (S6)		Red Parent I	viateriai (i	-21) (MLF	KA 127, 14	(7) unle	ss disturbed or problematic.
Restrictive I	ayer (if observed)):						
Type:								
Depth (inc	ches):						Hydric Soil P	Present? Yes V No No
Remarks:								
In	dicator F3 is	s prese	ent.					
		-						

Project/Site: MVP Southgate City	//County: Rockingham County Sampling Date: 2024-06-12
Applicant/Owner: Mountain Valley PIPELINE LLC	State: North Carolina Sampling Point: SP-B067
Investigator(s):P.Meier, E.Sanchez, L.Cooper See	
Landform (hillslope, terrace, etc.): Drainageway Local	
	Long:79.639083 Datum: WGS 84
Soil Map Unit Name: CmD - Clover sandy loam, 8 to 15 percer	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologynaturally proble	matic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Yes No No No No No No No N	Is the Sampled Area
Tryuno dell'i redenti	within a Wetland? Yes No
Wetland Hydrology Present? Yes ✓ No Remarks:	
PEM WETLAND W-B032; AREA SIGNIFICANT HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plant	· · · · · · · · · · · · · · · · · · ·
High Water Table (A2) Hydrogen Sulfide (
	eres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduc	
	tion in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface	(C7) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in F	Remarks) Stunted or Stressed Plants (D1)
Iron Deposits (B5)	✓ Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches): 1	
Saturation Present? Yes No Depth (inches):_10	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	
WETLAND HYDROLOGY INDICATORS B10, D2	2, AND D5 ARE MET.

•	names of	piants.		Sampling Point: SP-B067
00.6	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4	_			Descript of Descript Conscion
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				,
7				Prevalence Index worksheet:
		= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover:				OBL species 30 x 1 = 30
Sapling/Shrub Stratum (Plot size: 15 ft r)			-	FACW species 50 x 2 = 100
1. Liquidambar styraciflua	10	✓	FAC	FAC species 20 x 3 = 60
2.				FACU species $0 \times 4 = 0$
				UPL species 0 x 5 = 0
3				Column Totals: 100 (A) 190 (B)
4 5.		· -		
•				Prevalence Index = B/A = 1.90
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9	10			✓ 3 - Prevalence Index is ≤3.0¹
500/ CLLL 500		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>5.00</u>	20% of	total cover	2.00	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft r)	20	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex frankii			FACW	
2. Juncus effusus	20			¹ Indicators of hydric soil and wetland hydrology must
3. Mentha spicata	20		FACW	be present, unless disturbed or problematic.
_{4.} Arthraxon hispidus	10		FAC	Definitions of Four Vegetation Strata:
_{5.} Bidens aristosa	10		FACW	
_{6.} Persicaria hydropiperoides	10		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
				Horte All borbooks (non-visadis) plante recording
	90	= Total Cov	er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45.00				
Woody Vine Stratum (Plot size: 30 ft r)			-	Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2				
3				
·				
4				Hydrophytic
4 5				Vegetation Present? Yes ✓ No
45				
5		= Total Cov		riesent? Tes NO
	20% of	= Total Cov		Fresent? Tes NO

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 6	10YR 5/1	80	7.5YR 3/4	20	<u>C</u>	<u>M</u>	Sandy Loam	
6 - 20	10YR 5/1	80	10YR 4/6	20	С	М	Sandy Clay Loam	
		_	·	-				
			·					
		<u> </u>			_			
				-	_			
			·					
		<u> </u>			_			
					_			
		oletion, RN	/I=Reduced Matrix, MS	S=Maske	ed Sand Gi	ains.		L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surf	ace (S8) (I	MLRA 147	, 148) C	coast Prairie Redox (A16)
Black Hi			Thin Dark Su			147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		P	riedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark					ery Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Dar		. ,		c	Other (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
-	lucky Mineral (S1) (LRR N,	Iron-Mangan		ses (F12)	(LRR N,		
	147, 148)		MLRA 13	-			3	
-	leyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N	Material (F21) (MLF	RA 127, 14	7) un	less disturbed or problematic.
Restrictive I	ayer (if observed)	:						
Type:								_
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:							1	
Н	YDRIC SOIL	INDIC	ATOR F3 IS M	ET.				

Project/Site: MVP Southgate	City/County: Pittsylvania Sampling Date: 2024-06-12
Applicant/Owner: Mountain Valley PIPELINE LLC	State: Virginia Sampling Point: SP-B068
Investigator(s):P.Meier, E.Sanchez, L.Cooper	· · · · · · · · · · · · · · · · · · ·
	cal relief (concave, convex, none): Concave Slope (%): 5
	Long:79.6389047 Datum: WGS 84
Soil Map Unit Name:	
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes No (If no, explain in Remarks.)
	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	
	sampling point locations, transects, important features, etc.
Yes No 4	
Hydrophytic Vegetation Present? Yes Yes No No No No No No No No No No	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No V	within a Wetland? Yes No
Remarks:	
Cattle impacted Upland adjacent to PEM W HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Pl	
High Water Table (A2) Hydrogen Sulfice	
	spheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Re	
Sediment Deposits (B2) Recent Iron Re	duction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surf	
Algal Mat or Crust (B4) Other (Explain	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9) Aquatic Fauna (B13)	Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	1 AC-Neutlat Test (D3)
Surface Water Present? Yes No Depth (inches)	·
Water Table Present? Yes No Depth (inches)	
Saturation Present? Yes No Depth (inches)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	

/EGETATION (Four Strata) – Use scientific r	names of	plants.		Sampling Point: SP-B068
00.6	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1. Liquidambar styraciflua	10		FAC	That Are OBL, FACW, or FAC: 2 (A)
2. Quercus phellos	10		FAC	Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50.0 (A/B)
6	_			
7	_			Prevalence Index worksheet:
	20	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover: 10	20% of	f total cover	-: <u> 4 </u>	OBL species $\frac{0}{10}$ $\times 1 = \frac{0}{20}$
Sapling/Shrub Stratum (Plot size: 15 ft r				FACW species $\frac{10}{20}$ $\times 2 = \frac{20}{20}$
1				FAC species $\frac{20}{300}$ $\times 3 = \frac{60}{3000}$
2				FACU species 90 x 4 = 360
3				UPL species $0 \times 5 = 0$
4				Column Totals: 120 (A) 440 (B)
5				Brookland Index D/A 3.67
6				Prevalence Index = B/A = 3.67
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
o		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)				data in Remarks or on a separate sheet)
1. Lolium perenne	60	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Trifolium repens	20	~	FACU	
3. Juncus effusus	10		FACW	¹ Indicators of hydric soil and wetland hydrology must
4 Solanum carolinense	10		FACU	be present, unless disturbed or problematic.
··-	-			Definitions of Four Vegetation Strata:
5	-	•		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
0				more in diameter at breast height (DBH), regardless of
0				height.
8		·		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		· ·		m) tall.
11	100	·		Herb – All herbaceous (non-woody) plants, regardless
500% - \$4-4-1 5 0		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% 01	r total covel	:_20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1		· ——		
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Co		Present? Yes No
50% of total cover:	20% of	f total cover	·:	
Remarks: (Include photo numbers here or on a separate	sheet.)			
NO INDICATORS OF HYDROPHYTIC	VEGET	ΔΤΙΩΝ	ADE DE	DESENT
10 INDICATORS OF HTDROPHTHC	V LGE I	~ I IOIN		LOLINI.

Color (moist) % Type Loc Texture R	matic Hydric Soils (MLRA 147) lox (A16)
4 - 12	matic Hydric Soils (MLRA 147) lox (A16)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Deplete Lining, Malgaria, MS=Masked Sand Grains. Thidicators: Dark Surface (S7)	matic Hydric Soils (MLRA 147) lox (A16)
Histosol (A1)	matic Hydric Soils (MLRA 147) lox (A16)
Indicators:Indicators for ProblemHistosol (A1)Dark Surface (S7)2 cm Muck (A10) (Coast Prairie RedoHistic Epipedon (A2)Polyvalue Below Surface (S8) (MLRA 147, 148)Coast Prairie RedoBlack Histic (A3)Thin Dark Surface (S9) (MLRA 147, 148)(MLRA 147, 148)Hydrogen Sulfide (A4)Loamy Gleyed Matrix (F2)Piedmont FloodplaStratified Layers (A5)Depleted Matrix (F3)(MLRA 136, 142 cm Muck (A10) (LRR N)Redox Dark Surface (F6)Very Shallow DarkDepleted Below Dark Surface (A11)Depleted Dark Surface (F7)Other (Explain in FThick Dark Surface (A12)Redox Depressions (F8)Sandy Mucky Mineral (S1) (LRR N,Iron-Manganese Masses (F12) (LRR N,MLRA 147, 148)MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Matrix (F3) Polyvalue Below Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplate (MLRA 136, 14) Piedmont Floodplate (MLRA 136, 14) Very Shallow Dark Depleted Below Dark Surface (A11) Pepleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4) _ Stratified Layers (A5) _ 2 cm Muck (A10) (MLRA 147, 148) _ Stratified Layers (A5) _ 2 cm Muck (A10) (LRR N) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, _ MLRA 147, 148) Mara 147, 148] Mura 136) Micha Surface (S7) Muck (A10) (MLRA 147, 148) Mura 147, 148] Mura 147, 148) Indicators for Problem in Carlo Problem 2 cm Muck (A10) (MLRA 147, 148) Mura 147, 148) Mura 146, 148, 148, 148, 148, 148, 148, 148, 148	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Matrix (F3) Polyvalue Below Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplate (MLRA 136, 14) Very Shallow Dark Depleted Below Dark Surface (A11) Pick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4) _ Stratified Layers (A5) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) _ Histosol (A1) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Coast Prairie Redo (MLRA 147, 148) _ (MLRA 147, 148) _ Piedmont Floodplate (MLRA 136, 147) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (MLRA 136, 147) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Piedmont Floodplate (MLRA 147, 148) _ Nedox Depleted Matrix (F2) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (F6) _ Other (Explain in Factor (F7)) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4) _ Stratified Layers (A5) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) _ Histosol (A1) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Coast Prairie Redo (MLRA 147, 148) _ (MLRA 147, 148) _ Piedmont Floodplate (MLRA 136, 147) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (MLRA 136, 147) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Piedmont Floodplate (MLRA 147, 148) _ Nedox Depleted Matrix (F2) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (F6) _ Other (Explain in Factor (F7)) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) Depleted Matrix (F3) Polyvalue Below Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplate (MLRA 136, 14) Very Shallow Dark Depleted Below Dark Surface (A11) Pick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4) _ Stratified Layers (A5) _ 2 cm Muck (A10) (MLRA 147, 148) _ Stratified Layers (A5) _ 2 cm Muck (A10) (LRR N) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, _ MLRA 147, 148) Mara 147, 148] Mura 136) Micha Surface (S7) Muck (A10) (MLRA 147, 148) Mura 147, 148] Mura 147, 148) Indicators for Problem in Carlo Problem 2 cm Muck (A10) (MLRA 147, 148) Mura 147, 148) Mura 146, 148, 148, 148, 148, 148, 148, 148, 148	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4) _ Stratified Layers (A5) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) _ Histosol (A1) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Coast Prairie Redo (MLRA 147, 148) _ (MLRA 147, 148) _ Piedmont Floodplate (MLRA 136, 147) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (MLRA 136, 147) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Piedmont Floodplate (MLRA 147, 148) _ Nedox Depleted Matrix (F2) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (F6) _ Other (Explain in Factor (F7)) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
ydric Soil Indicators: _ Histosol (A1) _ Histic Epipedon (A2) _ Black Histic (A3) _ Hydrogen Sulfide (A4) _ Stratified Layers (A5) _ Depleted Below Dark Surface (A11) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) _ Histosol (A1) _ Polyvalue Below Surface (S8) (MLRA 147, 148) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Coast Prairie Redo (MLRA 147, 148) _ (MLRA 147, 148) _ Piedmont Floodplate (MLRA 136, 147) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (MLRA 136, 147) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (F6) _ Polyvalue Below Surface (S9) (MLRA 147, 148) _ Piedmont Floodplate (MLRA 147, 148) _ Nedox Depleted Matrix (F2) _ Piedmont Floodplate (MLRA 136, 147) _ Very Shallow Dark (F6) _ Other (Explain in Factor (F7)) _ Thick Dark Surface (A12) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 136)	matic Hydric Soils (MLRA 147) lox (A16)
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136)	(MLRA 147) lox (A16)
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redomeration of MLRA 147, 148) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplate Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) Piedmont Floodplate Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Field Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136)	lox (A16)
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 144) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplate (MLRA 136, 147) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) Thick Dark Surface (A11) Depleted Dark Surface (F6) Very Shallow Dark (Explain in Factor of Facto	, ,
_ Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodpla _ Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 14' _ 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark _ Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in F _ Thick Dark Surface (A12) Redox Depressions (F8) _ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136)	l8)
Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Media Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
_ 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark _ Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in F _ Thick Dark Surface (A12) Redox Depressions (F8) _ Sandy Mucky Mineral (S1) (LRR N, _ MLRA 147, 148) MLRA 136)	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136)	Remarks)
MLRA 147, 148) MLRA 136)	
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Indicators of hydrop	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology r Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or	
estrictive Layer (if observed):	рговієтнаціс.
Type:	
• -	s No_
Depth (inches): Hydric Soil Present? Yes	s No
NO HYDRIC SOIL INDICATORS ARE MET.	

Project/Site: MVP Southgate	City/County: Rockingham County Sampling Date: 2024-08-27
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-B069a
Investigator(s):AC, LC	Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace/floodplain Loc	cal relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): P 136 Lat: 36.5255580	8 Long:79.64853518 Datum: NAD 83
	lopes, frequently flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly of	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	blematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No Voc Voc No No No No No No No No No	within a Wetland? Yes No
Wetland Hydrology Present? Yes V No	
Remarks:	
	lent Precipitation Tool indicates wetter than normal conditions 3 hydrology, vegetation, and soils from poor farming practices,
resulting in an isolated feature that does not connect dow	
resulting in an isolated reature that does not connect dow	Trailey to any ficality worlds.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Pla	
High Water Table (A2) Hydrogen Sulfid	
	spheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Rec	
Sediment Deposits (B2) Recent Iron Rec	duction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surfa	
Algal Mat or Crust (B4) Other (Explain in	
Iron Deposits (B5)	✓ Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches)	
Water Table Present? Yes No Depth (inches).	
Saturation Present? Yes No Depth (inches) (includes capillary fringe)	: Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photo:	s, previous inspections), if available:
Remarks:	
Indicators D2 and D5 are present.	
indicators be and be are present.	

/EGETATION (Four Strata) – Use scientific	names of	plants.		Sampling Point: SP-B069a
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				Dersont of Deminant Charles
5	_			Percent of Dominant Species That Are OBL, FACW, or FAC: 60.00 (A/B)
6				
7				Prevalence Index worksheet:
		= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover:	20% of	total cover	:	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FACW species <u>55</u> x 2 = <u>110</u>
1				FAC species 25 x 3 = 75
2				FACU species <u>50</u> x 4 = <u>200</u>
3				UPL species <u>0</u>
4				Column Totals: <u>130</u> (A) <u>385</u> (B)
5				2.00
6				Prevalence Index = B/A = 2.96
				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
9		- Total Car		✓ 3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 /0 01	total covci		data in Remarks or on a separate sheet)
1. Boehmeria cylindrica	20	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Lonicera japonica	20		FACU	
3. Juncus effusus	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
_{3.} cunicus cirusus _{4.} Rubus argutus	15		FACU	be present, unless disturbed or problematic.
_{4.} Toxicodendron radicans	15		FAC	Definitions of Four Vegetation Strata:
6. Chamaecrista fasciculata	10		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Eupatorium serotinum	10		FAC	more in diameter at breast height (DBH), regardless of
	10		FACW	height.
8. Persicaria pensylvanica			FACW	Sapling/Shrub – Woody plants, excluding vines, less
9. Diodia virginiana	_ 5			than 3 in. DBH and greater than or equal to 3.28 ft (1
10.Solidago altissima	_ 5		FACU	m) tall.
_{11.} Vernonia noveboracensis	5		<u>FACW</u>	Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>65.0</u>	<u>0</u> 20% of	total cover	26.00	Woody vine – All woody vines greater than 3.28 ft in
Noody Vine Stratum (Plot size: 30 ft r)				height.
1				
<u>2</u>				
3	_			
4				Hydrophytic
5				Vegetation
		= Total Co	ver	Present? Yes _ No
50% of total cover:	20% of	total cover	:	
Remarks: (Include photo numbers here or on a separate	sheet.)			
Dominance test indicator is met.				

Depth	Matrix Orlinois 10	Redox Features	- .	
(inches)	Color (moist) %	Color (moist) % Type ¹ Loc ²	<u>Texture</u>	Remarks
0 - 20	10YR 5/3		Clay Loam	
-				
				_
-				
-				
_				
-				
_				
		=Reduced Matrix, MS=Masked Sand Grains.		L=Pore Lining, M=Matrix.
lydric Soil I	ndicators:		Indic	ators for Problematic Hydric Soils ³ :
Histosol		Dark Surface (S7)	2	cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,	148) C	Coast Prairie Redox (A16)
Black His	stic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)
	n Sulfide (A4)	Loamy Gleyed Matrix (F2)	P	Piedmont Floodplain Soils (F19)
	l Layers (A5)	Depleted Matrix (F3)		(MLRA 136, 147)
	ck (A10) (LRR N)	Redox Dark Surface (F6)		ery Shallow Dark Surface (TF12)
	d Below Dark Surface (A11)	Depleted Dark Surface (F7)	<u>~</u> C	Other (Explain in Remarks)
	ark Surface (A12)	Redox Depressions (F8)		
	lucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,		
	A 147, 148)	MLRA 136)	3.	
	sleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)		licators of hydrophytic vegetation and
			X) \\/ <i>(</i>	etland hydrology must be present,
Sandy R		Piedmont Floodplain Soils (F19) (MLRA 14		
Stripped	Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147		less disturbed or problematic.
Stripped Restrictive L				
Stripped Restrictive L Type:	Matrix (S6) Layer (if observed):) un	less disturbed or problematic.
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (incommerce) Remarks:	Matrix (S6) Layer (if observed): Ches):) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes V No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (incommerce) Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (incommerce) Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (incommerce) Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (incommerce) Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No
Stripped Restrictive L Type: Depth (inc Remarks:	Matrix (S6) Layer (if observed): Ches):	Red Parent Material (F21) (MLRA 127, 147) un	Present? Yes No

Project/Site: MVP Southgate		City/County: Rockingham (County S	sampling Date: 2024-08-27	
Applicant/Owner: Mountain Vall				Sampling Point: SP-B069b	
Investigator(s):AC, LC		Section, Township, Range:			
Landform (hillslope, terrace, etc.):					
Subregion (LRR or MLRA): P 136					
Soil Map Unit Name: DaA - Dan					
Are climatic / hydrologic conditions	on the site typical for this time of y	ear? Yes No	(If no, explain in Ren	narks.)	
Are Vegetation, Soil	_, or Hydrology significantly	y disturbed? Are "Norma	Circumstances" pre	sent? Yes No	
Are Vegetation, Soil	_, or Hydrology naturally pr	oblematic? (If needed, e	explain any answers	in Remarks.)	
SUMMARY OF FINDINGS	- Attach site map showing	g sampling point location	ons, transects, i	mportant features, etc.	
Hydrophytic Vegetation Present?	Yes No 🗸				
Hydric Soil Present?	Yes No ✓	Is the Sampled Area	Voo	No. 4	
Wetland Hydrology Present?	Yes No 🗸	within a Wetland?	Yes	No 🗸	
Remarks:					
I Inland sample plot a	ndjacent to PEM W-A0	53 The USACE An	tacadant Dra	ocinitation Tool	
	•			cipitation roof	
Indicates wetter than	n normal conditions 3	months prior to sur	vey.		
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indicato	rs (minimum of two required)	
	one is required; check all that apply)		Surface Soil Cr	·	
Surface Water (A1)	True Aquatic F	<u> </u>		tated Concave Surface (B8)	
High Water Table (A2)	Hydrogen Sulf		Drainage Patte		
Saturation (A3)		ospheres on Living Roots (C3)	Moss Trim Lines (B16)		
Water Marks (B1)	Presence of R		Dry-Season Wa		
Sediment Deposits (B2)		eduction in Tilled Soils (C6)	Crayfish Burrov		
Drift Deposits (B3)	Thin Muck Sui	face (C7)	Saturation Visit	ole on Aerial Imagery (C9)	
Algal Mat or Crust (B4)	Other (Explain	in Remarks)	Stunted or Stre	ssed Plants (D1)	
Iron Deposits (B5)			Geomorphic Po	osition (D2)	
Inundation Visible on Aerial I	magery (B7)		Shallow Aquita	rd (D3)	
Water-Stained Leaves (B9)			Microtopograph	nic Relief (D4)	
Aquatic Fauna (B13)			FAC-Neutral Te	est (D5)	
Field Observations:					
	es No Depth (inches				
	es No 🔽 Depth (inches			,	
	es No V Depth (inches	S): Wetland H	lydrology Present?	Yes No	
(includes capillary fringe) Describe Recorded Data (stream	gauge, monitoring well, aerial phot	os, previous inspections), if ava	ilable:		
Remarks:					
No indicators are pre	esent.				
i					

EGETATION (Four Strata) – Use scientific	names of p	Jiants.		Sampling Point: SP-B069b
20.4		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.00 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
F00/ of total acres		Total Cov		OBL species 10 x 1 = 10
50% of total cover:	20% 01 t	.otai cover:	<u> </u>	FACW species $0 \times 2 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r)				FAC species 15 x 3 = 45
1				FACU species 70
2				UPL species 0 $x = 0$
3				Column Totals: 95 (A) 335 (B)
1				
5				Prevalence Index = B/A = 3.52
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
3				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
E0% of total cover:		Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: Herb Stratum (Plot size: 5 ft r)	20% 011	.otal cover.		data in Remarks or on a separate sheet)
1. Rubus argutus	30	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Solidago altissima	20		FACU	
3. Lespedeza cuneata			FACU	¹ Indicators of hydric soil and wetland hydrology must
Toxicodendron radicans	15		FAC	be present, unless disturbed or problematic.
5. Carex Iurida	10		OBL	Definitions of Four Vegetation Strata:
5. Chamaecrista fasciculata			FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
*: <u></u>				more in diameter at breast height (DBH), regardless of
7				height.
8		-		Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11	 95 _			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 47.		Total Cov		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30 ft r)	20 /0 01 1	otal cover.	10.00	Woody vine – All woody vines greater than 3.28 ft in
				height.
2				
3				
45.				Hydrophytic
5				Vegetation Present? Yes No ✓
		= Total Cov total cover:		
50% of total cover:	20% of t			
	000/ 5/	total cover		

Depth	Matrix	<u></u> %	Redox Features	Loc ²	Fassits sma	Daman	
inches)	Color (moist)		Color (moist) % Type ¹		<u> Fexture</u>	Remarl	KS
0 - 20	10YR 3/6	100		<u>Cl</u>	ay Loam		
-							
-							
					 -		
-							
_							
	-						
	-						
/pe: C=C	oncentration. D=De	pletion. RM=R	Reduced Matrix, MS=Masked Sand Grain	ns. ² Lo	cation: PL=	=Pore Lining, M=Mat	rix.
	Indicators:	,				ors for Problematic	
Histosol			Dark Surface (S7)			m Muck (A10) (MLR	
	pipedon (A2)		Polyvalue Below Surface (S8) (MLI	RA 147, 148		ast Prairie Redox (A	
Black Hi			Thin Dark Surface (S9) (MLRA 147			(MLRA 147, 148)	,
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	, -,		edmont Floodplain Sc	oils (F19)
	d Layers (A5)		Depleted Matrix (F3)			(MLRA 136, 147)	,
	ick (A10) (LRR N)		Redox Dark Surface (F6)			ry Shallow Dark Surf	ace (TF12)
	d Below Dark Surfa	ce (A11)	Depleted Dark Surface (F7)			ner (Explain in Rema	
_ Thick Da	ark Surface (A12)		Redox Depressions (F8)				
_ Sandy M	lucky Mineral (S1)	(LRR N,	Iron-Manganese Masses (F12) (LR	RR N,			
MLRA	A 147, 148)		MLRA 136)				
_ Sandy G	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136,	122)	³ Indic	ators of hydrophytic	vegetation and
_ Sandy R	tedox (S5)		Piedmont Floodplain Soils (F19) (N	ILRA 148)	wetla	and hydrology must b	oe present,
_ Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA	127, 147)	unle	ss disturbed or probl	ematic.
estrictive l	_ayer (if observed)):					
Type:			<u></u>				
Depth (in	ches):			н	ydric Soil P	Present? Yes	No 🖍
emarks:					-		
	o indicators	are pres	ent.				
	o maioatoro	a. o p. oo					

Project/Site: MVP Southgate Project NC	ity/County: Eden/Rockingham Sampling Date: 2024-06-12
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B070
Investigator(s):ES, LC, PM	Section, Township, Range: P 136
	al relief (concave, convex, none): Concave Slope (%): 0-1
	Long: -79.65324675 Datum: NAD 83
	oes, rarely flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly d	isturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally prob	
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Yes Yes No V	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No 🗸	
Precipitation Tool indicates normal conditions w	d wetland in fallow field. The USACE Antecedent vere present 3 months prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Pla	
High Water Table (A2) Hydrogen Sulfide	
	pheres on Living Roots (C3) Moss Trim Lines (B16) luced Iron (C4) Dry-Season Water Table (C2)
	uction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface	
Algal Mat or Crust (B4) Other (Explain in	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):_	
Water Table Present? Yes No Depth (inches):_	
Saturation Present? Yes No Depth (inches):_ (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if available:
Remarks:	
Indicator D2 is present.	

'EGETATION (Four Strata) – Use scientific r	ames of	plants.		Sampling Point: SP-B070
20.65 %	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4. <u> </u>		-		Percent of Dominant Species
5		-		That Are OBL, FACW, or FAC: 33.33 (A/B
6				Prevalence Index worksheet:
7				
	:	= Total Cov	er	
50% of total cover:	20% of	total cover		x :
Sapling/Shrub Stratum (Plot size: 15 ft r				17.617 species x2
1				1 AC species X 3 =
2				FACU species 50 x 4 = 200
3				UPL species $\frac{10}{200}$ x 5 = $\frac{50}{240}$
4				Column Totals: 90 (A) 340 (B)
5				Prevalence Index = B/A = 3.77
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
		= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:	20% of	total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)				data in Remarks or on a separate sheet)
1. Rumex crispus	30	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Vernonia angustifolia	30	~	FACU	
3. Lespedeza cuneata	20	~	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Bromus inermis	10		UPL	
5				Definitions of Four Vegetation Strata:
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.		-		more in diameter at breast height (DBH), regardless of height.
8		-		Holght.
o	· - 			Sapling/Shrub – Woody plants, excluding vines, less
10.				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	·	-		,
11	90	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45.00				of size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size: 30 ft r)	20 70 01	total cover		Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation Present? Yes No ✓
500/ 51.1.1		= Total Cov		
	20 /6 01	total cover.		
	20% of	total cover.		

Depth	<u>Matrix</u>	0/		x Feature		1 2	- .	5 .	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 2	7.5YR 3/1	100							
2 - 20	10YR 5/3	95	7.5YR 5/6	5	С	M			
-									
_									
					-				
	-					<u> </u>			
-			· -				<u> </u>		
_									
	-					· ——			
		_	· -						
			. ,				<u> </u>		
vpe: C=C	oncentration, D=De	epletion, RN	1=Reduced Matrix, M	S=Masked	I Sand Gr	ains.	² Location: PL=F	Pore Lining, M=Matrix.	
	Indicators:	<u> </u>	,				Indicator	rs for Problematic Hyd	dric Soils³:
_ Histosol	I (A1)		Dark Surface	e (S7)				Muck (A10) (MLRA 14	
	pipedon (A2)		Polyvalue Be	. ,	ce (S8) (N	/ILRA 147,		st Prairie Redox (A16)	,
	istic (A3)		Thin Dark S		. , .		· —	ILRA 147, 148) `	
	en Sulfide (A4)		Loamy Gley			, ,	•	mont Floodplain Soils (l	F19)
	d Layers (A5)		Depleted Ma		,			ILRA 136, 147)	,
	uck (A10) (LRR N)		Redox Dark		·6)		•	Shallow Dark Surface	(TF12)
	d Below Dark Surfa	ice (A11)	Depleted Da	rk Surface	(F7)			r (Explain in Remarks)	,
_ Thick Da	ark Surface (A12)		Redox Depr	essions (F	8)				
_ Sandy N	Mucky Mineral (S1)	(LRR N,	Iron-Mangar	ese Mass	es (F12) (LRR N,			
MLR	A 147, 148)		MLRA 13	36)					
_ Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ace (F13) (MLRA 13	36, 122)	³ Indicat	ors of hydrophytic vege	etation and
Sandy F	Redox (S5)		Piedmont Fl	oodplain S	oils (F19)	(MLRA 14	48) wetlar	nd hydrology must be pr	resent,
Stripped	d Matrix (S6)		Red Parent	Material (F	21) (MLR	A 127, 147	7) unless	s disturbed or problema	tic.
estrictive	Layer (if observed	l):							
Type:									
Depth (in	ches):						Hydric Soil Pre	esent? Yes	No 🗸
emarks:									
	lo indicators	are pr	esent.						
	io maioatore	are pr	000111.						

Project/Site: MVP Southgate Project NC	City/County: Ec	den/Rockingham	Sampling Date: 2024-06-17
Applicant/Owner: Mountain Valley Pipeline LLC		State: North Carolin	
Investigator(s):ES, JM	Section, Towns		_ , , ,
		ve, convex, none): Convex	Slope (%): 2
Subregion (LRR or MLRA): P 136 Lat: 3			
Soil Map Unit Name: BaB - Banister loam, 0 to 4			
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Are "Normal Circumstances" pr	resent? Yes No
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site ma			
Vis	No	<u> </u>	
Hydrophytic Vegetation Present? Hydric Soil Present? Yes Yes	No V Is the Sa	ampled Area	No d
Wetland Hydrology Present?	No v within a	Wetland? Yes	No 🗸
Remarks:			
Upland sample plot adjacent to PFO W-B0	N5 Vegetation and h	vdrology significantly dis	turbed by natural dae
pipeline right-of-way. The USACE Antece	•		
1	dent Precipitation Tot	n indicates normal condit	ilons were present 5
months prior to survey.			
HYDROLOGY			
Wetland Hydrology Indicators:		·	ors (minimum of two required)
Primary Indicators (minimum of one is required; check a		Surface Soil (
	rue Aquatic Plants (B14)		etated Concave Surface (B8)
	lydrogen Sulfide Odor (C1)	Drainage Patt	
	oxidized Rhizospheres on Livir resence of Reduced Iron (C4)		Vater Table (C2)
	ecent Iron Reduction in Tilled		
	hin Muck Surface (C7)		sible on Aerial Imagery (C9)
	other (Explain in Remarks)		ressed Plants (D1)
Iron Deposits (B5)		Geomorphic F	
Inundation Visible on Aerial Imagery (B7)		Shallow Aquit	
Water-Stained Leaves (B9)			ohic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral	Test (D5)
Field Observations:			
	Depth (inches):		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Present	? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous insp	 pections), if available:	
Damada			
Remarks:			
Indicator D5 is present.			

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B090
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	Status	Number of Dominant Species
1. Liquidambar styraciflua	20		FAC	That Are OBL, FACW, or FAC: 6 (A)
2. Quercus alba	10		FACU	Total Number of Dominant
3. Salix nigra	10		OBL	Species Across All Strata: 7 (B)
4. Carpinus caroliniana	10		FAC	
5. Ulmus rubra	10	✓	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)
6				That the OBE, Thow, STITE:
7				Prevalence Index worksheet:
	60	= Total Cov	<u></u>	Total % Cover of: Multiply by:
50% of total cover: _30.00				OBL species <u>20</u> x 1 = <u>20</u>
Sapling/Shrub Stratum (Plot size: 15 ft r)			_	FACW species <u>0</u> x 2 = <u>0</u>
1				FAC species 50 x 3 = 150
2				FACU species 10 x 4 = 40
3				UPL species $0 \times 5 = 0$
4				Column Totals: <u>80</u> (A) <u>210</u> (B)
5				
•				Prevalence Index = B/A = 2.62
•				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
5 ft r	20% 01	lotal cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 3111) 1. Microstegium vimineum	10	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ludwigia peploides	10		OBL	
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 10.00	20% of	total cover:	4.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes V No No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			
Dominance test is passed.				

Depth	Matrix	%	Redox Features	oc² Textu	ro Domortic
inches)	Color (moist)		Color (moist) % Type ¹ L		
0 - 21	7.5YR 4/6	100		Silt Lo	am_
-					
_					
					
-					
-					
	-				
vpe: C=C	oncentration, D=De	oletion, RM=R	Reduced Matrix, MS=Masked Sand Grains	Locatio	on: PL=Pore Lining, M=Matrix.
	Indicators:	•	,		ndicators for Problematic Hydric Soils ³ :
_ Histosol	(A1)		Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Below Surface (S8) (MLR	A 147, 148)	Coast Prairie Redox (A16)
	stic (A3)		Thin Dark Surface (S9) (MLRA 147,		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	_	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)	_	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark Surface (F6)	_	Very Shallow Dark Surface (TF12)
_ Deplete	d Below Dark Surface	ce (A11)	Depleted Dark Surface (F7)	<u>-</u>	Other (Explain in Remarks)
_ Thick Da	ark Surface (A12)		Redox Depressions (F8)		
_ Sandy N	Mucky Mineral (S1)	LRR N,	Iron-Manganese Masses (F12) (LRI	R N,	
MLR	A 147, 148)		MLRA 136)		
Sandy C	Bleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 1	22)	³ Indicators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Floodplain Soils (F19) (MI	_RA 148)	wetland hydrology must be present,
	l Matrix (S6)		Red Parent Material (F21) (MLRA 1	27, 147)	unless disturbed or problematic.
estrictive	Layer (if observed)	:			
Type:			<u></u>		
Depth (in	ches):			Hydrid	: Soil Present? Yes No 🚩
lemarks:					
	o indicators	are pres	sent.		
		a. o p. oo			

Project/Site: MVP Southgate Project NC City/C	County: Eden/Rockingham Sampling Date: 2024-06-17						
•	State: North Carolina Sampling Point: SP-B091						
EC IVA	on, Township, Range:						
andform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-1							
Subregion (LRR or MLRA): P 136 Lat: 36.53428439							
Soil Map Unit Name: BaB - Banister loam, 0 to 4 percent slopes							
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally problems							
	npling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No Yes No No No Hydric Soil Present?	Is the Sampled Area within a Wetland? Yes No						
Wetland Hydrology Present? Yes V No	within a Wetland? Yes No						
Remarks:							
Wetland sample plot within PFO W-B045. Vegetation an pipeline right-of-way. The USACE Antecedent Precipitation months prior to survey							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (High Water Table (A2) Hydrogen Sulfide Od Saturation (A3) Oxidized Rhizospher Water Marks (B1) Presence of Reducer Sediment Deposits (B2) Recent Iron Reduction Drift Deposits (B3) Thin Muck Surface (Context (B4)) Iron Deposits (B5) Other (Explain in Renduction (Explain in Renduction Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): (includes capillary fringe) No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, presented to	Surface Soil Cracks (B6) (B14) Sparsely Vegetated Concave Surface (B8) for (C1) Drainage Patterns (B10) fees on Living Roots (C3) Moss Trim Lines (B16) for In Tilled Soils (C6) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) marks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No						
Indicators A2, A3, D2 and D5 are present.							

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B091
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	20		FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Carpinus caroliniana	15		FAC	Total Number of Dominant
3. Fraxinus pennsylvanica	10		FACW	Species Across All Strata: 5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
6				That rice OBE, Triott, Stiffe.
7				Prevalence Index worksheet:
	45	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 22.50				OBL species 10 x 1 = 10
Sapling/Shrub Stratum (Plot size: 15 ft r)	_	•		FACW species 30 x 2 = 60
1				FAC species 80 x 3 = 240
2				FACU species <u>0</u> x 4 = <u>0</u>
				UPL species 0 x 5 = 0
3				Column Totals: 120 (A) 310 (B)
4				(b)
5				Prevalence Index = B/A = 2.58
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 ft r)				Problematic Hydrophytic Vegetation¹ (Explain)
1. Microstegium vimineum	45		FAC	Problematic Hydrophytic Vegetation (Explain)
2. Impatiens capensis	20		FACW	The disease of booking and conditioned booking as a second
3. Ludwigia peploides	10		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation offata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
· ·				neight.
8	-			Sapling/Shrub – Woody plants, excluding vines, less
9	-			than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Tity can:
11	75			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 37.50		= Total Cov		of size, and woody plants less than 3.28 ft tall.
·	20% 01	total cover.	13.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes V No No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate si	heet.)			-
Daminanaa taat ia naasad				
Dominance test is passed.				

Profile Desc	ription: (Describe	to the de	pth needed to docur	ment the	indicator	or confirn	n the absence o	f indicators.)
Depth	Matrix		Redo	x Feature	es.			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 12	7.5YR 5/1	70	7.5YR 5/4	5	<u>C</u>	M	Silty Clay	
0 - 12	10YR 4/2	25					Silty Clay	
12 - 21	10YR 5/1	100	<u> </u>		·		Sandy Clay Loam	
		_						
-								
-								
		_				-		
	-		-					
		_		-				
		<u> </u>						
1 _{T. max} 0-0		DA	A-Dadwaad Matrix M				21	- Doug Lining M-Metric
Hydric Soil I		oletion, RI	M=Reduced Matrix, MS	S=Maske	d Sand Gr	ains.		=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)				m Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		nce (S8) (I	/II RΔ 147		ast Prairie Redox (A16)
Black Hi			Tolyvalde Be					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			141, 140)		edmont Floodplain Soils (F19)
	I Layers (A5)		<u>✓</u> Depleted Ma		(1 2)			(MLRA 136, 147)
	• '		Redox Dark		-0)			
	ck (A10) (LRR N)	o (A11)	Redox Dark	,	,			ry Shallow Dark Surface (TF12)
	Below Dark Surfac	e (ATT)			. ,		011	ner (Explain in Remarks)
	ark Surface (A12)	I DD N	Redox Depre			I DD N		
	lucky Mineral (S1) (LKK N,	Iron-Mangan		665 (F 12) (LKK N,		
	147, 148)		MLRA 13	-	/MI DA 44	00 400\	31,	ators of budges budges and
	leyed Matrix (S4)		Umbric Surfa					ators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					and hydrology must be present,
	Matrix (S6)		Red Parent N	Material (F	-21) (ML R	RA 127, 14	7) unle	ss disturbed or problematic.
	_ayer (if observed)	:						
Type:								,
Depth (inc	ches):						Hydric Soil P	Present? Yes V No No
Remarks:								
In	dicator F3 is	s prese	ent.					

Project/Site: MVP Southgate Project NC	City/County: Eden/Rockingham Sampling Date: 2024-06-05						
Applicant/Owner: Mountain Valley Pipeline LLC	State: North Carolina Sampling Point: SP-B102						
Investigator(s):ES, LC Section, Township, Range:							
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1							
Subregion (LRR or MLRA): P 136 Lat: 36.50159731 Long: -79.67157062 Datum: NAD 83							
	cent slopes, frequently flooded NWI classification:						
	ime of year? Yes No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology na	turally problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map s	howing sampling point locations, transects, important features, etc						
Hydronhytic Vegetation Present? Yes ✔ No	,						
Hydrophytic Vegetation Present? Hydric Soil Present? Yes V No	Is the Sampled Area						
Wetland Hydrology Present? Yes ✓ No	within a Wetland? Yes No						
Remarks:	l						
W	000 TL 11040EA :						
Wetland sample plot within PFO W-B	006. The USACE Antecedent Precipitation Tool						
indicates normal conditions were pre	sent 3 months prior to survey.						
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all the							
Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (
High Water Table (A2)							
	ted Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)						
	nce of Reduced Iron (C4) Dry-Season Water Table (C2)						
	at Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8)						
	Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) (Explain in Remarks) Stunted or Stressed Plants (D1)						
Iron Deposits (B5)	Geomorphic Position (D2)						
✓ Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)						
Water-Stained Leaves (B9)	Microtopographic Relief (D4)						
Aquatic Fauna (B13)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No Dept	n (inches):						
Water Table Present? Yes No Dept							
Saturation Present? Yes No Dept	· · · · · · · · · · · · · · · · · · ·						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, as	rial photos, previous inspections) if available:						
besome recorded bata (stream gauge, monitoring well, at	mai priotos, previous inspections), il avallable.						
Remarks:							
Indicators B7 and D2 are present.							
maioatoro B7 ana B2 are present.							

50% of total cover: 50.00

20 = Total Cover

Vegetation

Present?

50% of total cover: 35.00 20% of total cover: 14.00

50% of total cover: 50.00 20% of total cover: 20.00

50% of total cover: 10.00 20% of total cover: 4.00

Tree Stratum (Plot size: 30 ft r

3. Carpinus caroliniana

Sapling/Shrub Stratum (Plot size: 15 ft r)

4. Nyssa sylvatica

1. Liquidambar styraciflua

4. Pinus taeda

1. Liriodendron tulipifera

Herb Stratum (Plot size: 5 ft r 1. Microstegium vimineum 2. Dulichium arundinaceum

4. Polystichum acrostichoides

3. Impatiens capensis

3. Carpinus caroliniana

2. Acer rubrum

2. Acer rubrum

ames of	plants.		Sampling Point: SP-B102
Absolute	Dominant		Dominance Test worksheet:
% Cover 40	Species?	FAC	Number of Dominant Species
30		FAC	That Are OBL, FACW, or FAC: 6 (A)
25		FAC	Total Number of Dominant
5		FAC	Species Across All Strata: 7 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)
			Prevalence Index worksheet:
100	- Total Cav		Total % Cover of: Multiply by:
	= Total Cov total cover:		OBL species 10 x 1 = 10
2070 01	total oover.		FACW species 10 x 2 = 20
30	~	FACU	FAC species 230 x 3 = 690
25	~	FAC	FACU species 40 x 4 = 160
10		FAC	UPL species <u>0</u> x 5 = <u>0</u>
5		FAC	Column Totals: <u>290</u> (A) <u>880</u> (B)
			Prevalence Index = B/A = 3.03
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
70 :	= Total Cov	er	3 - Prevalence index is \$3.0 4 - Morphological Adaptations ¹ (Provide supporting
20% of	total cover:	14.00	data in Remarks or on a separate sheet)
70	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
10		OBL	
10		FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
10		FACU	
			Definitions of Four Vegetation Strata:
		<u> </u>	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.
	= Total Cov total cover:		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
_	iolai covel.		Woody vine – All woody vines greater than 3.28 ft in height.
20		FAC	Hydrophytic

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

Woody Vine Stratum (Plot size: 30 ft r) 1. Vitis rotundifolia

Dominance test is passed.

Yes ____ No ____

Profile Desc	ription: (Describe	to the de	oth needed to docu	ment the	indicator	or confirr	n the absence of in	dicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 5/2	60	7.5YR 5/8	10	С	М	Sandy Clay Loam	_
0 - 4	10YR 6/2	30					Sandy Clay Loam	_
4 - 12	10YR 5/3	85	7.5YR 5/8	15	С	М	Sandy Clay Loam	
12 - 21	10YR 6/2	70	10YR 6/6	30	С	М	Sandy Clay Loam	
		- (-				
					_			
					_			
					_			
		letion, RM	I=Reduced Matrix, M	S=Maske	d Sand G	ains.		re Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface					luck (A10) (MLRA 147)
Histic Ep	ipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (I	VILRA 147	, 148) Coast I	Prairie Redox (A16)
Black His	stic (A3)		Thin Dark Su	urface (S9) (MLRA	147, 148)	(MLI	RA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Piedmo	ont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted Ma					RA 136, 147)
	ck (A10) (LRR N)		Redox Dark		F6)			hallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da					Explain in Remarks)
	rk Surface (A12)	- ()	Redox Depre					,
	ucky Mineral (S1) (I	RR N	Iron-Mangan			(I RR N		
	. 147, 148)		MLRA 13		303 (1 12)	(LIXIX IV,		
				•	/MI D A 14	26 122\	3Indicator	s of hydrophytic vegetation and
	leyed Matrix (S4)		Umbric Surfa					
	edox (S5)		Piedmont Flo					hydrology must be present,
	Matrix (S6)		Red Parent I	viateriai (i	-21) (WLF	KA 127, 14	uniess d	listurbed or problematic.
	.ayer (if observed):							
Type:								_
Depth (inc	ches):						Hydric Soil Pres	ent? Yes No
Remarks:			_					
In	dicator F3 is	prese	ent.					

Project/Site: MVP Southg	ate Projec	t NC		(City/Cour	_{nty:} Eder	n/Rocking	ham	Sampling Dat	e:_2024-06-05
Applicant/Owner: Mountain					-	-			arolina Sampling P	
Investigator(s):EJ, LC				;						
nvestigator(s): EJ, LC Section, Township, Range: _andform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0								Slope (%): 0		
Subregion (LRR or MLRA): P										
Soil Map Unit Name: CmE -										
Are climatic / hydrologic condi										
Are Vegetation, Soil _										✓ No
Are Vegetation, Soil _										
SUMMARY OF FINDIN				• •		,			wers in Remarks.	
30MMART OF THE	- Alla		z map	Silowing	Sampi	ing pon	it locatio	nis, transec	is, important	reatures, etc.
Hydrophytic Vegetation Pres		Yes _		lo	Is	the Sam	oled Area			
Hydric Soil Present?		Yes _		lo 🗸		ithin a We		Yes _	No _ /	<u>, </u>
Wetland Hydrology Present? Remarks:	<u>'</u>	Yes _		lo 🗸						
Upland sample plo indicates normal o	•								Precipitatio	n Tool
HYDROLOGY										
Wetland Hydrology Indicat	ors:							Secondary Ind	icators (minimum	of two required)
Primary Indicators (minimum	of one is rec							Surface Soil Cracks (B6)		
Surface Water (A1)				Aquatic Pla					/egetated Concav	ve Surface (B8)
High Water Table (A2)				ogen Sulfid			Danta (CO)	_	Patterns (B10)	
Saturation (A3)				ized Rhizos ence of Re		_	Roots (C3)	Moss Trim		20)
Water Marks (B1)Sediment Deposits (B2)	1			ent Iron Red			ils (C6)		on Water Table (C Surrows (C8)	,2)
Orift Deposits (B3)		•		Muck Surfa			113 (00)	-	Visible on Aerial	Imagery (C9)
Algal Mat or Crust (B4)		•		er (Explain i					Stressed Plants	
Iron Deposits (B5)		•		` '		,			nic Position (D2)	,
Inundation Visible on Ae	erial Imagery	(B7)						Shallow A	quitard (D3)	
Water-Stained Leaves (B9)							Microtopo	graphic Relief (D4	1)
Aquatic Fauna (B13)								FAC-Neut	ral Test (D5)	
Field Observations:										
Surface Water Present?				oth (inches)						
Water Table Present?				oth (inches)						.,
Saturation Present? (includes capillary fringe)	Yes	_ No	Dep	oth (inches)	:		Wetland F	lydrology Pres	sent? Yes	No
Describe Recorded Data (str	ream gauge,	monitori	ng well, a	erial photo	s, previou	us inspect	ions), if ava	ilable:		
Remarks:										
No indicators are	present.	,								

EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B103
00.6	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)		Species?		Number of Dominant Species
_{1.} Pinus taeda	10		FAC	That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across All Strata: 6 (B)
4.	•	· ·		
5				Percent of Dominant Species That Are OBL FACW or FAC: 66.66 (A/R)
_				That Are OBL, FACW, or FAC: 66.66 (A/B)
5	· -			Prevalence Index worksheet:
7	10	· 		Total % Cover of: Multiply by:
500/ 51.1. 5.00		= Total Cov		OBL species 0 $x 1 = 0$
50% of total cover: <u>5.00</u>	20% of	total cover:	2.00	FACW species 0 x 2 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)	20	_	540	100
1. Acer rubrum	30		FAC	I
Liriodendron tulipifera	30		FACU	FACU species 40 x 4 = 160
3. Liquidambar styraciflua	25	~	FAC	UPL species $0 \times 5 = 0$
1				Column Totals: 140 (A) 460 (B)
5				2.00
				Prevalence Index = B/A = 3.28
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
B		· 		✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations¹ (Provide supporting
50% of total cover: 42.50	20% of	total cover:	17.00	
Herb Stratum (Plot size: 5 ft r)				data in Remarks or on a separate sheet)
1				Problematic Hydrophytic Vegetation ¹ (Explain)
2.				
•		<u> </u>		¹ Indicators of hydric soil and wetland hydrology must
3		· 		be present, unless disturbed or problematic.
4	-			Definitions of Four Vegetation Strata:
5				Tree Mondy plants evaluding vines 2 in (7.6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
40		·		m) tall.
	· -			,
11	-			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of	total cover:		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r				height.
_{1.} Vitis rotundifolia	35		F <u>AC</u>	
2. Smilax bona-nox	10	~	FACU	
3				
4				
5.				Hydrophytic
0	45	· 		Vegetation Present? Yes ✓ No
700/ 6/ / 20 50		= Total Cov		1103CHL: 103 110
50% of total cover: 22.50	20% of	total cover:	9.00	
Remarks: (Include photo numbers here or on a separate s	sheet.)			
Dominance test is passed.				
-				

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confir	m the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es		_	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 18	10YR 4/4	80	10YR 4/6	20	<u>C</u>	M	Sandy Clay Loam	
18 - 21	10YR 4/4	100					Sandy Clay Loam	
_	-							
							· 	
						-		
							. <u></u>	
-								
			·			-	· ·	
						-		
		_	<u> </u>				. <u> </u>	
¹ Type: C=C	oncentration D=De	oletion RN	M=Reduced Matrix, M	S=Maske	d Sand G	ains	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil		olotion, ren	Treduced Watth, IVI	o maono	a cana ci	unio.		ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be	. ,	ace (S8) (I	MLRA 147		Coast Prairie Redox (A16)
	stic (A3)		Thin Dark Su				, . ,	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			, . ,	Р	riedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		(- –)			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		F6)		V	ery Shallow Dark Surface (TF12)
	d Below Dark Surfac	ce (A11)	Depleted Da		. ,			Other (Explain in Remarks)
	ark Surface (A12)	, ,	Redox Depre					,
	Mucky Mineral (S1)	LRR N,	Iron-Mangan			(LRR N,		
	A 147, 148)		MLRA 13		, ,			
	Gleyed Matrix (S4)		Umbric Surfa	rce (F13)	(MLRA 1	36, 122)	³ Ind	icators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					etland hydrology must be present,
-	Matrix (S6)		Red Parent N					less disturbed or problematic.
Restrictive	Layer (if observed)	:						
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No
Remarks:							1.,	
	o indicators	are nr	acant					
11	o indicators	are pr	esent.					

Project/Site: MVP Southgate	City/County: Rockingham County Sampling Date: 2024-08-26						
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-B114						
40.10	Section, Township, Range:						
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 Subregion (LRR or MLRA): P 136 Lat: 36.50830043 Long: -79.66523413 Datum: NAD 83							
CmE - Clover sandy learn 15 to 25 no	reent slanes						
	rcent slopes NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year							
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (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 Yes No No No No No No No No No N	Is the Sampled Area within a Wetland? Yes No						
Wetland Hydrology Present? Yes No Remarks:							
indicates wetter than normal conditions 3 r	The USACE Antecedent Precipitation Tool months prior to survey.						
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)							
Surface Water (A1) True Aquatic P							
High Water Table (A2) Hydrogen Sulfi							
Saturation (A3) Oxidized Rhizo Water Marks (B1) Presence of Re							
	eduction in Tilled Soils (C6) Crayfish Burrows (C8)						
Drift Deposits (B3) Thin Muck Surf							
Algal Mat or Crust (B4) Other (Explain							
Iron Deposits (B5)	Geomorphic Position (D2)						
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)						
Water-Stained Leaves (B9)	Microtopographic Relief (D4)						
Aquatic Fauna (B13)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No Depth (inches							
Water Table Present? Yes No Depth (inches):						
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	l os, previous inspections), if available:						
Remarks:							
Indicators B10, D2 and D5 are present.							

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: SP-B114
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?		Number of Dominant Species
1. Liquidambar styraciflua	45		FAC	That Are OBL, FACW, or FAC: 5 (A)
2. Quercus phellos	20		FAC	Total Number of Deminent
3				Total Number of Dominant Species Across All Strata: 6 (B)
4.				
5				Percent of Dominant Species That Are OBL_FACW_or_FAC: 83.33 (A/B)
6				That Are OBL, FACW, or FAC: 83.33 (A/B)
				Prevalence Index worksheet:
7	65	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 32.50				OBL species <u>0</u> x 1 = <u>0</u>
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /6 01	lotal cover.		FACW species 50 x 2 = 100
	15	V	FACW	FAC species 85 x 3 = 255
			IACVV	FACU species 15 x 4 = 60
2				$\begin{array}{cccccccccccccccccccccccccccccccccccc$
3				
4	-			Column Totals: <u>150</u> (A) <u>415</u> (B)
5				Prevalence Index = B/A = 2.76
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	15	= Total Cov	<u></u>	✓ 3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 7.50				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)		·		data in Remarks or on a separate sheet)
1. Agrimonia parviflora	35	✓	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Microstegium vimineum	20		FAC	
3 Rumex obtusifolius	15		FACU	¹ Indicators of hydric soil and wetland hydrology must
		-		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6	-			more in diameter at breast height (DBH), regardless of
7	-			height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	70	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>35.00</u>	20% of	total cover:	14.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1	-			
2				
3				
4				
5.				Hydrophytic Vegetation
<u> </u>		= Total Cov		Present? Yes _ No
50% of total cover:				
Remarks: (Include photo numbers here or on a separate si				
	11001.7			
Dominance test indicator met.				

Profile Desc	ription: (Describe	to the de	pth needed to docur	nent the	indicator	or confirr	n the absence of in	ndicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100	- <u>-</u>		<u> </u>		Clay Loam	
4 - 14	10YR 4/2	65	7.5YR 5/6	5	С	М	Clay Loam	
4 - 14	10YR 4/6	30			· ·	_ (Clay Loam	
14 - 20	5YR 5/3	100			<u> </u>		Clay Loam	
					· ·	- (. <u></u> <u></u>	
			<u> </u>		· ·			
		-						
					· ·	_ (
		_	<u> </u>					
					<u> </u>			
		letion, RN	M=Reduced Matrix, MS	S=Maske	d Sand Gr	ains.		ore Lining, M=Matrix.
Hydric Soil I								s for Problematic Hydric Soils ³ :
Histosol			Dark Surface					Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		. , .		· • —	t Prairie Redox (A16)
Black His			Thin Dark Su			147, 148)		LRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)			nont Floodplain Soils (F19)
Stratified	l Layers (A5)		Depleted Ma	trix (F3)			(ML	LRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (I	F6)		Very S	Shallow Dark Surface (TF12)
Depleted	Below Dark Surfac	e (A11)	Depleted Dar	rk Surface	e (F7)		Other	(Explain in Remarks)
Thick Da	rk Surface (A12)		Redox Depre	essions (F	·8)			
Sandy M	lucky Mineral (S1) (LRR N,	Iron-Mangan	ese Mass	ses (F12) (LRR N,		
-	\ 147, 148)	,	MLRA 13		. ,	•		
	leyed Matrix (S4)		Umbric Surfa	•	(MI RΔ 13	86 122)	³ Indicato	ors of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					d hydrology must be present,
-	Matrix (S6)		Red Parent N					
	_ayer (if observed)		Red Falelit is	viateriai (r	-21) (IVILI	A 121, 14	1) unless	disturbed or problematic.
	-ayer (ii observed)	•						
Type:	- L V-						United a Call Day	
Depth (inc	cnes):						Hydric Soil Pres	sent? Yes No
Remarks:	dicator F3 is	met.						

Project/Site: MVP Southgate	City/County: Rockingham Cou	Inty Sampling Date: 2024-08-26
Applicant/Owner: Mountain Valley Pipeline, LLC		tate: North Carolina Sampling Point: SP-B115
Investigator(s) AC, LC	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Hillslope		
Subregion (LRR or MLRA): P 136 Lat: 36.50		
Soil Map Unit Name: CmE - Clover sandy loam, 15 to	25 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this til	ne of year? Yes No (If no	o, explain in Remarks.)
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed? Are "Normal Circ	cumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed, expla	ain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh		
Hydrophytic Vegetation Present? Hydric Soil Present? Wes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland?	Yes No <u>~</u>
Remarks:	<u> </u>	
Upland sample plot adjacent to PFO W indicates wetter than normal condition		
HYDROLOGY		
Wetland Hydrology Indicators:		condary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that		Surface Soil Cracks (B6)
		Sparsely Vegetated Concave Surface (B8)
	en Sulfide Odor (C1) d Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
	ce of Reduced Iron (C4)	_ Moss Trim Lines (B16) _ Dry-Season Water Table (C2)
	Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
	uck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
	Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)	<u> </u>	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No Depth	(inches):	
Water Table Present? Yes No Depth		
Saturation Present? Yes No Depth		rology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aer	al nhotos, previous inspections), if availab	le·
Decorate News and Data (chodin gauge, memoring weil, act	ar priotos, provious inspositorio,, ir availasi	
Remarks:		
No indicators are present.		

Samplin	na Point	SP-B115

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r		Species?		Number of Dominant Species
1. Acer rubrum	30		FAC	That Are OBL, FACW, or FAC: 4 (A)
2. Pinus taeda	20		FAC	Total Number of Dominant
3. Ulmus alata	20		FACU	Species Across All Strata: 9 (B)
4. Carya glabra	15		FACU	
5. Fagus grandifolia	15		FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 44.44 (A/B)
6. Quercus alba	15		FACU	That Are OBE, I ACW, OF I AC.
7				Prevalence Index worksheet:
	115	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: <u>57.50</u>				OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15 ft r)	20 /0 01	total cover.		FACW species $0 x 2 = 0$
1. Carya glabra	25	~	FACU	FAC species 80 x 3 = 240
	15		FACU	FACU species 145
2. Ulmus alata			IACO	UPL species $0 \times 5 = 0$
3				
4				Column Totals: <u>225</u> (A) <u>820</u> (B)
5				Prevalence Index = B/A = 3.64
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9				2 - Dominance Test is >50%
0	40	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 20.00				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r	20,00.	10101 00101.		data in Remarks or on a separate sheet)
1. Asplenium platyneuron	15	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Lonicera japonica	15		FACU	
	15		FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Smilax rotundifolia				be present, unless disturbed or problematic.
4. Verbesina alternifolia	15		FAC	Definitions of Four Vegetation Strata:
5. Parthenocissus quinquefolia	10		FACU	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
'':	70			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 35.00		= Total Cov		of size, and woody plants less than 3.28 ft tall.
	20% 01	total cover:	14.00	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 30 ft r)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:				
Remarks: (Include photo numbers here or on a separate si	heet.)			
No indicators are present.				

Profile Desc	ription: (Describe	to the dep	th needed to docum	ent the i	ndicator	or confirm	the absence o	f indicators.)	
Depth	Matrix		Redox	Features	3				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 2	10YR 3/3	100					Clay Loam		
2 - 12	10YR 4/4	100					Clay Loam		
12 - 20	10YR 5/4	100					Clay Loam		
-									
-									
-									
								-	
	-								
1 _{Type:} C=C		alatian DM	-Doduced Metrix MC		Cond Cr		² Location: DL	-Doro Lining M-Matrix	
Hydric Soil		oletion, Rivi-	Reduced Matrix, MS	-iviaskeu	Sand Gra	airis.		=Pore Lining, M=Matrix. ors for Problematic Hydric Soils	s ³ :
Histosol			Dark Surface	(S7)				m Muck (A10) (MLRA 147)	
	oipedon (A2)		Polyvalue Bel		ce (S8) (N	II RA 147		ast Prairie Redox (A16)	
Black Hi			Thin Dark Su					(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gleye			41, 140,		edmont Floodplain Soils (F19)	
	Layers (A5)		Depleted Mat		1 2)			(MLRA 136, 147)	
	ick (A10) (LRR N)		Redox Dark S		·6)			ry Shallow Dark Surface (TF12)	
		oo (A11)						ner (Explain in Remarks)	
	d Below Dark Surface	æ (ATT)	Depleted Dar				01	iei (Explain in Remarks)	
	ark Surface (A12)	1 DD N	Redox Depre			DD 11			
	lucky Mineral (S1) (LRR N,	Iron-Mangane		es (F12) (I	LKK N,			
	A 147, 148)		MLRA 136	-			3		
	Bleyed Matrix (S4)		Umbric Surfa					ators of hydrophytic vegetation an	nd
	ledox (S5)		Piedmont Flo					and hydrology must be present,	
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR .	A 127, 147	7) unle	ess disturbed or problematic.	
Restrictive I	_ayer (if observed)	:							
Type:									
Depth (inc	ches):						Hydric Soil F	Present? Yes No 🗸	
Remarks:									
N	o indicators	are pre	esent.						
		•							

Project/Site: MVP Southgate City	//County: Rockingham County Sampling Date: 2024-08-26
	State: North Carolina Sampling Point: SP-B116
	ction, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local r	
Subregion (LRR or MLRA): P 136 Lat: 36.50839664	
Soil Map Unit Name: CmE - Clover sandy loam, 15 to 25 perce	nt slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dist	urbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problem	
	impling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes Yes No Yes No No No Remarks:	Is the Sampled Area within a Wetland? Yes No
Wetland sample plot within W-B052b. The US wetter than normal conditions 3 months prior	•
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Presence of Reduction	Surface Soil Cracks (B6) S (B14) Sparsely Vegetated Concave Surface (B8) Odor (C1) Prainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) (C7) Saturation Visible on Aerial Imagery (C9) Emarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No No
Indicators B10, D2 and D5 are present.	

/EGETATION (Four Strata) – Use scientific i	names of	plants.		Sampling Point: SP-B116
		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3		·		Species Across All Strata: 3 (B)
4	- -			Percent of Dominant Species
5. <u> </u>	- -			That Are OBL, FACW, or FAC: 100.00 (A/B)
6		·		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species 45 x 1 = 45
50% of total cover:	20% of	total cover:		FACW species 30
Sapling/Shrub Stratum (Plot size: 15 ft r) 1 Salix nigra	15	~	OBL	FAC species 40 $\times 3 = 120$
"		. ——	OBL	FACU species $0 \times 4 = 0$
2				UPL species 0 x 5 = 0
3				Column Totals: 115 (A) 225 (B)
4				(1)
5				Prevalence Index = B/A = 1.95
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8	_			✓ 2 - Dominance Test is >50%
9	15	= Total Cov		✓ 3 - Prevalence Index is ≤3.0¹
50% of total cover: 7.50		= Total Cov f total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 /0 01	total cover.		data in Remarks or on a separate sheet)
1. Microstegium vimineum	40	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Bidens aristosa	30		FACW	
3. Carex lurida	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Leersia oryzoides	15		OBL	be present, unless disturbed or problematic.
5				Definitions of Four Vegetation Strata:
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.				more in diameter at breast height (DBH), regardless of height.
8				
9.	_			Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10	_			m) tall.
11.				Harb All berbasses (non woods) plants regardless
	100	= Total Cov	er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50.00	0 20% of	total cover:	20.00	
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes V No No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate	sheet.)			
Dominance test and prevalence inde	y are m	net		
Sommance test and prevalence made	, X GIC III	ict.		

Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirn	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 1	10YR 3/3	100					Silt Loam	
1 - 5	10YR 5/2	97	5YR 4/6	3	С	М	Clay Loam	
5 - 20	10YR 5/3	98	5YR 4/6	2	С	М		
		_	<u></u>			_		
-		_				_,		
		_				_,		
-								
		oletion, RN	1=Reduced Matrix, M	S=Maske	d Sand G	rains.		L=Pore Lining, M=Matrix.
Hydric Soil I								ators for Problematic Hydric Soils ³ :
Histosol	• •		Dark Surface	. ,				cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148) C	Coast Prairie Redox (A16)
Black His			Thin Dark Su			147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodplain Soils (F19)
Stratified	l Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (F6)		V	ery Shallow Dark Surface (TF12)
Depleted	Below Dark Surfac	e (A11)	Depleted Da	rk Surfac	e (F7)		0	Other (Explain in Remarks)
Thick Da	rk Surface (A12)		Redox Depre	essions (F	- 8)			
Sandy M	lucky Mineral (S1) (LRR N,	Iron-Mangan	ese Mass	ses (F12)	(LRR N,		
	\ 147, 148)	,	MLRA 13		, ,	,		
	leyed Matrix (S4)		Umbric Surfa	-	/MIRA1	36 122)	³ Ind	licators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent I	viateriai (i	-21) (WLF	KA 127, 14	<i>/</i>) un	less disturbed or problematic.
Restrictive L	_ayer (if observed)	:						
Type:								,
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:	dianta FO is							
In	dicator F3 is	s met.						

Project/Site: MVP Southgate	City/County: Rockingham County Sampling Date: 2024-08-26
Applicant/Owner: Mountain Valley Pipeline, LLC	State: North Carolina Sampling Point: SP-B117
Investigator(s):AC, LC	Section, Township, Range:
	ocal relief (concave, convex, none): Convex Slope (%): 3
Subregion (LRR or MLRA): P 136 Lat: 36.508396	
Soil Map Unit Name: CmE - Clover sandy loam, 15 to 25 pe	rcent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	
	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes No V No V Remarks:	Is the Sampled Area within a Wetland? Yes No
Upland sample plot adjacent to PEM W-B0 indicates wetter than normal conditions 3	52b. The USACE Antecedent Precipitation Tool months prior to survey.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic F	Plants (B14) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulf	
	ospheres on Living Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of R	
	eduction in Tilled Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Sur	
Algal Mat or Crust (B4) Other (Explain	
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches	
Water Table Present? Yes No Depth (inches	
Saturation Present? Yes No Depth (inches (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:
Remarks:	
No indicators are present.	

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: SP-B117
		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4		· ——		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50.00 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
F00/ of total across		= Total Cov		OBL species 0 $x 1 = 0$
50% of total cover:	20% of	total cover:		FACW species $0 \times 2 = 0$
Sapling/Shrub Stratum (Plot size: 15 ft r) 1. Liquidambar styraciflua	15	~	FAC	FAC species 50 $\times 3 = 150$
2. Ulmus alata	10		FACU	FACU species 60 x 4 = 240
				UPL species 0 x 5 = 0
3				Column Totals: 110 (A) 390 (B)
4				
5				Prevalence Index = B/A = 3.54
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	25			3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 12.50		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5 ft r)	20 /0 01	total cover.		data in Remarks or on a separate sheet)
1. Lespedeza cuneata	35	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Microstegium vimineum	25		FAC	
3. Chamaecrista fasciculata	15	·	FACU	¹ Indicators of hydric soil and wetland hydrology must
4 Dichanthelium clandestinum	10	·	FAC	be present, unless disturbed or problematic.
5.				Definitions of Four Vegetation Strata:
6.		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8		·		
9.		·		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11.		·		
· ·· <u>-</u>	85	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.50				
Woody Vine Stratum (Plot size: 30 ft r)				Woody vine – All woody vines greater than 3.28 ft in height.
1				no.g.m
2				
3				
4				Livedrambystic
5				Hydrophytic Vegetation
		= Total Cov	er	Present? Yes No
50% of total cover:	20% of	total cover:		
Remarks: (Include photo numbers here or on a separate s	heet.)			
No tooto are passed				
No tests are passed.				

Depth	Matrix		Redox Features	T 4	Develope
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0 - 20	10YR 5/4	100		Clay Loam	
-					
-					
	-	 ·			
-					
-					
		<u> </u>			
		 -		-	
-	-	 .			
-					
T 0. 0.			Dadward Matrix MO Made d Oard Oraling	21	N. Dave Liveine M. Madein
	Indicators:	pietion, Rivi=i	Reduced Matrix, MS=Masked Sand Grains.		PL=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
-			Dork Surface (S7)		
Histosol			Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)
Histic Ep Black Hi:	oipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147Thin Dark Surface (S9) (MLRA 147, 148)	, 140) (Coast Prairie Redox (A16) (MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Matrix (F3)	<u> </u>	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark Surface (F6)	\	/ery Shallow Dark Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dark Surface (F7)		Other (Explain in Remarks)
	ark Surface (A12)	,	Redox Depressions (F8)	 ·	,
	lucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,		
	\ 147, 148)	,	MLRA 136)		
			•	3.	
	Bleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	inc	alcators of hydrophytic vegetation and
Sandy G	Bleyed Matrix (S4) Redox (S5)		Umbric Surface (F13) (MLRA 136, 122)Piedmont Floodplain Soils (F19) (MLRA 1		dicators of hydrophytic vegetation and etland hydrology must be present,
Sandy G Sandy R				48) we	
Sandy G Sandy R Stripped	ledox (S5)	:	Piedmont Floodplain Soils (F19) (MLRA 1	48) we	etland hydrology must be present,
Sandy G Sandy R Stripped	ledox (S5) Matrix (S6)		Piedmont Floodplain Soils (F19) (MLRA 1	48) we	etland hydrology must be present,
Sandy G Sandy R Stripped Strictive L Type:	tedox (S5) Matrix (S6) Layer (if observed)		Piedmont Floodplain Soils (F19) (MLRA 1	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Sestrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed)		Piedmont Floodplain Soils (F19) (MLRA 1	48) we	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed)		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Cestrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped Cestrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped Cestrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped estrictive L Type: Depth (included)	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped estrictive L Type: Depth (included)	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
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Sandy G Sandy R Stripped estrictive L Type: Depth (included)	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped estrictive L Type: Depth (included)	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped estrictive L Type: Depth (included)	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, nless disturbed or problematic.
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Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Restrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.
Sandy G Sandy R Stripped Cestrictive L Type: Depth (inc	tedox (S5) Matrix (S6) Layer (if observed) Ches):		Piedmont Floodplain Soils (F19) (MLRA 1 Red Parent Material (F21) (MLRA 127, 14	48) we 7) ur	etland hydrology must be present, lless disturbed or problematic.





Photograph C-1: View of wetland SP-B001 within PEM W-B001, facing east.



Photograph C-2: View of wetland SP-B001 within PEM W-B001, facing west.





Photograph C-3: View of upland SP-B002 adjacent to W-B001, facing east.



Photograph C-4: View of upland SP-B002 adjacent to W-B001, facing west.





Photograph C-5: View of wetland SP-B003 within PFO W-B002, facing east.



Photograph C-6: View of wetland SP-B003 within PFO W-B002, facing west.





Photograph C-7: View of upland SP-B004 west of W-B002, facing northeast.



Photograph C-8: View of upland SP-B004 west of W-B002, facing south.





Photograph C-9: View of wetland SP-B005 within PFO W-B002 and adjacent to S-B001, facing northeast.



Photograph C-10: View of wetland SP-B005 within PFO W-B002 and adjacent to S-B001, facing southwest.





Photograph C-11: View of upland SP-B006 west of W-B002 and east of OW-B001, facing southwest.



Photograph C-12: View of upland SP-B006 west of W-B002 and east of OW-B001, facing northeast.





Photograph C-13: View of wetland SP-B007 within PFO W-B003 and adjacent to S-B003, facing northwest.



Photograph C-14: View of wetland SP-B007 within PFO W-B003 and adjacent to S-B003, facing southeast.





Photograph C-15: View of upland SP-B008 south of W-B003 and W-B051, facing southwest.



Photograph C-16: View of upland SP-B008 south of W-B003 and W-B051, facing northeast.





Photograph C-17: View of wetland SP-B008a within PFO W-B051 and adjacent to S-B003, facing northwest.



Photograph C-18: View of wetland SP-B008a within PFO W-B051 and adjacent to S-B003, facing southeast.



Photograph C-19: View of wetland SP-B009 within PEM W-B004, facing north.



Photograph C-20: View of wetland SP-B009 within PEM W-B004, facing south.





Photograph C-21: View of upland SP-B010 adjacent to PEM W-B004 and PSS W-B004a, facing north.



Photograph C-22: View of upland SP-B010 adjacent to PEM W-B004 and PSS W-B004a, facing south.





Photograph C-23: View of wetland SP-B011 within PEM W-B005, facing north.



Photograph C-24: View of wetland SP-B011 within PEM W-B005, facing west.



Photograph C-25: View of upland SP-B012 northeast of W-B005, facing south.



Photograph C-26: View of upland SP-B012 northeast of W-B005, facing northwest.



Photograph C-27: View of wetland SP-B013 within PEM W-B007, facing west.



Photograph C-28: View of wetland SP-B013 within PEM W-B007, facing east.





Photograph C-29: View of upland SP-B014 south of W-B007 and S-B015, facing northwest.



Photograph C-30: View of upland SP-B014 south of W-B007 and S-B015, facing east.





Photograph C-31: View of wetland SP-B015 within PEM W-B008, facing east.



Photograph C-32: View of wetland SP-B015 within PEM W-B008, facing west.





Photograph C-33: View of upland SP-B016 northwest of PEM W-B008 and adjacent to S-B017, facing southeast.



Photograph C-34: View of upland SP-B016 northwest of PEM W-B008 and adjacent to S-B017, facing north.



Photograph C-35: View of upland SP-B016a west of PEM W-B008, facing northwest.



Photograph C-36: View of upland SP-B016a west of PEM W-B008, facing southeast.





Photograph C-37: View of wetland SP-B017 within PFO W-B009a, facing south.



Photograph C-38: View of wetland SP-B017 within PFO W-B009a, facing north.





Photograph C-39: View of upland SP-B018 west of W-B009a, facing northwest.



Photograph C-40: View of upland SP-B018 west of W-B009a, facing southeast.





Photograph C-41: View of wetland SP-B019 within PEM W-B009b, facing north.



Photograph C-42: View of wetland SP-B019 within PEM W-B009b, facing south.





Photograph C-43: View of upland SP-B020 east of W-B009b, facing south.



Photograph C-44: View of upland SP-B020 east of W-B009b, facing northeast.





Photograph C-45: View of wetland SP-B021 within PEM W-B010, facing west.



Photograph C-46: View of wetland SP-B021 within PEM W-B010, facing east.





Photograph C-47: View of upland SP-B022 east of W-B010, facing east.



Photograph C-48: View of upland SP-B022 east of W-B010, facing west.



Photograph C-49: View of wetland SP-B023 within PEM W-B011, facing southwest.



Photograph C-50: View of wetland SP-B023 within PEM W-B011, facing northeast.





Photograph C-51: View of upland SP-B024 north of W-B011 and S-B019, facing southwest.



Photograph C-52: View of upland SP-B024 north of W-B011 and S-B019, facing northeast.





Photograph C-53: View of wetland SP-B025 within PEM W-B012, facing northeast.



Photograph C-54: View of wetland SP-B025 within PEM W-B012, facing southwest.





Photograph C-55: View of upland SP-B026 west of W-B012, facing northeast.



Photograph C-56: View of upland SP-B026 west of W-B012, facing southwest.





Photograph C-57: View of upland SP-B056 east of W-B027, facing southeast.



Photograph C-58: View of upland SP-B056 east of W-B027, facing northeast.





Photograph C-59: View of wetland SP-B057 within PFO W-B027, facing north.



Photograph C-60: View of wetland SP-B057 within PFO W-B027, facing south.





Photograph C-61: View of upland SP-B057a east of PFO W-B027, facing northeast.



Photograph C-62: View of upland SP-B057a east of PFO W-B027, facing southwest.



Photograph C-63: View of wetland SP-B058 within PEM W-B028, facing northeast.



Photograph C-64: View of wetland SP-B058 within PEM W-B028, facing southwest.





Photograph C-65: View of upland SP-B059 adjacent to W-B028, facing east.



Photograph C-66: View of upland SP-B059 adjacent to W-B028, facing west.





Photograph C-67: View of wetland SP-B060 within PEM W-B029, facing north.



Photograph C-68: View of wetland SP-B060 within PEM W-B029, facing south.





Photograph C-69: View of upland SP-B061 north of W-B029, facing east.



Photograph C-70: View of upland SP-B061 north of W-B029, facing west.





Photograph C-71: View of wetland SP-B062 within PSS W-B030, facing southwest.



Photograph C-72: View of wetland SP-B062 within PSS W-B030, facing northeast.





Photograph C-73: View of upland SP-B063 north of W-B030, facing west.



Photograph C-74: View of upland SP-B063 north of W-B030, facing east.





Photograph C-75: View of upland SP-B064 northeast of W-B031b facing northeast.



Photograph C-76: View of upland SP-B064 northeast of W-B031b, facing southeast.





Photograph C-77: View of wetland SP-B065 within PSS W-B031b, facing south.



Photograph C-78: View of wetland SP-B065 within PSS W-B031b, facing north.





Photograph C-79: View of wetland SP-B066 within PEM W-B031a and adjacent to W-B031b, facing northwest.



Photograph C-80: View of wetland SP-B066 within PEM W-B031a and adjacent to W-B031b, facing southeast.





Photograph C-81: View of wetland SP-B067 within PEM W-B032, which has been significantly disturbed by cattle, facing northwest.



Photograph C-82: View of wetland SP-B067 within PEM W-B032, which has been significantly disturbed by cattle, facing southeast.





Photograph C-83: View of upland SP-B068 north of W-B032, facing southeast.



Photograph C-84: View of upland SP-B068 north of W-B032, facing northwest.





Photograph C-85: View of wetland SP-B069a within PEM W-B053, facing northeast.



Photograph C-86: View of wetland SP-B069a within PEM W-B053, facing southwest.





Photograph C-87: View of upland SP-B069b west of PEM W-B053, facing northeast.



Photograph C-88: View of upland SP-B069b west of PEM W-B053, facing southwest.





Photograph C-89: View of upland SP-B070 located within previously delineated wetland area, facing southeast.



Photograph C-90: View of upland SP-B070 located within previously delineated wetland area, facing north.





Photograph C-91: View of wetland SP-B102 within PFO W-B006 and adjacent to S-B010, facing east.



Photograph C-92: View of wetland SP-B102 within PFO W-B006 and adjacent to S-B01, facing southwest.



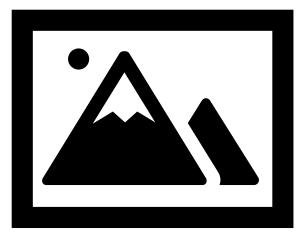


Photograph C-93: View of upland SP-B103 north of W-B006 and S-B010, facing northwest.



Photograph C-94: View of upland SP-B103 north of W-B006 and S-B010, facing northeast.





Photograph C-95: View of wetland SP-B114 within W-B052a, facing east.



Photograph C-96: View of wetland SP-B114 within W-B052a, facing west.





Photograph C-97: View of upland SP-B115 southwest of W-B052a, facing northwest.



Photograph C-98: View of upland SP-B115 southwest of W-B052a, facing southeast.





Photograph C-99: View of wetland SP-B116 within W-B052b, facing east.



Photograph C-100: View of wetland SP-B116 within W-B052b, facing southwest.





Photograph C-101: View of upland SP-B117 west of W-B052b, facing north.



Photograph C-102: View of upland SP-B117 west of W-B052b, facing southwest.





Photograph C-103: View of wetland SP-A157 within PEM W-B027a, facing southwest.



Photograph C-104: View of wetland SP-A157 within PEM W-B027a, facing northeast.





Photograph C-105: View of upland SP-A158 west of W-B027a, facing north.



Photograph C-106: View of upland SP-B103 west of W-B027a, facing south.





Photograph C-107: View of wetland SP-A159 within PSS W-B004a, facing south.



Photograph C-108: View of wetland SP-A159 within PSS W-B004a, facing north.





Photograph C-109: View of upland SP-A160 southeast of PEM W-B056, facing northwest.



Photograph C-110: View of upland SP-A160 southeast of PEM W-B056, facing southeast.





Photograph C-111: View of wetland SP-A161 within PEM W-B056, facing north.



Photograph C-112: View of wetland SP-A161 within PEM W-B056, facing south.





Photograph C-113: View of wetland SP-A162 within PEM W-B055, facing south.



Photograph C-114: View of wetland SP-A162 within PEM W-B055, facing north.





Photograph C-115: View of wetland SP-A163 within PSS W-B056a, facing northeast.



Photograph C-116: View of wetland SP-A163 within PSS W-B056a, facing southwest.





Photograph C-117: View of upland SP-A164 southeast of PSS W-B056a, facing northwest.



Photograph C-118: View of upland SP-A164 southeast of PSS W-B056a, facing southeast.





Photograph C-119: View of upland SP-A165 east of PEM W-B034, facing northeast.



Photograph C-120: View of upland SP-A165 east of PEM W-B034, facing southwest.





Photograph C-121: View of wetland SP-A166 within PEM W-B034, facing southwest.



Photograph C-122: View of wetland SP-A166 within PSS W-B004a, facing northeast.





Photograph C-123: View of open water OW-B001, facing northeast.



Photograph C-124: View of open water OW-B001, facing southwest.





Photograph C-125: View of ephemeral S-B001, facing north.



Photograph C-126: View of ephemeral S-B001, facing south.





Photograph C-127: View of intermittent S-B002, facing north.



Photograph C-128: View of intermittent S-B002, facing south.





Photograph C-129: View of intermittent S-B003, facing northwest.



Photograph C-130: View of intermittent S-B003, facing southeast.

MVP Southgate

Amendment Project

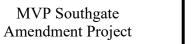




Photograph C-131: View of ephemeral S-B004, facing northwest.



Photograph C-132: View of ephemeral S-B004, facing southeast.







Photograph C-133: View of perennial S-B005, the Dan River, facing northwest.



Photograph C-134: View of perennial S-B005, the Dan River, facing northeast.



Photographs November 2024 Rockingham County, NC



Photograph C-135: View of intermittent S-B006, facing northwest.



Photograph C-136: View of intermittent S-B006, facing southeast.





Photograph C-137: View of intermittent S-B007, facing north.



Photograph C-138: View of intermittent S-B007, facing south.





Photograph C-139: View of intermittent S-B008, facing northwest.



Photograph C-140: View of intermittent S-B008, facing southeast.





Photograph C-141: View of ephemeral S-B009, facing west.



Photograph C-142: View of ephemeral S-B009, facing east.



Photograph C-143: View of ephemeral S-B010, facing southwest.



Photograph C-144: View of ephemeral S-B010, facing northeast.



Photograph C-145: View of intermittent S-B011, facing southeast.



Photograph C-146: View of intermittent S-B011, facing northwest.



Photograph C-147: View of intermittent S-B013, facing northwest.



Photograph C-148: View of intermittent S-B013, facing southeast.



Photograph C-149: View of ephemeral S-B014, facing northwest.



Photograph C-150: View of ephemeral S-B014, facing southeast.



Photograph C-151: View of intermittent S-B015, facing northwest.



Photograph C-152: View of intermittent S-B015, facing southeast.



Photograph C-153: View of ephemeral S-B016, facing southwest.



Photograph C-154: View of ephemeral S-B016, facing northeast.



Photograph C-155: View of ephemeral S-B017, facing north.



Photograph C-156: View of ephemeral S-B017, facing southeast.



Photograph C-157: View of ephemeral S-B018, facing northeast.



Photograph C-158: View of ephemeral S-B018, facing southwest.



Photograph C-159: View of ephemeral S-B019, facing north.



Photograph C-160: View of ephemeral S-B019, facing southeast.



Photograph C-161: View of perennial S-B034, Cascade Creek, facing north.



Photograph C-162: View of perennial S-B034, Cascade Creek, facing south.

MVP Southgate Amendment Project



Photographs
June 2024
Rockingham County, NC



Photograph C-163: View of perennial S-B035, Dry Creek, facing east.



Photograph C-164: View of perennial S-B035, Dry Creek, facing west.



Photograph C-165: View of intermittent S-B036, facing north.



Photograph C-166: View of intermittent S-B036, facing south.



Photograph C-167: View of ephemeral S-B057, facing northeast.



Photograph C-168: View of ephemeral S-B057, facing southwest.



US.	ACE AID #:		NCDWR #:			
	Project Name		Date of Evaluation	10/23/24		
A	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B001		
	Wetland Type		Assessor Name/Organization	L. Cooper/BMcD		
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River		
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103		
	County	NCDWR Region	Winston-Salem			
	☐ Yes 🔳 No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	79.679598321W/36.495464021N		
Is t Ree	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. • Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) • Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) • Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) • Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply)					
	Tidal (if tidal, cl	neck one of the following boxes)	ar 🗌 Wind 🔲 Both			
ls t	he assessment area	on a coastal island? Yes No	0			
ls t	he assessment area	's surface water storage capacity or du	ration substantially altered by beaver?	☐ Yes ■ No		
Do	es the assessment a	rea experience overbank flooding durir	ng normal rainfall conditions? Yes	■ No		
1.	Check a box in each the assessment area basessment area bases VS A A A A B B B B S	ea. Compare to reference wetland if apposed on evidence of an effect. Not severely altered Severely altered over a majority of the assectimentation, fire-plow lanes, skidder trace	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exa- cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro-	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure		
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric			
	(Sub). Consider bot 1 foot deep is expect Surf Sub	th increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect swater. Consider tidal flooding regime, if apput altered. Ted, but not substantially (typically, not sufficientially altered (typically, alteration sufficient	urface water only, while a ditch > plicable. ient to change vegetation).		
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	on, filling, excessive sedimentation, undergr ype condition metric (skip for all marshe	s)		
		n column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).		
	B B N C C N	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep			
	□B E	ividence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet			

4.	Son Texture/Struc	cture – assessment area condition metric (skip for all marshes)
		n each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
		dy soil
	■B Loai	my or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
	☐C Loai	my or clayey soils not exhibiting redoximorphic features
		my or clayey gleyed soil
	□E Hist	osol or histic epipedon
		ribbon < 1 inch
	■B Soil	ribbon ≥ 1 inch
	4c. ■A Nop	peat or muck presence
		eat or muck presence
5.	Discharge into W	etland – assessment area opportunity metric
٠.	ŭ	each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub).
		surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A	Little or no evidence of pollutants or discharges entering the assessment area
	□в □в	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
		treatment capacity of the assessment area
	□c □c	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive
		sedimentation, odor)
6.	Land Use - oppo	rtunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		oply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		sment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment
		hin 2 miles and within the watershed draining to the assessment area (2M).
	WS 5M	2M
	□A □A	☐A ≥ 10% impervious surfaces
	□в □в	Confined animal operations (or other local, concentrated source of pollutants)
	□C □C □D □D	□C ≥ 20% coverage of pasture□D ≥ 20% coverage of agricultural land (regularly plowed land)
		 □D ≥ 20% coverage of agricultural land (regularly plowed land) □E ≥ 20% coverage of maintained grass/herb
	□F □F	□F ≥ 20% coverage of clear-cut land
	□G □G	☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the
		assessment area.
7.	Wetland Acting a	s Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
••	=	ent area within 50 feet of a tributary or other open water?
	7a. Is assessifie	
		of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make
		ent based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
		50 feet
	_	om 30 to < 50 feet
	_	om 15 to < 30 feet
		om 5 to < 15 feet 5 feet <u>or</u> buffer bypassed by ditches
		of leet <u>or</u> buffer bypassed by ditches. Ith. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	☐≤ 15-feet	
		assessment area vegetation extend into the bank of the tributary/open water?
	□Yes □I	
		ry or other open water sheltered or exposed?
		- open water width < 2500 feet and no regular boat traffic.
	∐Exposed -	– open water width ≥ 2500 feet or regular boat traffic.
8.	Wetland Width at	the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
		Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	
		ach column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		rea (WC). See User Manual for WT and WC boundaries.
	WT WC	
	□A □A	≥ 100 feet
	□в □в	From 80 to < 100 feet
		From 50 to < 80 feet
		From 40 to < 50 feet
	■E ■E	From 30 to < 40 feet
	□F□F	From 15 to < 30 feet
	□G □G	From 5 to < 15 feet
	□н □н	< 5 feet

J .	mundation buration – assessment area condition metric (skip for non-nparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
12	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F F F F F F F F F F F F F F F F F
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only) □A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent (2 90%) of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A B S From 100 to < 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres B E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Structure – assessment area/wetland type condition metric									
	17a. Is vegetation present? ■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.									
	17b. Evaluate percent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. □A ≥ 25% coverage of vegetation □B < 25% coverage of vegetation									
	17c. Check a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.									
	AA WT									
	Dense mid-story/sapling layer ODE B Moderate density mid-story/sapling layer DE C Mid-story/sapling layer sparse or absent									
	☐A Dense shrub layer ☐B Moderate density shrub layer ☐C Shrub layer sparse or absent									
	☐A ☐A Dense herb layer ☐B ☐B Moderate density herb layer ☐C ☐C Herb layer sparse or absent									
18.	Snags – wetland type condition metric (skip for all marshes)									
	□A Large snags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability). ■B Not A									
19.	Diameter Class Distribution – wetland type condition metric (skip for all marshes)									
	Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.									
	 □B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. □C Majority of canopy trees are < 6 inches DBH or no trees. 									
20.	Large Woody Debris – wetland type condition metric (skip for all marshes)									
	Include both natural debris and man-placed natural debris. Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability). Not A									
21.	Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)									
	Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.									
22.	Hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)									
	Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. Overbank and overland flow are not severely altered in the assessment area. Overbank flow is severely altered in the assessment area. Overland flow is severely altered in the assessment area. Both overbank and overland flow are severely altered in the assessment area.									
Note	<u> </u>									

Notes

Both overbank and overland flow altered by draining, ditching, and road berm in assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/23/24
Α	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B002
	Wetland Type	Headwater Forest	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ☐ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.494175416N/79.678786859W
Is t	ase circle and/or makent past (for instance,	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beat b-surface discharges into the wetland (examund storage tanks (USTs), hog lagoons, extensively stress (examples: vegetation mortality mmunity alteration (examples: mowing, cointensively managed? Yes ons - Were regulatory considerations eval	ressors is apparent. Consider departure folde, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollute.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that	tants, presence of nearby septic
_	Publicly owned N.C. Division of Abuts a stream Designated NC Abuts a 303(d)- at type of natural str	property Coastal Management Area of Environment	plemental classifications of HQW, ORW, or ed stream	Trout
	•	neck one of the following boxes)		
ls t	he assessment area	on a coastal island?		☐ Yes ■ No ■ No
1.	Check a box in each the assessment area basessment area bases VS	Compare to reference wetland if app sed on evidence of an effect.	nent area condition metric ound surface (GS) in the assessment area licable (see User Manual). If a reference	
	□B □B S	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration exacks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximation)	pollutants) (vegetation structure
2.	Surface and Sub-Su	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider both 1 foot deep is expect Surf Sub A A A W B B B W C C C W	h increase and decrease in hydrology. A sted to affect both surface and sub-surface and sub-surface and sub-surface and sub-surface are storage capacity or duration are alter atternance and a sub-steep and support of the storage capacity or duration is substance.	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect swater. Consider tidal flooding regime, if apply taltered. The deep index of the consider tidal flooding regime, if apply taltered. The deep index of the consideration is sufficient on, filling, excessive sedimentation, undergrantic index of the consideration is sufficient on, filling, excessive sedimentation, undergrantic index of the consideration is sufficient on, filling, excessive sedimentation, undergrantic in the consideration is sufficient to the consideration in the consideration is sufficient to the consideration is sufficient to the consideration is sufficient to the consideration in the consi	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
- '	=		for the assessment area (AA) and the wetla	
	AA WT	5 - 11 - 5 - 12 - 12 - 12 - 12 - 12 - 12	(,	<i>7</i> . (<i>)</i>
	□B □B M □C □C M	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to epressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regions indicators. 4a. A Sandy soil B Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) C Loamy or clayey soils not exhibiting redoximorphic features D Loamy or clayey gleyed soil Histosol or histic epipedon
	4b. □A Soil ribbon < 1 inch ■B Soil ribbon ≥ 1 inch
	4c. ■A No peat or muck presence □B A peat or muck presence
5.	Discharge into Wetland – assessment area opportunity metric
	Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub) Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Surf Sub A ■A Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area C □ C Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Land Use – opportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland) Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider source draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). WS 5M 2M A A A A A A A A A A A A A A A A A A A
7	
7.	 Wetland Acting as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands) 7a. Is assessment area within 50 feet of a tributary or other open water? Yes
8.	Wetland Width at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and Estuarine Woody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest only) Check a box in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at the assessment area (WC). See User Manual for WT and WC boundaries. WT WC A B A ≥ 100 feet B B From 80 to < 100 feet C C From 50 to < 80 feet D D From 40 to < 50 feet E From 30 to < 40 feet F From 15 to < 30 feet G G From 5 to < 15 feet H D H < 5 feet

).	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
ın	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E B E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
1.4	
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	ve Struct	ure – assess	ment area/wetlan	d type cor	dition metri	С		
		0	n present?						
		Yes 🔲	No If Yes,	continue to 17b. If	No, skip to	o Metric 18.			
	17b. Ev	aluate per	rcent coverage	e of assessment ar	ea vegetat	ion for all m a	arshes only.	Skip to17c for non-marsh wetla	ands.
				of vegetation					
		B < 2	25% coverage	of vegetation					
	in a	airspace a	above the ass	lumn for each stra essment area (AA)				etric for non-marsh wetlands.	Consider structure
	AA .■.				ماممما بينا	b notinal con	istad v	with material processes	
	on on		-	y closed, of flearly y present, but oper				vith natural processes	
	□ □	c 🗀		y sparse or absent		iaii iiaiai ai g			
	F-Story □	A □. B ■		mid-story/sapling late density mid-sto	-	ovor			
	j j	C \square		ory/sapling layer sp		•			
	_			, , , ,					
	<u>م</u>	A 🔲		shrub layer					
	Shru	B		ate density shrub la layer sparse or abs	-				
	•,	• ⊔	o omas	layor oparoo or abo	, O I I				
	0-	A 🔲		herb layer					
	 E	B		ate density herb lay ayer sparse or abse					
10	_	_				aa\			
10.				on metric (skip for an one) are visible (-	ne relative to s	species present and landscape	stahility)
	■B	Not A	ago (moro tric	ar orio, are violate (72 1110110	0 <i>D D</i> 11, 01 Idi	go rolativo to t	species present and landedape	otasiity).
19.	Diamete	r Class D	istribution -	wetland type con-	dition met	ric (skip for	all marshes)		
	□A	Majority or present.	of canopy tree	es have stems > 6 i	nches in d	iameter at bro	east height (DE	BH); many large trees (> 12 inc	ches DBH) are
	■B	Majority		es have stems betw			BH, few are >	12 inch DBH.	
	□с	Majority	of canopy tree	es are < 6 inches D	BH <u>or</u> no t	rees.			
20.	_	-		d type condition n	•	p for all mar	shes)		
	Include b			man-placed natural		in diameter (or large relative	e to species present and lands	cane stability)
	□B	Not A	go (moro triam	one) are visible (12 11101100	iii didiiiotoi, t	or large relative	o to oposico procent ana lando	oapo otability).
21.	Vegetati	ion/Open	Water Dispe	rsion – wetland ty	pe/open w	ater conditi	on metric (eva	aluate for Non-Tidal Freshwa	ter Marsh only)
				ribes the amount of while solid white an				nd open water in the growing	season. Patterned
		□Å		□В			C	□D Ch	
					À				
	(0)				M	N.)		
					W	Z1300	<i>Ŋ</i>		
		The state of the s							
22.	Hydrolo	gic Conn	ectivity – ass	sessment area cor	ndition me	tric (evaluat	e for riparian	wetlands and Salt/Brackish	Marsh only)
								sive ditching, fill, sedimentat d if evaluated as B, C, or D.	ion, channelization,
	■A	Overban	k <u>and</u> overlan	d flow are not seve	rely altered	d in the asses		a ii cvaluateu as D, C, Ul D.	
	В	Overban	k flow is seve	rely altered in the a	ssessmen	t area.			
	□C □D			ely altered in the as erland flow are sev			ssment area.		

Notes

US	ACE AID #:		NCDWR #:	
	Project Name		Date of Evaluation	10/23/24
Ap	pplicant/Owner Name		Wetland Site Name	W-B003
	Wetland Type		Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes 🔳 No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.494736034N/79.677700932W
Is t Reç U U U U U U U U U U U U U U U U U U	ase circle and/or maient past (for instance,	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beab-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality ommunity alteration (examples: mowing, considerations evaluated stress or State endangered or threat an buffer rule in effect y Nursery Area (PNA) property of Coastal Management Area of Environments.	tressors is apparent. Consider departure folude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollute.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species Intal Concern (AEC) (including buffer) oplemental classifications of HQW, ORW, or ed stream	ntants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
ls t	he assessment area	neck one of the following boxes) Lun on a coastal island? Yes No 's surface water storage capacity or dul trea experience overbank flooding during	ration substantially altered by beaver?	☐ Yes ■ No ■ No
	Ground Surface Co	ch column. Consider alteration to the group. Can compare to reference wetland if apposed on evidence of an effect. Consider altered. Compare to reference wetland if apposed on evidence of an effect. Consider a majority of the asset edimentation, fire-plow lanes, skidder traces.	nent area condition metric bund surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration examples, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximates]	and vegetation structure (VS) in is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A A V B B B V C C C V	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter Vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect swater. Consider tidal flooding regime, if apply taltered. The detailed in the substantially (typically, not sufficient on, filling, excessive sedimentation, underground in the substantially altered (typically, alteration, underground in the substantially altered (typically, alteration) and the substantially (ty	urface water only, while a ditch > plicable. sient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
o .	Check a box in each AA WT 3a. AA	h column for each group below. Select Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	for the assessment area (AA) and the wetland point water > 1 foot deep point water 6 inches to 1 foot deep point water 3 to 6 inches deep deep	
	□B E	ividence that maximum depth of inundation ividence that maximum depth of inundation ividence that maximum depth of inundation	n is between 1 and 2 feet	

4.	Check	a box	Structure – assessment area condition metric (skip for all marshes) from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	indicate 4a. [[[ors. □A ■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
			Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
			No peat or muck presence A peat or muck presence
5.	Discha		to Wetland – assessment area opportunity metric
	Check	a box	t in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub) sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A □B	■A □B	
	С	□C	
6.	l and l	Isa – 0	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
o .	Check drainin	all tha	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □B □C	□A □B □C	
			□D ≥ 20% coverage of agricultural land (regularly plowed land)
	■G	■G	
7.	Wetlar	nd Acti	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7b. H	■Yes How mu ouffer ju	ssment area within 50 feet of a tributary or other open water? No If Yes, continue to 7b. If No, skip to Metric 8 In the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make digment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	[[■A □B □C □D	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet From 5 to < 15 feet
		ΞĔ	< 5 feet or buffer bypassed by ditches
			y width. If the tributary is anastomosed, combine widths of channels/braids for a total width. feet wide
	7d. [Do roots	s of assessment area vegetation extend into the bank of the tributary/open water?
	7e. [_ s the tri ■Shelt	butary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic. sed – open water width ≥ 2500 feet or regular boat traffic.
8.	Wetlar	nd Wid	th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and body Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Fores
	Check		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex and area (WC). See User Manual for WT and WC boundaries.
	ΠA	■A	≥ 100 feet
	□в	□в	
	□C □D	□C □D	
	□E	□E	
	□F	□F	From 15 to < 30 feet
	□G □H	□G □H	

).	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
ın	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E B E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
1.4	
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	ve Struc	ture – asses	sment area/wetla	and type co	ndition metri	С		
		•	n present?						
		Yes]No If Yes	s, continue to 17b.	If No, skip t	o Metric 18.			
	17b. Ev	aluate pe	rcent covera	ge of assessment	area vegeta	tion for all m	arshes only.	Skip to17c for non-marsh wetla	nds.
				e of vegetation					
		B <	25% coveraç	e of vegetation					
	in a	airspace	above the as	olumn for each s sessment area (A				tric for non-marsh wetlands.	Consider structure
	AA ⊡ ≲			my alasad as maas	أبد والممام بدأ	th natural gar	a accepted v	with material manages	
	on ol			py closed, or riear py present, but op	-			vith natural processes	
	□ □	c E		py sparse or abse					
			1						
	l-Story ■ □	A		e mid-story/sapling erate density mid-s		lovor			
	i j	C [story/sapling layer		•			
	_			, , , ,	'				
	Shrub 	A 🔳		e shrub layer	1				
		В <u> </u>		erate density shrub o layer sparse or a	•				
	٠,٠	_	10 011141	o layer oparee or e	1000111				
	0-	Α [e herb layer					
	_ E_ E_	B <u>■</u> C □		erate density herb layer sparse or ab	•				
10			-	-					
10.				ion metric (skip f		-	ne relative to s	species present and landscape	stability)
	■B	Not A	lago (moro ti	iair one) are visibi	0 (* 12 1110110	70 BB11, 01 101	go rolativo to c	pooloo procent and landocape	otability).
19.	Diamete	r Class [Distribution	- wetland type co	ondition me	tric (skip for	all marshes)		
	□A	Majority present.		ees have stems >	6 inches in d	iameter at br	east height (DE	BH); many large trees (> 12 inc	hes DBH) are
	■B			ees have stems be	etween 6 and	I 12 inches D	BH, few are > ²	12 inch DBH.	
	□с			ees are < 6 inches					
20.	_	-		nd type conditior	•	p for all mar	shes)		
	Include b			d man-placed natu		in diameter	or large relative	e to species present and lands	cane stability)
	□B	Not A	gs (more tha	in one) are visible	(> 12 11101163	in diameter,	or large relative	s to species present and landst	sape stability).
21.	Vegetati	ion/Open	Water Disp	ersion – wetland	type/open v	vater conditi	on metric (eva	aluate for Non-Tidal Freshwa	ter Marsh only)
								nd open water in the growing	season. Patterned
	areas inc	dicate veç ⊟A	getated areas A	s, while solid white □B	areas indica		r. C	ΠD	
		TO	2		1				
	\mathcal{C}) Wye					À		
			5/11/1						
22	Hydrolo	aic Conr	nectivity – a	seesement area	ondition me	etric (evaluat	e for rinarian	wetlands and Salt/Brackish I	Marsh only)
	-	-	_			-	_	sive ditching, fill, sedimentati	= -
	diversion	n, man-ma	ade berms, b	eaver dams, and	stream incisi	on. Documer	ntation required	I if evaluated as B, C, or D.	
	■A □B			nd flow are not se erely altered in the			ssment area.		
	□C	Overland	d flow is seve	erely altered in the	assessment	area.			
	□D	Both ove	erbank <u>and</u> c	verland flow are s	everely alter	ed in the asse	essment area.		

Notes

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/23/24
A	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B004
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.493588316N/79.675951061W
	Brownwater			
	lidal (if tidal, ch	neck one of the following boxes)	nar 📙 Wind 📙 Both	
ls t	he assessment area	on a coastal island?	0	
		's surface water storage capacity or du rea experience overbank flooding durir	ration substantially altered by beaver? ng normal rainfall conditions?	☐ Yes ■ No ■ No
1.	Ground Surface Co	ndition/Vegetation Condition – assessr	nent area condition metric	
	Check a box in each the assessment area based S VS	ch column. Consider alteration to the groat. Compare to reference wetland if apposed on evidence of an effect.	ound surface (GS) in the assessment area licable (see User Manual). If a reference	
	■B ■B S	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration exal cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro c alteration)	pollutants) (vegetation structure
2.	Surface and Sub-Su	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider both 1 foot deep is expect Surf Sub A A W B B B W C C W	h increase and decrease in hydrology. A sted to affect both surface and sub-surface and sub-surface and sub-surface and sub-surface are storage capacity or duration are alter atternance and a sub-steep and support of the storage capacity or duration is substance.	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect substantial flooding regime, if apput altered. Ted, but not substantially (typically, not sufficient antially altered (typically, alteration sufficient on, filling, excessive sedimentation, undergred.	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3	•			
3.	=		ype condition metric (skip for all marshes	
	AA WT	n column for each group below. Select	for the assessment area (AA) and the wetla	na type (w i).
	3a.	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to epressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

٠.	Jon Texture/Stru	icture – assessment area condition metric (skip for all marshes)
		m each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
		ndy soil
	■B Loa	amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
	☐C Loa	amy or clayey soils not exhibiting redoximorphic features
		amy or clayey gleyed soil
	□E His	tosol or histic epipedon
		I ribbon < 1 inch
	■B Soi	l ribbon ≥ 1 inch
	4c. ■A No	peat or muck presence
		eat or muck presence
_		·
5.	· ·	Vetland – assessment area opportunity metric
		each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A	Little or no evidence of pollutants or discharges entering the assessment area
	□B □B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
		treatment capacity of the assessment area
	□c □c	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
		potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive
		sedimentation, odor)
6	Land Heat anno	artunity matric (ckin for non ringrian watlands, tidal marches, and Estuarine Woody Watland)
6.	• •	ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		pply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		sment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment
		thin 2 miles and within the watershed draining to the assessment area (2M).
	WS 5M □A □A	2M □A ≥ 10% impervious surfaces
	□B □B	☐B Confined animal operations (or other local, concentrated source of pollutants)
		□C ≥ 20% coverage of pasture
	D D	□D ≥ 20% coverage of agricultural land (regularly plowed land)
		□E ≥ 20% coverage of maintained grass/herb
	□F □F	☐F ≥ 20% coverage of clear-cut land
	⊟G ⊟G	G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the
		assessment area.
7.	Wetland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
٠.	=	
		ent area within 50 feet of a tributary or other open water?
		No If Yes, continue to 7b. If No, skip to Metric 8
		of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make nent based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
		50 feet
		om 30 to < 50 feet
		om 15 to < 30 feet
	_	om 5 to < 15 feet
		5 feet or buffer bypassed by ditches
		dth. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	∐≤ 15-feet	
	7d. Do roots of	assessment area vegetation extend into the bank of the tributary/open water?
]No
		ary or other open water sheltered or exposed?
		d – open water width < 2500 feet and no regular boat traffic.
	∐Exposed	 open water width ≥ 2500 feet or regular boat traffic.
8.	Wetland Width a	t the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
		y Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	
	Check a box in e	each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
	the assessment a	rea (WC). See User Manual for WT and WC boundaries.
	WT WC	
	\Box A \Box A	≥ 100 feet
	□в □в	From 80 to < 100 feet
	_c _c	From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G	From 5 to < 15 feet
	□H □H	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)		
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)		
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)		
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.		
11.	Wetland Size – wetland type/wetland complex condition metric		
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut		
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)		
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.□B Pocosin is < 90% of the full extent of its natural landscape size.		
13.	Connectivity to Other Natural Areas – landscape condition metric		
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely □ A □ A ≥ 500 acres □ B From 100 to < 500 acres □ C □ C From 50 to < 100 acres □ D □ D From 10 to < 50 acres □ E < 10 acres □ F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. 		
	☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.		
14	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)		
. 0	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8		
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)		
	 Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. ✓ Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. ✓ Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of no characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in least one stratum. 		
16	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)		
	□ Vegetative Biversity = assessment area condition metric (evaluate for Non-tidal Freshwater marsh only) □ Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ Vegetation diversity is low or has > 10% to 50% cover of exotics. □ Vegetation is dominated by exotic species (> 50% cover of exotics).		

17.	. Vegetative Structure – assessment area/wetland type condition metric		
	17a. Is vegetation present? ■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.		
	17b. Evaluate percent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. □A ≥ 25% coverage of vegetation □B < 25% coverage of vegetation		
	17c. Check a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.		
	AA WT		
	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent		
	□ A □ A Dense shrub layer □ B □ B Moderate density shrub layer □ □ C Shrub layer sparse or absent		
	■A ■A Dense herb layer □B Moderate density herb layer □C □C Herb layer sparse or absent		
18.	Snags – wetland type condition metric (skip for all marshes)		
	□A Large snags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability). ■ Not A		
19.	Diameter Class Distribution – wetland type condition metric (skip for all marshes)		
	Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.		
	 □B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. □C Majority of canopy trees are < 6 inches DBH or no trees. 		
20.	Large Woody Debris – wetland type condition metric (skip for all marshes)		
	Include both natural debris and man-placed natural debris. A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability). Not A		
21.	Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)		
	Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.		
22.	Hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)		
	Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. Overbank and overland flow are not severely altered in the assessment area. Overbank flow is severely altered in the assessment area. Overland flow is severely altered in the assessment area. Both overbank and overland flow are severely altered in the assessment area.		
Note	<u> </u>		

No

Overland flow altered by draining and agricultural activity.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/23/24
Ap	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B004a
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.493867671N/79.675951915W
Plea reco	ase circle and/or makent past (for instance,	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beat b-surface discharges into the wetland (examples ton stress (examples: vegetation mortality of the wetland (examples: wegetation mortality of the wetland (examples: mowing, contensively managed? Yes ons - Were regulatory considerations evaluated species or State endangered or threat in buffer rule in effect y Nursery Area (PNA) property	tressors is apparent. Consider departure ficlude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustc.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species	tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
	Abuts a stream Designated NC Abuts a 303(d)- at type of natural str Blackwater Brownwater		oplemental classifications of HQW, ORW, or ed stream any? (check all that apply)	Trout
ls t	he assessment area	on a coastal island?		☐ Yes ■ No ■ No
1.	Check a box in each the assessment area bands of the session of th	a. Compare to reference wetland if app sed on evidence of an effect. ot severely altered everely altered over a majority of the asse	ound surface (GS) in the assessment area licable (see User Manual). If a reference	is not applicable, then rate the mples: vehicle tracks, excessive
	а		cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro c alteration)	
2.		urface Storage Capacity and Duration –		
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A A W B B B W C C C W	h increase and decrease in hydrology. A sted to affect both surface and sub-surface and sub-surface and sub-surface and sub-surface are storage capacity or duration are alter atternance and a sub-steep and support of the storage capacity or duration is substance.	apacity and duration (Surf) and sub-surface ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if appet altered. The substantially (typically, not sufficient antially altered (typically, alteration sufficient on, filling, excessive sedimentation, underground in the substantially alteration, underground in the substantially altered (typically, alteration, underground in the substantially altered (typically, alteration, underground in the substantial typically and substantially altered (typically, alteration, underground in the substantial typically and substantially altered (typically, alteration, underground in the substantial typically and substantially altered (typically, alteration, underground in the substantial typically altered (typically, altered (typica	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	AA WT 3a. □A □A M □B □B M □C □C M ■D ■D D	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to epressions able to pond water < 3 inches	o pond water > 1 foot deep o pond water 6 inches to 1 foot deep o pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

٠.	Jon Texture/Stru	icture – assessment area condition metric (skip for all marshes)
		m each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
		ndy soil
	■B Loa	amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
	☐C Loa	amy or clayey soils not exhibiting redoximorphic features
		amy or clayey gleyed soil
	□E His	tosol or histic epipedon
		I ribbon < 1 inch
	■B Soi	l ribbon ≥ 1 inch
	4c. ■A No	peat or muck presence
		eat or muck presence
_		·
5.	· ·	Vetland – assessment area opportunity metric
		each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A	Little or no evidence of pollutants or discharges entering the assessment area
	□B □B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
		treatment capacity of the assessment area
	□c □c	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
		potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive
		sedimentation, odor)
6	Land Heat anno	artunity matric (ckin for non ringrian watlands, tidal marches, and Estuarine Woody Watland)
6.	• •	ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		pply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		sment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment
		thin 2 miles and within the watershed draining to the assessment area (2M).
	WS 5M □A □A	2M □A ≥ 10% impervious surfaces
	□B □B	☐B Confined animal operations (or other local, concentrated source of pollutants)
		□C ≥ 20% coverage of pasture
	D D	□D ≥ 20% coverage of agricultural land (regularly plowed land)
		□E ≥ 20% coverage of maintained grass/herb
	□F □F	☐F ≥ 20% coverage of clear-cut land
	⊟G ⊟G	G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the
		assessment area.
7.	Wetland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
٠.	=	
		ent area within 50 feet of a tributary or other open water?
		No If Yes, continue to 7b. If No, skip to Metric 8
		of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make nent based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
		50 feet
		om 30 to < 50 feet
		om 15 to < 30 feet
	_	om 5 to < 15 feet
		5 feet or buffer bypassed by ditches
		dth. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	∐≤ 15-feet	
	7d. Do roots of	assessment area vegetation extend into the bank of the tributary/open water?
]No
		ary or other open water sheltered or exposed?
		d – open water width < 2500 feet and no regular boat traffic.
	∐Exposed	 open water width ≥ 2500 feet or regular boat traffic.
8.	Wetland Width a	t the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
		y Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	
	Check a box in e	each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
	the assessment a	rea (WC). See User Manual for WT and WC boundaries.
	WT WC	
	\Box A \Box A	≥ 100 feet
	□в □в	From 80 to < 100 feet
	_c _c	From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G	From 5 to < 15 feet
	□H □H	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)		
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)		
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)		
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.		
11.	Wetland Size – wetland type/wetland complex condition metric		
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut		
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)		
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.□B Pocosin is < 90% of the full extent of its natural landscape size.		
13.	Connectivity to Other Natural Areas – landscape condition metric		
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely □ A □ A ≥ 500 acres □ B From 100 to < 500 acres □ C □ C From 50 to < 100 acres □ D □ D From 10 to < 50 acres □ E < 10 acres □ F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. 		
	☐ Yes ☐ No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.		
14	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)		
. 0	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8		
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)		
	 Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. ✓ Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. ✓ Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of no characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in least one stratum. 		
16	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)		
	□ Vegetative Biversity = assessment area condition metric (evaluate for Non-tidal Freshwater marsh only) □ Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ Vegetation diversity is low or has > 10% to 50% cover of exotics. □ Vegetation is dominated by exotic species (> 50% cover of exotics).		

17.	. Vegetative Structure – assessment area/wetland type condition metric		
	17a. Is vegetation present? ■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.		
	17b. Evaluate percent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. □A ≥ 25% coverage of vegetation □B < 25% coverage of vegetation		
	17c. Check a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.		
	AA WT ☐ A Canopy closed, or nearly closed, with natural gaps associated with natural processes ☐ B ☐ B Canopy present, but opened more than natural gaps ☐ ■ C Canopy sparse or absent		
	Dense mid-story/sapling layer Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent		
	□ A □ A Dense shrub layer □ B □ B Moderate density shrub layer □ C □ C Shrub layer sparse or absent		
	☐A ☐A Dense herb layer ☐B ☐B Moderate density herb layer ☐C ☐C Herb layer sparse or absent		
18.	Snags – wetland type condition metric (skip for all marshes)		
	 □A Large snags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability). □B Not A 		
19.	Diameter Class Distribution – wetland type condition metric (skip for all marshes) A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are		
	present.		
	 □B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. □C Majority of canopy trees are < 6 inches DBH or no trees. 		
20.	Large Woody Debris – wetland type condition metric (skip for all marshes)		
	Include both natural debris and man-placed natural debris. A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability). Not A		
21.	Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)		
	Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.		
22.	Hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)		
	Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. Overbank and overland flow are not severely altered in the assessment area. Overbank flow is severely altered in the assessment area. Overland flow is severely altered in the assessment area. Both overbank and overland flow are severely altered in the assessment area.		
Note			

No

Overland flow altered by draining and agricultural activity.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/23/24
Ap	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B005
	Wetland Type	Headwater Forest	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.501595294N/79.671561390W
Plea reco	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. • Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) • Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) • Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) • Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed?			
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Blackwater Brownwater Tidal (if tidal, che assessment area he assessment area	ream is associated with the wetland, if a neck one of the following boxes) Lunon a coastal island? Yes Now Now Yes vertace water storage capacity or during a experience overbank flooding during	nar 🗌 Wind 🔲 Both	☐ Yes ■ No ■ No
1.	Check a box in each the assessment area bands of the same of the s	 a. Compare to reference wetland if app sed on evidence of an effect. lot severely altered 	ound surface (GS) in the assessment area licable (see User Manual). If a reference	is not applicable, then rate the
	s a	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration exa- cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro calteration)	pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A A V B B B V C C C V	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect swater. Consider tidal flooding regime, if appet altered. The deep is considered to affect swater. Consider tidal flooding regime, if appet altered. The deep is considered to affect the affect swater and sufficient on, filling, excessive sedimentation, underground the substantially altered (typically, alteration, underground tidal).	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	■B ■B M □C □C M □D □D D	flajority of wetland with depressions able to flajority of wetland with depressions able to flajority of wetland with depressions able to percessions able to pend water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

4.	Soil Texture/Struc	cture – assessment area condition metric (skip for all marshes)	
	Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional indicators.		
	4a. □A Sand ■B Loam □C Loam □D Loam	dy soil ny or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) ny or clayey soils not exhibiting redoximorphic features ny or clayey gleyed soil osol or histic epipedon	
	=	ribbon < 1 inch ribbon ≥ 1 inch	
		eat or muck presence at or muck presence	
5.	Discharge into We	etland – assessment area opportunity metric	
	Check a box in e	each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). urface discharges include presence of nearby septic tank, underground storage tank (UST), etc.	
	■A ■A □B □B □C □C	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)	
6.	I and Use - opport	tunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)	
.	Check all that app draining to assessn area (5M), and with	ply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources ment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M	
	■A ■A □B □B	 ■A ≥ 10% impervious surfaces □B Confined animal operations (or other local, concentrated source of pollutants) 	
	□D □D ■E ■E □F □F	 □ C ≥ 20% coverage of pasture □ D ≥ 20% coverage of agricultural land (regularly plowed land) □ E ≥ 20% coverage of maintained grass/herb □ F ≥ 20% coverage of clear-cut land 	
	□G □G	☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.	
7.	Wetland Acting as	s Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)	
		nt area within 50 feet of a tributary or other open water?	
	buffer judgme	No If Yes, continue to 7b. If No, skip to Metric 8 If the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make ent based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) 0 feet	
	☐C Fror	m 30 to < 50 feet m 15 to < 30 feet m 5 to < 15 feet	
	<u></u> E < 5	feet or buffer bypassed by ditches	
	7c. Tributary widt ∏≤ 15-feet w	th. If the tributary is anastomosed, combine widths of channels/braids for a total width. vide □> 15-feet wide □ Other open water (no tributary present)	
		ssessment area vegetation extend into the bank of the tributary/open water?	
	■Yes □N 7e. Is the tributar	No ry or other open water sheltered or exposed?	
	☐Sheltered -	– open water width < 2500 feet and no regular boat traffic. - open water width ≥ 2500 feet or regular boat traffic.	
8.	 Wetland Width at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and Estuarine Woody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Fores only) 		
		ach column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at ea (WC). See User Manual for WT and WC boundaries.	
		≥ 100 feet	
		From 80 to < 100 feet	
		From 50 to < 80 feet From 40 to < 50 feet	
		From 30 to < 40 feet	
	□F □F I	From 15 to < 30 feet	
		From 5 to < 15 feet	
	□H □H ·	< 5 feet	

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)		
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)		
10.	10. Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)		
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.		
11.	Wetland Size – wetland type/wetland complex condition metric		
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre J J J From 0.01 to < 0.1 acre K K K K K K K C.0.01 acre or assessment area is clear-cut		
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)		
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.□B Pocosin is < 90% of the full extent of its natural landscape size.		
13.	Connectivity to Other Natural Areas – landscape condition metric		
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E A 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.		
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)		
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." \square A 0 \square B 1 to 4 \square C 5 to 8		
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)		
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum. 		
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)		
	Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). Vegetation diversity is low or has > 10% to 50% cover of exotics. Vegetation is dominated by exotic species (> 50% cover of exotics).		

17.	Vegetati	ve Str	ucture –	assessment area/wetland type condition metric
		•	tion prese	
		Yes	□No	If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Ev	aluate	percent o	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands.
				overage of vegetation
		В	< 25% co	overage of vegetation
	in a	airspac	e above	ach column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA .■.		WT	Canapy aloned as peoply aloned with natural gang acceptated with natural processes
	ou ou		■A □B	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps
	□ □	С	□c	Canopy sparse or absent
	-Story □	A	■A □B	Dense mid-story/sapling layer Moderate density mid-story/sapling layer
	Äjd.	С	C	Mid-story/sapling layer sparse or absent
	_			
	<u>a</u> □	A	ΠA	Dense shrub layer
	Shru	C B	□B ■C	Moderate density shrub layer Shrub layer sparse or absent
	٥, 🔳	O		Childs layer opared or assemb
			■A	Dense herb layer
	HE E	В	□в □С	Moderate density herb layer Herb layer sparse or absent
40	_			• •
10.				condition metric (skip for all marshes) nore than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
	■B	Not A		
19.				ution – wetland type condition metric (skip for all marshes)
	□A	prese		opy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	■B	Major	ity of can	opy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH.
	□с	-	-	popy trees are < 6 inches DBH <u>or</u> no trees.
20.	-	-		wetland type condition metric (skip for all marshes)
	□A			ris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
	■В	Not A		
21.	Vegetati	ion/Op	en Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
				est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water. □B □C □D
		$\widetilde{}$		
	V		651	
	4			
22	Hydrolo	aic Co	nnectivi	ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
<i></i> .	-	_		that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization,
	diversion	n, man-	made be	rms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D.
	■A □B			overland flow are not severely altered in the assessment area. is severely altered in the assessment area.
	□C	Overla	and flow i	is severely altered in the assessment area.
	□D	Both	overbank	and overland flow are severely altered in the assessment area.

USAC	CE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
App	licant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B006
	Wetland Type	Headwater Forest	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.508010944N/79.665355594W
Is the Regu	ence of stressors are circle and/or mat past (for instance, Hydrological m Surface and surface Habitat/plant core assessment area latory Considerati Anadromous fis Federally prote NCDWR riparia Abuts a Primar Publicly owned N.C. Division o Abuts a stream Designated NC Abuts a 303(d) type of natural st Blackwater Brownwater	affecting the assessment area (may not ke note on the last page if evidence of st, within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beath-surface discharges into the wetland (examples to the stress (examples: vegetation mortality or the stress (examples: vegetation mortality or the stress (examples: wegetation mortality or the stress (examples: mowing, continuous transitions). The stress of the stress	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. It is aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species Intal Concern (AEC) (including buffer) poplemental classifications of HQW, ORW, or ead stream any? (check all that apply)	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
Is the	assessment area	on a coastal island?	ration substantially altered by beaver?	☐ Yes ■ No ■ No
ti a C	Check a box in earne assessment area bassessment area bassessment area bassess VS A B B B S	ea. Compare to reference wetland if applied on evidence of an effect. Not severely altered Severely altered over a majority of the asserted mentation, fire-plow lanes, skidder translateration examples: mechanical disturba	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration examples, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the com	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
	r	educed diversity [if appropriate], hydrologic	c alteration)	
2. 8	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
() 1 S [[Sub). Consider bot foot deep is expect Surf Sub A B A V C C C C V	th increase and decrease in hydrology. A sted to affect both surface and sub-surface. Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter Vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect sowater. Consider tidal flooding regime, if appet altered. Ted, but not substantially (typically, not sufficient antially altered (typically, alteration sufficient on, filling, excessive sedimentation, underground ditch is considered.	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3. V	Vater Storage/Sur	face Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
C	check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	□B □B M □C □C M ■D ■D □	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
3	□B E	Evidence that maximum depth of inundation Evidence that maximum depth of inundation Evidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil observindicators. 4a. □A Sa	om each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature vations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional and soil
	□C Lo □D Lo	amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) amy or clayey soils not exhibiting redoximorphic features amy or clayey gleyed soil stosol or histic epipedon
		il ribbon < 1 inch il ribbon ≥ 1 inch
		peat or muck presence peat or muck presence
5.	Discharge into \	Netland – assessment area opportunity metric
	Check a box in	n each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub) surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Little or no evidence of pollutants or discharges entering the assessment area
	□B □B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	I and Use - onn	ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
0.	Check all that a draining to asses	apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources as ment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M A ≥ 10% impervious surfaces B Confined animal operations (or other local, concentrated source of pollutants) C ≥ 20% coverage of pasture D ≥ 20% coverage of agricultural land (regularly plowed land) E ≥ 20% coverage of maintained grass/herb F ≥ 20% coverage of clear-cut land Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the
		assessment area.
7.	Wetland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7a. Is assessm ■Yes □ 7b. How much buffer judg □A ≥ □B F ■C F □D F □E <	nent area within 50 feet of a tributary or other open water? No If Yes, continue to 7b. If No, skip to Metric 8 of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make ment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) 50 feet rom 30 to < 50 feet rom 15 to < 30 feet rom 5 to < 15 feet 5 feet or buffer bypassed by ditches
	7c. Tributary w ■≤ 15-fee	idth. If the tributary is anastomosed, combine widths of channels/braids for a total width. t wide □> 15-feet wide
	7d. Do roots of	assessment area vegetation extend into the bank of the tributary/open water?
	7e. Is the tribut ■Sheltere]No ary or other open water sheltered or exposed? d – open water width < 2500 feet and no regular boat traffic. I – open water width ≥ 2500 feet or regular boat traffic.
8.		at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and ly Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Fores
	the assessment	each column . Select the average width for the wetland type at the assessment area (WT) and the wetland complex a area (WC). See User Manual for WT and WC boundaries.
	WT WC □A □A	≥ 100 feet
	□B □B	From 80 to < 100 feet
	\Box C \Box C	From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
	□F □F □G □G	From 15 to < 30 feet From 5 to < 15 feet
	□G □G	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E E From 10 to < 25 acres F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre MK K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
40	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D D From 10 to < 50 acres E A 10 acres F F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." \square A 0 \square B 1 to 4 \square C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 ☐A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). ☐B Vegetation diversity is low or has > 10% to 50% cover of exotics. ☐C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	ve Str	ucture –	assessment area/wetland type condition metric
		•	tion prese	
		Yes	□No	If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Ev	aluate	percent o	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands.
				overage of vegetation
		В	< 25% co	overage of vegetation
	in a	airspac	e above	ach column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA .■.		WT	Canapy aloned as peoply aloned with natural gang acceptated with natural processes
	ou ou		■A □B	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps
	□ □	С	□c	Canopy sparse or absent
	-Story □	A	■A □B	Dense mid-story/sapling layer Moderate density mid-story/sapling layer
	Äjd.	С	C	Mid-story/sapling layer sparse or absent
	_			
	<u>a</u> □	A	ΠA	Dense shrub layer
	Shru	C B	□B ■C	Moderate density shrub layer Shrub layer sparse or absent
	٥, 🔳	O		Childs layer opared or assemb
			■A	Dense herb layer
	HE E	В	□в □С	Moderate density herb layer Herb layer sparse or absent
40	_			• •
10.				condition metric (skip for all marshes) nore than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
	■B	Not A		
19.				ution – wetland type condition metric (skip for all marshes)
	□A	prese		opy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	■B	Major	ity of can	opy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH.
	□с	-	-	popy trees are < 6 inches DBH <u>or</u> no trees.
20.	-	-		wetland type condition metric (skip for all marshes)
	□A			ris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
	■В	Not A		
21.	Vegetati	ion/Op	en Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
				est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water. □B □C □D
		$\widetilde{}$		
	V		651	
	4			
22	Hydrolo	aic Co	nnectivi	ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
<i></i> .	-	_		that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization,
	diversion	n, man-	made be	rms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D.
	■A □B			overland flow are not severely altered in the assessment area. is severely altered in the assessment area.
	□C	Overla	and flow i	is severely altered in the assessment area.
	□D	Both	overbank	and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
Ap	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B007
	Wetland Type	Non-tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.516636304/79.657168817
Is t Reg	dence of stressors a ase circle and/or malent past (for instance,	infecting the assessment area (may not be note on the last page if evidence of structure within 10 years). Noteworthy stressors in codifications (examples: ditches, dams, beat be-surface discharges into the wetland (example stress), hog lagoons, extraction stress (examples: vegetation mortalition munity alteration (examples: mowing, contensively managed? Yes ons - Were regulatory considerations evaluated species or State endangered or threat in buffer rule in effect y Nursery Area (PNA) property Footstal Management Area of Environment with a NCDWQ classification of SA or sup NHP reference community distentions are supplied to the supplied of the	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species Intal Concern (AEC) (including buffer) pelemental classifications of HQW, ORW, or ed stream	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
□ × □ Is t	Blackwater Brownwater Tidal (if tidal, ch he assessment area he assessment area	ream is associated with the wetland, if a neck one of the following boxes) Lunon a coastal island? Yes Now Now Yes vertace water storage capacity or during a experience overbank flooding during	nar 🗌 Wind 🔲 Both	☐ Yes ■ No ■ No
1.	Check a box in each the assessment area bands of the seed of the seed of the assessment area bands of the seed of the seed of the assessment area bands of the seed of the see	Compare to reference wetland if app sed on evidence of an effect. Int severely altered everely altered over a majority of the asse edimentation, fire-plow lanes, skidder trace	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the comp	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
_			·	
2.	Check a box in ear (Sub). Consider bot 1 foot deep is expect Surf Sub A B B B W C C C W	h increase and decrease in hydrology. A ted to affect both surface and sub-surface vater storage capacity <u>and</u> duration are no vater storage capacity <u>or</u> duration are alter vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect s water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	□B □B M □C □C M □D □D D	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to lepressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence.	n is between 1 and 2 feet	

4.	Soil Texture/Structure – assessment area condition metric (skip for all marshes)	
	Check a box from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feat Make soil observations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regi indicators.	
	4a.	
	4b. □A Soil ribbon < 1 inch □B Soil ribbon ≥ 1 inch	
	4c. □A No peat or muck presence □B A peat or muck presence	
5.	Discharge into Wetland – assessment area opportunity metric	
	Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (S Examples of sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Surf Sub	3ub).
	■A Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)	ıd
6.	Land Use – opportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)	
0.	Check all that apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sou draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). WS 5M 2M	
	□A□A≥ 10% impervious surfaces□B□B□BConfined animal operations (or other local, concentrated source of pollutants)	
	□C □C ≥ 20% coverage of pasture □D □D ≥ 20% coverage of agricultural land (regularly plowed land) □E □E □E ≥ 20% coverage of maintained grass/herb □F □F □F ≥ 20% coverage of clear-cut land	
	■G ■G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.	e in
7.	Wetland Acting as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)	
	7a. Is assessment area within 50 feet of a tributary or other open water?	
	 ■Yes	∕lake)
	☐B From 30 to < 50 feet ☐C From 15 to < 30 feet	
	■D From 5 to < 15 feet □E < 5 feet <u>or</u> buffer bypassed by ditches	
	7c. Tributary width. If the tributary is anastomosed, combine widths of channels/braids for a total width.	
	■≤ 15-feet wide	
	■Yes □No	
	7e. Is the tributary or other open water sheltered or exposed? ■Sheltered – open water width < 2500 feet and no regular boat traffic. □Exposed – open water width ≥ 2500 feet or regular boat traffic.	
8.	Wetland Width at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and Estuarine Woody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Foonly)	orest
	Check a box in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complete	ex at
	the assessment area (WC). See User Manual for WT and WC boundaries. WT WC	
	□A □A ≥ 100 feet □B □B □ From 90 to < 100 feet	
	□B From 80 to < 100 feet □C □C From 50 to < 80 feet	
	□D □D From 40 to < 50 feet	
	□E □E From 30 to < 40 feet	
	□F □F From 15 to < 30 feet	
	■G ☐G From 5 to < 15 feet	
	□H □H < 5 feet	

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F F F F F F F F F F F F F F F F F
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
40	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D D From 10 to < 50 acres E A 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." $\Box A \qquad 0$ $\Box B \qquad 1 \text{ to } 4$ $\Box C \qquad 5 \text{ to } 8$
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative	Structure -	- assessment area/wetland type condition metric
	17a. Is veg ■Yes		sent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evalua ■A □B	≥ 25% (coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation
	in airs	pace above	each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	Cano B □ C	WT □A □B □C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B	□A □B □C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	Shrub D B V □	□A □B □C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	P B B C C	□A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.	Snags - we	tland type	condition metric (skip for all marshes)
	□B No	t A	(more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			bution – wetland type condition metric (skip for all marshes)
	pre	esent.	nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.	_	=	- wetland type condition metric (skip for all marshes) bris and man-placed natural debris.
	□A La		nore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/	Open Wate	er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			pest describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas, while solid white areas indicate open water. □B □C □D
	O)		
22.			rity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, m A Ov B Ov C Ov	an-made be erbank <u>and</u> erbank flow erland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. doverland flow are not severely altered in the assessment area. vis severely altered in the assessment area. vis severely altered in the assessment area. k and overland flow are severely altered in the assessment area.

USACE AID #: NCDWR #:				
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
Ap	pplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B008
	Wetland Type	Headwater Forest	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.513211743N/79.660029159W
Is til	dence of stressors a ase circle and/or makent past (for instance,	inffecting the assessment area (may not be note on the last page if evidence of structure within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beat be-surface discharges into the wetland (exampled storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes sons - Were regulatory considerations evaluated species or State endangered or threat in buffer rule in effect y Nursery Area (PNA) property	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. It is aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species Intal Concern (AEC) (including buffer) poplemental classifications of HQW, ORW, or ead stream any? (check all that apply)	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
ls t	he assessment area	on a coastal island?		☐ Yes ■ No ■ No
1.	Check a box in each the assessment area bands of the session of th	Compare to reference wetland if app sed on evidence of an effect. Int severely altered everely altered over a majority of the asse edimentation, fire-plow lanes, skidder trace	ment area condition metric bund surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exal cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro-	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
		educed diversity [if appropriate], hydrologic		
2.	Surface and Sub-Si	urface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ear (Sub). Consider bot 1 foot deep is expect Surf Sub A B B B W C C C W	ch column. Consider surface storage ch increase and decrease in hydrology. A sted to affect both surface and sub-surface water storage capacity and duration are nowater storage capacity or duration are alterwater storage capacity or duration is substated.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect s water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
		h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	B B M C C M D D	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to lepressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence.	n is between 1 and 2 feet	

4.	Check	a box	Structure – assessment area condition metric (skip for all marshes) from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature.
	indicate 4a.	ors. □A □B ■C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
			Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
			No peat or muck presence A peat or muck presence
5.	Discha		to Wetland – assessment area opportunity metric
	Check	a box	t in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Subsub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A □B	■A □B	
	□с	□с	
6.	l and l	lse – o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
-	Check draining	all tha g to as:	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider source sessment area within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment area (2M). 2M
	□A □B □C	□A □B □C	
	□D □E	□D □E	□D ≥ 20% coverage of agricultural land (regularly plowed land)□E ≥ 20% coverage of maintained grass/herb
	□F ■ G	□F ■ G	 ☐ F ≥ 20% coverage of clear-cut land ☐ G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.			ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7b. F	■Yes łow mu ouffer ju	sment area within 50 feet of a tributary or other open water? In the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Makadgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
		⊒A ⊒B ■C	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet
		□D □E	From 5 to < 15 feet < 5 feet or buffer bypassed by ditches
	7c. T	ributar ∎≤ 15-1	y width. If the tributary is anastomosed, combine widths of channels/braids for a total width. feet wide □> 15-feet wide □ Other open water (no tributary present)
	Į.	■Yes	s of assessment area vegetation extend into the bank of the tributary/open water? ☐No
		Shelte	butary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic. sed – open water width ≥ 2500 feet or regular boat traffic.
8.			th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and body Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	Check		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex and area (WC). See User Manual for WT and WC boundaries.
	□A	□A	≥ 100 feet
	□В	□В	From 80 to < 100 feet
	□D □E	□D □E	
	□F	□F	From 15 to < 30 feet
	□G	□G	From 5 to < 15 feet
	\square H	□н	< 5 feet

Э.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). Sediment deposition is not excessive, but at approximately natural levels. Sediment deposition is excessive, but not overwhelming the wetland. Consider recent deposition only (no plant growth since deposition). Sediment deposition is not excessive, but at approximately natural levels. Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre I J J From 0.01 to < 0.1 acre K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E = E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 ☐A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. ☐B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata.
16	■C Vegetation severely altered from reference in composition, <u>or</u> expected species are unnaturally absent (planted stands of non characteristic species <u>or</u> at least one stratum inappropriately composed of a single species), <u>or</u> exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Structure – assessment area/wetland type condition metric				
	17a. Is vegetation present? ■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.				
	17b. Evalu □A □B	≥ 25% (coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation		
			each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.		
	Canopy B □ C	□A ■B □C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent		
	Mid-Story B C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent		
	Shrub □ C B	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent		
	P Herb B □ C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent		
18.	Snags - we	etland type	condition metric (skip for all marshes)		
		arge snags (ot A	more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).		
19.			oution – wetland type condition metric (skip for all marshes)		
		ajority of ca esent.	nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are		
	■ B M	ajority of ca	nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.		
20.	•	-	- wetland type condition metric (skip for all marshes)		
	□A La		bris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).		
21.	Vegetation	Open Wate	er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)		
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned d areas, while solid white areas indicate open water. □B □C □D		
22.	Hydrologic	Connectiv	ity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)		
	diversion, n A O B O C O	nan-made b verbank <u>and</u> verbank flow verland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. developed overland flow are not severely altered in the assessment area. It is severely altered in the assessment area. It is severely altered in the assessment area. It is severely altered in the assessment area. It is and overland flow are severely altered in the assessment area.		
Note	25				
	· -				

WL abuts cleared gas ROW.

USACE AID #:	-	NCDWR #:	
Project Nam	e MVP Southagate	Date of Evaluation	10/24/24
Applicant/Owner Nam	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B009a
Wetland Typ	e Headwater Forest	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregio	n Piedmont	Nearest Named Water Body	Dan River
River Basi	n Roanoke	USGS 8-Digit Catalogue Unit	03010103
	y Rockingham	NCDWR Region	Winston-Salem
☐ Yes ■ N	o Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.516016283/-79.656736591
Evidence of stressors Please circle and/or m recent past (for instance	affecting the assessment area (may not ake note on the last page if evidence of site, within 10 years). Noteworthy stressors in modifications (examples: ditches, dams, besub-surface discharges into the wetland (exaround storage tanks (USTs), hog lagoons, exation stress (examples: vegetation mortaliticommunity alteration (examples: mowing, coa intensively managed? Yes strions - Were regulatory considerations evaluated species or State endangered or threatian buffer rule in effect ary Nursery Area (PNA) d property of Coastal Management Area of Environme	be within the assessment area) tressors is apparent. Consider departure ficulde, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustc.) ty, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No luated? Yes No If Yes, check all that attened species Intal Concern (AEC) (including buffer) oplemental classifications of HQW, ORW, or ed stream any? (check all that apply) In Mind Both original Both original Conservation of the properties of the	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
1. Ground Surface C Check a box in e the assessment area b GS VS A A A B B	Condition/Vegetation Condition – assessing ach column. Consider alteration to the gracea. Compare to reference wetland if appearsed on evidence of an effect. Not severely altered Severely altered over a majority of the assessed in entation, fire-plow lanes, skidder training assessed.		is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
	reduced diversity [if appropriate], hydrologic		priatej, exolio species, graziriy,
	Surface Storage Capacity and Duration –	·	
Check a box in e (Sub). Consider both 1 foot deep is expect Surf Sub A A B B	wach column. Consider surface storage count increase and decrease in hydrology. A sected to affect both surface and sub-surface. Water storage capacity and duration are not water storage capacity or duration are alterwater storage capacity or duration is substitution.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect s water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3. Water Storage/Su	rface Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
Check a box in ea	ch column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
□B □B □C □C ■D ■D	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	o pond water 6 inches to 1 foot deep o pond water 3 to 6 inches deep deep	
□В	Evidence that maximum depth of inundation Evidence that maximum depth of inundation Evidence that maximum depth of inundation	n is between 1 and 2 feet	

4.	Soil Texture/S	Structure – assessment area condition metric (skip for all marshes)
	Check a box Make soil obs	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ervations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
	=	Soil ribbon < 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	o Wetland – assessment area opportunity metric
	Check a box	in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A B B □C □C	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	I and Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
.	Check all that draining to ass	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □C □C	 □A ≥ 10% impervious surfaces □B Confined animal operations (or other local, concentrated source of pollutants) □C ≥ 20% coverage of pasture
	□D □D □E □E □F □F	 □D ≥ 20% coverage of agricultural land (regularly plowed land) ■E ≥ 20% coverage of maintained grass/herb ■F ≥ 20% coverage of clear-cut land
	■ G ■ G	■G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Actir	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	— .	sment area within 50 feet of a tributary or other open water?
	∐Yes 7b. How mu buffer ju ∏A	■No If Yes, continue to 7b. If No, skip to Metric 8 ch of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make dgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) ≥ 50 feet
	□B □C □D	From 30 to < 50 feet From 15 to < 30 feet From 5 to < 15 feet
	ΠĒ	< 5 feet or bypassed by ditches
		/ width. If the tributary is anastomosed, combine widths of channels/braids for a total width. eet wide □> 15-feet wide □ Other open water (no tributary present)
	7d. Do roots	of assessment area vegetation extend into the bank of the tributary/open water?
	■Yes 7e. Is the tril	□No butary or other open water sheltered or exposed?
	☐Shelte	ered – open water width < 2500 feet and no regular boat traffic. sed – open water width ≥ 2500 feet or regular boat traffic.
8.		h at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and ody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	Check a box the assessmen	in each column . Select the average width for the wetland type at the assessment area (WT) and the wetland complex at nt area (WC). See User Manual for WT and WC boundaries.
	WT WC □A □A	≥ 100 feet
	□B □B	From 80 to < 100 feet
	□c □c	From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet From 15 to < 30 feet
	□r □r	From 5 to < 15 feet
	□H □H	

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)		
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)		
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)		
	Consider recent deposition only (no plant growth since deposition). B Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.		
11.	Wetland Size – wetland type/wetland complex condition metric		
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I I I From 0.01 to < 0.5 acre K K K K K K K C K C 0.01 acre or assessment area is clear-cut		
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)		
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.□B Pocosin is < 90% of the full extent of its natural landscape size.		
13.	Connectivity to Other Natural Areas – landscape condition metric		
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C From 50 to < 100 acres D D D From 10 to < 50 acres E A 10 acres F F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.		
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)		
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8		
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)		
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum. 		
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)		
	Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). Vegetation diversity is low or has > 10% to 50% cover of exotics. Vegetation is dominated by exotic species (> 50% cover of exotics).		

17.	Vegetative Structure – assessment area/wetland type condition metric								
	17a. Is vegetation present?								
		Yes	No If Ye	es, continue to 1	7b. If No, skip	to Metric 18.			
	17b. Ev	aluate pe	rcent cover	age of assessme	ent area vegeta	ation for all n	narshes only.	Skip to17c for non-marsh wetla	ınds.
				ge of vegetation					
		B < 2	25% covera	ge of vegetation					
	in a	airspace a	above the a	column for eacl		-		etric for non-marsh wetlands . y.	Consider structure
	AA >==					ith natural man	iotod	with not well processes	
	noov 			opy closed, of the opy present, but	-	_	-	with natural processes	
	_a □	c \Box		opy sparse or al	•		,		
	>_	. –							
	l-Story ■ □	A		se mid-story/sap erate density mi		lovor			
	ş j	C \square		story/sapling lay		•			
	_			, , , ,	'				
	욕□	A 🗆		se shrub layer					
	Shru □	B		erate density shub layer sparse o	•				
	•	· <u>-</u>	,0 0,,,0	is layer opares c	, about				
				se herb layer					
	Ę Ę	В С		erate density he layer sparse or	•				
10			-			hoo)			
10.				tion metric (ski	-	-	rge relative to	species present and landscape	stahility)
	■B	Not A	iago (moro	andir only are vic	7 12 IIIOI	00 001, 01 10	ingo rolativo to	openies present and landesupe	otability).
19.				- wetland type			-		
	□A	Majority present.		rees have stems	> 6 inches in	diameter at b	reast height (D	BH); many large trees (> 12 inc	hes DBH) are
	■B	Majority	of canopy t	rees have stems			BH, few are >	12 inch DBH.	
	С	Majority	of canopy t	rees are < 6 inch	nes DBH <u>or</u> no	trees.			
20.	_	-		and type condit	•	ip for all ma	rshes)		
	Include b			nd man-placed na an one) are visib		s in diameter	or large relativ	ve to species present and lands	cane stability)
	■B	Not A	ge (e.e u.	a 55, a5 1.5	(, a.a	oa. go .o.a	o to openion process and same	- Lab - Clas
21.	Vegetati	ion/Open	Water Dis	persion – wetla	nd type/open	water condi	ion metric (ev	aluate for Non-Tidal Freshwa	ter Marsh only)
				escribes the amous, while solid wh		ate open wa <u>t</u>		and open water in the growing □ □ □	season. Patterned
					TRANS				
	0	116	RY)			W.	/		
	T.	ر ک) د					À		
				THE PROPERTY OF THE PARTY OF TH		TANK.			
22.	Hydrolo	gic Conn	nectivity – a	ssessment are	a condition m	etric (evalua	te for riparian	wetlands and Salt/Brackish I	Marsh only)
								nsive ditching, fill, sedimentati	ion, channelization,
	diversion A			beaver dams, ar and flow are not				ed if evaluated as B, C, or D.	
	□В	Overban	nk flow is se	verely altered in	the assessme	nt area.	oomont area.		
	□C □D			verely altered in to overland flow are			accment area		
	По	שטנוו טענ	SIDALIK <u>AIIU</u>	ovenand now are	severely alle	eu iii iile ass	cəsilicili alea.		

USACE AID #: NCDWR #:				
Project Name		MVP Southagate	Date of Evaluation	10/24/24
Applicant/Owner Name		Mountain Valley Pipeline, LLC	Wetland Site Name	W-B009b
Wetland Type		Non-Tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregion		Piedmont	Nearest Named Water Body	Dan River
	River Basir	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes 🔳 No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.517046768/-79.656379297
Eviden Please recent p i i i is the a Regula	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply) Blackwater			
Is the a	·	heck one of the following boxes)	0	
Is the a	ssessment area	a's surface water storage capacity or du	ration substantially altered by beaver?	☐ Yes ■ No
Does tl	he assessment a	area experience overbank flooding durir	ng normal rainfall conditions? Yes	■ No
Ch the	eck a box in ea e assessment are sessment area ba b VS A A A B B	ea. Compare to reference wetland if app ased on evidence of an effect. Not severely altered Severely altered over a majority of the asse sedimentation, fire-plow lanes, skidder tra	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the comp	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2. Su	rface and Sub-S	urface Storage Capacity and Duration -	assessment area condition metric	
Ch (Տւ	eck a box in eaub). Consider boot deep is expected as a larger of the constant	tch column. Consider surface storage countries and decrease in hydrology. A sted to affect both surface and sub-surface. Water storage capacity and duration are nowater storage capacity or duration are alterwater storage capacity or duration is substated.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch > slicable. The state of the state o
3. Wa	ater Storage/Sur	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	5)
Ch	eck a box in ead	ch column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	□B □B M □C □C M □D □D E	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches Evidence that maximum depth of inundation	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
SD.	□B E	Evidence that maximum depth of inundation Evidence that maximum depth of inundation Evidence that maximum depth of inundation	n is between 1 and 2 feet	

⊶.	4. Son rexture/Structure	- assessment area condition metric (skip for all marshes)
		h of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	4a.	
	□B Loamy or	clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
		clayey soils not exhibiting redoximorphic features
		clayey gleyed soil
		r histic epipedon
	4b. ☐A Soil ribbor	
	☐B Soil ribbor	1 ≥ 1 inch
	_ '	r muck presence
	☐B A peat or i	muck presence
5.	5. Discharge into Wetland	d – assessment area opportunity metric
	Examples of sub-surface	column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). e discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	Surf Sub	
		or no evidence of pollutants or discharges entering the assessment area reable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
		ment capacity of the assessment area
		eable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
	poten	ntially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive nentation, odor)
•		
6.		y metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		area within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment miles and within the watershed draining to the assessment area (2M).
	WS 5M 2M	Tilles and within the watershed draining to the assessment area (Zivi).
	□A □A □A	≥ 10% impervious surfaces
	□B □B □B	Confined animal operations (or other local, concentrated source of pollutants)
		≥ 20% coverage of pasture
	\Box D \Box D \Box D	≥ 20% coverage of agricultural land (regularly plowed land)
		≥ 20% coverage of maintained grass/herb
		≥ 20% coverage of clear-cut land
	■G ■G ■G	Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.		etated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
		a within 50 feet of a tributary or other open water?
		If Yes, continue to 7b. If No, skip to Metric 8
		first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make ased on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□A ≥ 50 feet	
		to < 50 feet
		to < 30 feet
	D From 5 to	o < 15 feet
		<u>or</u> buffer bypassed by ditches
		the tributary is anastomosed, combine widths of channels/braids for a total width.
	≤ 15-feet wide	□> 15-feet wide □ Other open water (no tributary present)
	7d. Do roots of assess □Yes ■No	sment area vegetation extend into the bank of the tributary/open water?
		other open water sheltered or exposed?
		en water width < 2500 feet and no regular boat traffic.
		n water width ≥ 2500 feet or regular boat traffic.
8.	8 Wetland Width at the A	Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
0.		and only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	and only, ovaluate the for Bottomana harawood Forest, houdwater Forest, and haronne owamp Forest
		column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		C). See User Manual for WT and WC boundaries.
	WT WC	
	□A □A ≥ 100) feet
		1 80 to < 100 feet
		1 50 to < 80 feet
		40 to < 50 feet
		30 to < 40 feet
		1 15 to < 30 feet
		n 5 to < 15 feet
	☐H ☐H < 5 fe	
		·

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A S 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I I From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size.
	Connectivity to Other Natural Areas – landscape condition metric 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C From 50 to < 100 acres D From 10 to < 50 acres F H Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." $ \Box A 0 \\ \Box B 1 \text{ to } 4 \\ \Box C 5 \text{ to } 8 $
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Structure – assessment area/wetland type condition metric		
	17a. Is vegetation ■Yes □N	·	
	■ A ≥ 2	cent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. 5% coverage of vegetation 5% coverage of vegetation	
	in airspace a	x in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands . Consider structure bove the assessment area (AA) and the wetland type (WT) separately.	
	AA WT à□A □A e□B □E O□C □C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps	
	Marian M	Moderate density mid-story/sapling layer	
	Ø□C □C	Moderate density shrub layer	
		Moderate density herb layer	
18.	☐A Large sna	type condition metric (skip for all marshes) ags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).	
10	☐B Not A	istribution – wetland type condition metric (skip for all marshes)	
13.	☐A Majority of	of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are	
		of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. of canopy trees are < 6 inches DBH or no trees.	
20.	= -	oris – wetland type condition metric (skip for all marshes)	
		al debris and man-placed natural debris. Is (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).	
21.	•	Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)	
		nat best describes the amount of interspersion between vegetation and open water in the growing season. Patterned etated areas, while solid white areas indicate open water.	
22.		ectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)	
	diversion, man-mad A Overbank B Overbank C Overland	rities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, de berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. (and overland flow are not severely altered in the assessment area. (flow is severely altered in the assessment area. flow is severely altered in the assessment area. rbank and overland flow are severely altered in the assessment area.	
Note	tes		

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US	ACE AID #:		NCDWR #:	
	Project Name		Date of Evaluation	10/24/24
Ap	pplicant/Owner Name		Wetland Site Name	W-B010
	• • •	Non-Tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.519180981/-79.654751578
Is t Rec	dence of stressors as ase circle and/or malent past (for instance,	affecting the assessment area (may not ke note on the last page if evidence of state within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beauth-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, eation stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes ones - Were regulatory considerations evaluated species or State endangered or threat an buffer rule in effect y Nursery Area (PNA) property	be within the assessment area) tressors is apparent. Consider departure ficlude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollutic.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that thened species Intal Concern (AEC) (including buffer) oplemental classifications of HQW, ORW, or ed stream	tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
ls t	he assessment area	neck one of the following boxes) Lun on a coastal island? Yes No 's surface water storage capacity or dur urea experience overbank flooding durin	ration substantially altered by beaver?	☐ Yes ■ No ■ No
1.	Check a box in each the assessment area basessment area bases VS A A A A B B B B S	ea. Compare to reference wetland if apposed on evidence of an effect. Not severely altered Severely altered over a majority of the assectimentation, fire-plow lanes, skidder trace	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the comp	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ea (Sub). Consider bot 1 foot deep is expect Surf Sub A A A A A A A A A A A A A A A A A A A	ch column. Consider surface storage continuous and decrease in hydrology. A sted to affect both surface and sub-surface. Vater storage capacity and duration are nowater storage capacity or duration are altered to a sub-surface.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch > slicable. The state of the state o
3.	Water Storage/Surf	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
	Check a box in each AA WT 3a.		for the assessment area (AA) and the wetla o pond water > 1 foot deep o pond water 6 inches to 1 foot deep o pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil observ indicators.	om each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature vations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional andy soil
	■B Loa □C Loa □D Loa	amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) amy or clayey soils not exhibiting redoximorphic features amy or clayey gleyed soil stosol or histic epipedon
		il ribbon < 1 inch il ribbon ≥ 1 inch
	_	peat or muck presence peat or muck presence
5.	Discharge into V	Netland – assessment area opportunity metric
		n each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub) surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Little or no evidence of pollutants or discharges entering the assessment area
	□B □B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Check all that a draining to asses	ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland) apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sement area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment in a miles and within the watershed draining to the assessment area (2M). 2M A ≥ 10% impervious surfaces Confined animal operations (or other local, concentrated source of pollutants) C ≥ 20% coverage of pasture D ≥ 20% coverage of agricultural land (regularly plowed land) E ≥ 20% coverage of maintained grass/herb F ≥ 20% coverage of clear-cut land Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7a. Is assessm	nent area within 50 feet of a tributary or other open water? No If Yes, continue to 7b. If No, skip to Metric 8 of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make ment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) 50 feet rom 30 to < 50 feet rom 15 to < 30 feet rom 5 to < 15 feet
		5 feet <u>or</u> buffer bypassed by ditches
	7c. Tributary w ∏≤ 15-feet	ridth. If the tributary is anastomosed, combine widths of channels/braids for a total width. t wide > 15-feet wide
		assessment area vegetation extend into the bank of the tributary/open water?
	7e. Is the tribut ☐Sheltere]No tary or other open water sheltered or exposed? d – open water width < 2500 feet and no regular boat traffic. I – open water width ≥ 2500 feet or regular boat traffic.
8.	Wetland Width a Estuarine Wood	at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and By Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex a
		area (WC). See User Manual for WT and WC boundaries.
	WI WE	≥ 100 feet
	□в □в	From 80 to < 100 feet
	□c □c	From 50 to < 80 feet
		From 40 to < 50 feet
	□E □E □F □F	From 30 to < 40 feet From 15 to < 30 feet
	□r □r □G □G	From 5 to < 15 feet
	□6 □6 □H □H	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	 □A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
. •.	□ Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ Vegetation diversity is low or has > 10% to 50% cover of exotics. □ Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Structure – assessment area/wetland type condition metric
	17a. Is vegetation present? ■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evaluate percent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. □A ≥ 25% coverage of vegetation □B < 25% coverage of vegetation
	17c. Check a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.
	AA WT ☐ A Canopy closed, or nearly closed, with natural gaps associated with natural processes ☐ B ☐ B Canopy present, but opened more than natural gaps ☐ ■ C Canopy sparse or absent
	Dense mid-story/sapling layer Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	□ A □ A Dense shrub layer □ B □ B Moderate density shrub layer □ □ C Shrub layer sparse or absent
	■A ■A Dense herb layer □B Moderate density herb layer □C □C Herb layer sparse or absent
18.	Snags – wetland type condition metric (skip for all marshes)
	□A Large snags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability). ■ Not A
19.	Diameter Class Distribution – wetland type condition metric (skip for all marshes)
	Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
	 □B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. □C Majority of canopy trees are < 6 inches DBH or no trees.
20.	Large Woody Debris – wetland type condition metric (skip for all marshes)
	Include both natural debris and man-placed natural debris. A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability). Not A
21.	Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
	Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.
22.	Hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. Overbank and overland flow are not severely altered in the assessment area. Overbank flow is severely altered in the assessment area. Overland flow is severely altered in the assessment area. Description:
Note	

No

Overland flow altered by road and ditches adjacent to wetland.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
A	pplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B011
	Wetland Type	Non-Tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Mountain Run
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.538182045/79.636198321
Is t Rea	dence of stressors a ase circle and/or mal ent past (for instance,	affecting the assessment area (may not see note on the last page if evidence of st within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beat-b-surface discharges into the wetland (exampled storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes ons - Were regulatory considerations evaluated species or State endangered or threat in buffer rule in effect y Nursery Area (PNA) property	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species Intal Concern (AEC) (including buffer) pelemental classifications of HQW, ORW, or ead stream Any? (check all that apply)	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
_	•	on a coastal island? ☐ Yes ■ No		
		's surface water storage capacity or du		☐ Yes ■ No
			ng normal rainfall conditions?	■ No
1.	Check a box in each the assessment area backs SS VS A A A A B B B SS S	a. Compare to reference wetland if app sed on evidence of an effect. lot severely altered severely altered over a majority of the asse edimentation, fire-plow lanes, skidder trac	pund surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximates]	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
		educed diversity [if appropriate], hydrologic		
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A V B B B W C C V	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter vater storage capacity <u>or</u> duration is substa	ed, but not substantially (typically, not suffic antially altered (typically, alteration sufficient	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
	·		on, filling, excessive sedimentation, undergr	
3.	=		ype condition metric (skip for all marshes	
		h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	□B □B M □C □C M	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to lepressions able to lepressions able to lepressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence.	n is between 1 and 2 feet	

⊶.	4. Son rexture/Structure	e – assessment area condition metric (skip for all marshes)
		ch of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. s within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	4a. □A Sandy s	oil
	☐B Loamy o	or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
		or clayey soils not exhibiting redoximorphic features
		or clayey gleyed soil
		or histic epipedon
		on < 1 inch
	☐B Soil ribb	on ≥ 1 inch
		or muck presence
	☐B A peat o	or muck presence
5.	5. Discharge into Wetla	nd – assessment area opportunity metric
	Check a hox in eac	th column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub).
		ice discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	Surf ['] Sub	
		le or no evidence of pollutants or discharges entering the assessment area
		ticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
		atment capacity of the assessment area
		ticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
		entially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive limentation, odor)
		• •
6.	6. Land Use – opportun	ity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		(at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		nt area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment
		2 miles and within the watershed draining to the assessment area (2M).
	WS 5M 2M □A □A □A	
		C ≥ 20% coverage of pasture
		E ≥ 20% coverage of maintained grass/herb
	□G □G □G	
		the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Acting as Ve	egetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
		rea within 50 feet of a tributary or other open water?
	■Yes □No	If Yes, continue to 7b. If No, skip to Metric 8
		e first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□A ≥ 50 fe	
		80 to < 50 feet
		5 to < 30 feet
	D From 5	5 to < 15 feet
		t <u>or</u> buffer bypassed by ditches
		If the tributary is anastomosed, combine widths of channels/braids for a total width.
	■≤ 15-feet wide	e
	7d. Do roots of asses ■Yes □No	ssillent area vegetation extend into the bank of the tributary/open water?
		r other open water sheltered or exposed?
		pen water width < 2500 feet and no regular boat traffic.
	☐Exposed – ope	en water width ≥ 2500 feet or regular boat traffic.
8.	R Wetland Width at the	Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
٥.		etland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	,
		column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		WC). See User Manual for WT and WC boundaries.
	WT WC	
		00 feet
		m 80 to < 100 feet
	□C □C From	om 50 to < 80 feet
	□D □D From	m 40 to < 50 feet
	□E □E From	om 30 to < 40 feet
	□F □F From	m 15 to < 30 feet
	■G □G From	m 5 to < 15 feet
		feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F F F F F F F F F F F F F F F F F
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size.
	Connectivity to Other Natural Areas – landscape condition metric 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D From 10 to < 50 acres E = E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. ■Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." $ \Box A 0 \\ \Box B 1 \text{ to } 4 \\ \Box C 5 \text{ to } 8 $
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative	Structure -	- assessment area/wetland type condition metric
	17a. Is veg ■Yes		sent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evalua ■A □B	≥ 25% (coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation
	in airs	pace above	each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	Cano B □ C	WT □A □B □C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B	□A □B □C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	Shrub D B V □	□A □B □C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	P B B C C	□A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.	Snags - we	tland type	condition metric (skip for all marshes)
	□B No	t A	(more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			bution – wetland type condition metric (skip for all marshes)
	pre	esent.	nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.	_	=	- wetland type condition metric (skip for all marshes) bris and man-placed natural debris.
	□A La		nore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/	Open Wate	er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			pest describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas, while solid white areas indicate open water. □B □C □D
	O)		
22.			rity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, m A Ov B Ov C Ov	an-made be erbank <u>and</u> erbank flow erland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. doverland flow are not severely altered in the assessment area. vis severely altered in the assessment area. vis severely altered in the assessment area. k and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
Αį	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B012
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Mountain Run
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.539457818/79.634387144
Is t	ase circle and/or malent past (for instance,	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beab-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes ons - Were regulatory considerations eval	ressors is apparent. Consider departure ficlude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollute.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that	tants, presence of nearby septic salt intrusion, etc.)
	Abuts a Primar Publicly owned N.C. Division o Abuts a stream Designated NC Abuts a 303(d)	y Nursery Area (PNA) property f Coastal Management Area of Environme	plemental classifications of HQW, ORW, or ed stream	Trout
ls t	he assessment area he assessment area	neck one of the following boxes)	ration substantially altered by beaver?	☐ Yes ■ No ■ No
1.	Check a box in each the assessment area basessment area bases VS	 ca. Compare to reference wetland if app sed on evidence of an effect. lot severely altered 	nent area condition metric bund surface (GS) in the assessment area licable (see User Manual). If a reference	is not applicable, then rate the
	s a	edimentation, fire-plow lanes, skidder trac	cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro	pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expec Surf Sub ☐A ☐A V	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect substant. Consider tidal flooding regime, if apput altered. Ted, but not substantially (typically, not sufficiency)	urface water only, while a ditch > olicable.
2	(6	examples: draining, flooding, soil compacti	antially altered (typically, alteration sufficient on, filling, excessive sedimentation, undergr	round utility lines).
3.	=		ype condition metric (skip for all marshes	
	AA WT	in column for each group below. Select	for the assessment area (AA) and the wetla	na type (vv i).
	3a.	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

4.	Check	a box	from each of	assessment area condition metric (skip for all marshes) of the three soil property groups below. Dig soil profile in the dominant assessment area landscape thin the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils	
	indicat 4a. [[[ors. □A ■B □C □D	Sandy soil Loamy or cla Loamy or cla Loamy or cla	ayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) ayey soils not exhibiting redoximorphic features ayey gleyed soil iistic epipedon	Ü
			Soil ribbon < Soil ribbon ≥		
			No peat or m	nuck presence uck presence	
5.	Discha		•	- assessment area opportunity metric	
	Check	a box	in each co	olumn. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharge ischarges include presence of nearby septic tank, underground storage tank (UST), etc.	es (Sub)
	■A □B	■A □B	Noticeal	no evidence of pollutants or discharges entering the assessment area ble evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the nt capacity of the assessment area	
	С	□C	Noticeat potential	ble evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment are ally overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive ntation, odor)	
6.	l and l	leo		netric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)	
0.	Check drainin	all tha	at apply (at I sessment are	least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider the author watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M).	
	□A □B	□A □B		≥ 10% impervious surfaces Confined animal operations (or other local, concentrated source of pollutants)	
	□C □D □E		□D □E	≥ 20% coverage of pasture ≥ 20% coverage of agricultural land (regularly plowed land) ≥ 20% coverage of maintained grass/herb	
	□F □G	□F □G	□F □G	≥ 20% coverage of clear-cut land Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturt the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.	
7.	Wetlar	nd Acti	ng as Vegeta	ated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands	;)
				within 50 feet of a tributary or other open water?	
	7b. i		ich of the first	Yes, continue to 7b. If No, skip to Metric 8 t 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water booked on the average width of wetland. Record a note if a portion of the buffer has been removed or disturb	
	[]	⊒B ⊒C	From 30 to From 15 to	< 30 feet	
		□D □E	From 5 to < < 5 feet or b	buffer bypassed by ditches	
	7c.	Γributar	y width. If the	e tributary is anastomosed, combine widths of channels/braids for a total width.	
				□> 15-feet wide □ Other open water (no tributary present) ent area vegetation extend into the bank of the tributary/open water?	
	-	☐Yes	■No	er open water sheltered or exposed?	
	[Shelt	ered – open w	water width < 2500 feet and no regular boat traffic. vater width ≥ 2500 feet or regular boat traffic.	
8.				sessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swam	
	Check			umn. Select the average width for the wetland type at the assessment area (WT) and the wetland co b. See User Manual for WT and WC boundaries.	omplex a
	\square A	□А		eet	
	□в	□в		0 to < 100 feet	
	□C ■D	□C ■D		0 to < 80 feet 0 to < 50 feet	
	□E			0 to < 40 feet	
	□F	□F	From 15	5 to < 30 feet	
	□G □H	□G □H		to < 15 feet	
			5 1001		

).	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
ın	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E F From 10 to < 25 acres F F F F F F F F F F F F F F F F F F F
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size.
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E A 10 acres F ■ F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative St	ructure –	assessment area/wetland type condition metric
	17a. Is veget ■Yes	ation pres □No	ent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evaluate □A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. overage of vegetation overage of vegetation
			each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	Canoby B⊟C Call	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dund dund B □ V	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A⊟erb B⊟C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.			condition metric (skip for all marshes)
	□A Larg ■B Not	• .	more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			oution – wetland type condition metric (skip for all marshes) ropy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	pres	ent.	
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.			wetland type condition metric (skip for all marshes)
		e logs (mo	oris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/O	pen Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water.
		3	
22.			ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, mar A Over B Over C Over	n-made be rbank <u>and</u> rbank flow rland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area. is severely altered in the assessment area. is severely altered in the assessment area. is and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
A	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B013b
	Wetland Type	Pine Flat	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Mountain Run
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010104
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.541667413/79.632620204
Is t	ase circle and/or makent past (for instance,	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beab-surface discharges into the wetland (examples tond storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality mmunity alteration (examples: mowing, contensively managed? Yes sons - Were regulatory considerations evaluated species or State endangered or threat in buffer rule in effect y Nursery Area (PNA)	ressors is apparent. Consider departure ficulde, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollute.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that	tants, presence of nearby septic
	N.C. Division of Abuts a stream Designated NC Abuts a 303(d)-	Coastal Management Area of Environment	plemental classifications of HQW, ORW, or ed stream	Trout
□ Is t	Tidal (if tidal, ch	on a coastal island? Yes No		□ Voc. ■ No.
		's surface water storage capacity or du rea experience overbank flooding durir	ration substantially altered by beaver? ng normal rainfall conditions? Yes	☐ Yes ■ No ■ No
1.	Check a box in each the assessment area basessment area bases VS	 a. Compare to reference wetland if app sed on evidence of an effect. ot severely altered 	nent area condition metric bund surface (GS) in the assessment area licable (see User Manual). If a reference ssment area (ground surface alteration examples)	is not applicable, then rate the
	s _e	edimentation, fire-plow lanes, skidder tra	cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro	pollutants) (vegetation structure
2.	Surface and Sub-Su	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider both 1 foot deep is expect Surf Sub A A A W B B B W C C C W	h increase and decrease in hydrology. A sted to affect both surface and sub-surface and sub-surface and sub-surface and sub-surface are storage capacity or duration are alter atternance and a sub-steep and support and sub-steep are storage capacity or duration is sub-steep atternance.	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect substant. Consider tidal flooding regime, if appet altered. The substantially (typically, not sufficient on, filling, excessive sedimentation, underground in the substantially alteration sufficient on, filling, excessive sedimentation, underground in the substantially alteration sufficient on, filling, excessive sedimentation, underground in the substantial s	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshes	5)
	=		for the assessment area (AA) and the wetla	
	AA WT	5 11 p 11 1 2 1 1 1	, , , , ,	, ,
	3a.	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to epressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

⊶.	Jon Texture/Str	ucture – assessment area condition metric (skip for all marshes)
		om each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. Vations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
		indy soil
	■B Loa	amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
		amy or clayey soils not exhibiting redoximorphic features
		amy or clayey gleyed soil
		stosol or histic epipedon
		il ribbon < 1 inch
	□B So	il ribbon ≥ 1 inch
		peat or muck presence
	□B A p	peat or muck presence
5.	Discharge into V	Wetland – assessment area opportunity metric
	Check a box ir	n each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub).
	Examples of sub-	-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	Surf Sub	
	■A ■A	Little or no evidence of pollutants or discharges entering the assessment area
	□В □В	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	□с □с	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
		potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive
		sedimentation, odor)
•	Land Harman	· • •
6.		ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		essment area within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment
		rithin 2 miles and within the watershed draining to the assessment area (2M).
	WS 5M □A □A	2M □A ≥ 10% impervious surfaces
	□B □B	☐B Confined animal operations (or other local, concentrated source of pollutants)
	□c □c	□C ≥ 20% coverage of pasture
		□D ≥ 20% coverage of agricultural land (regularly plowed land)
	□E □E	□E ≥ 20% coverage of maintained grass/herb
	□F □F	☐F ≥ 20% coverage of clear-cut land
	□G □G	☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7a. Is assessm	nent area within 50 feet of a tributary or other open water?
		No If Yes, continue to 7b. If No, skip to Metric 8
		of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make
		ment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
		50 feet from 30 to < 50 feet
		rom 15 to < 30 feet
		rom 5 to < 15 feet
	<u></u> E <	5 feet <u>or</u> buffer bypassed by ditches
		ridth. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	≤ 15-fee	
		f assessment area vegetation extend into the bank of the tributary/open water?
]No tary or other open water sheltered or exposed?
		d – open water width < 2500 feet and no regular boat traffic.
		d – open water width ≥ 2500 feet or regular boat traffic.
0	-	
8.		at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
	only)	ly Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		area (WC). See User Manual for WT and WC boundaries.
	WT WC	and (170). Coo cool Mandal for 171 and 170 boundarios.
	□A □A	≥ 100 feet
	□B □B	From 80 to < 100 feet
		From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□F □F	From 5 to < 15 feet
	□н □н	< 5 feet
		- O 100t

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre II II II From 0.1 to < 0.5 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	 □A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ☐No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	□ Vegetative Biversity = assessment area condition metric (evaluate for Non-tidal Freshwater marsh only) □ Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ Vegetation diversity is low or has > 10% to 50% cover of exotics. □ Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	/egetative Structure – assessment area/wetland type condition metric
	I/a. Is vegetation present?■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.
	The Evaluate percent coverage of assessment area vegetation for all marshes only. Skip to 17c for non-marsh wetlands. □ A ≥ 25% coverage of vegetation □ B < 25% coverage of vegetation
	7c. Check a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.
	AA WT AB Canopy closed, or nearly closed, with natural gaps associated with natural processes BB Canopy present, but opened more than natural gaps CCC Canopy sparse or absent
	Dense mid-story/sapling layer B
	□ A □ A Dense shrub layer □ B □ B Moderate density shrub layer □ □ C Shrub layer sparse or absent
	☐A Dense herb layer ☐B Moderate density herb layer ☐C ■C Herb layer sparse or absent
18.	Snags – wetland type condition metric (skip for all marshes)
	A Large snags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability). Not A
19.	Diameter Class Distribution – wetland type condition metric (skip for all marshes)
	A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present.
	 □B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. □C Majority of canopy trees are < 6 inches DBH or no trees.
20.	arge Woody Debris – wetland type condition metric (skip for all marshes)
	nclude both natural debris and man-placed natural debris. A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability). Not A
21.	/egetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
	Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.
22.	Hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. A Overbank and overland flow are not severely altered in the assessment area. D Overbank flow is severely altered in the assessment area. D Both overbank and overland flow are severely altered in the assessment area.
Note	

USACE AID #:		NCDWR #:	
•	MVP Southagate	Date of Evaluation	10/24/24
Applicant/Owner Name		Wetland Site Name	W-B027
3.	Riverine Swamp Forest	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregion	Piedmont Piedmont	Nearest Named Water Body	Cascade Creek
River Basi	Roanoke	USGS 8-Digit Catalogue Unit	03010103
Count	/ Rockingham	NCDWR Region	Winston-Salem
☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.528131016/79.646126512
Please circle and/or marecent past (for instance	e, within 10 years). Noteworthy stressors in nodifications (examples: ditches, dams, becaub-surface discharges into the wetland (exacund storage tanks (USTs), hog lagoons, exaction stress (examples: vegetation mortality ommunity alteration (examples: mowing, can intensively managed? Yes strong - Were regulatory considerations evaluated species or State endangered or threat an buffer rule in effect ry Nursery Area (PNA) diproperty of Coastal Management Area of Environme	tressors is apparent. Consider departure findude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustc.) ty, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No luated? Yes No If Yes, check all that attened species Intal Concern (AEC) (including buffer) oplemental classifications of HQW, ORW, or ed stream	tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
Is the assessment are	theck one of the following boxes) Lur a on a coastal island? Yes Noa's surface water storage capacity or du area experience overbank flooding during	o ration substantially altered by beaver?	☐ Yes ■ No ■ No
Ground Surface C Check a box in ea the assessment area box GS VS	ondition/Vegetation Condition – assessing ch column. Consider alteration to the great. Compare to reference wetland if appared on evidence of an effect.		and vegetation structure (VS) in
□В □В	sedimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration exal cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro c alteration)	pollutants) (vegetation structure
2. Surface and Sub-S	Surface Storage Capacity and Duration –	assessment area condition metric	
Check a box in early (Sub). Consider both 1 foot deep is expensive. Surf Sub A A A B B B C C C	ach column. Consider surface storage of the increase and decrease in hydrology. A cted to affect both surface and sub-surface. Water storage capacity and duration are now water storage capacity or duration are alternated water storage capacity or duration is substituted.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect s water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3. Water Storage/Sui	face Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)
Check a box in ea AA WT 3a.		for the assessment area (AA) and the wetland popond water > 1 foot deep popond water 6 inches to 1 foot deep popond water 3 to 6 inches deep	
3b.	Evidence that maximum depth of inundation Evidence that maximum depth of inundation Evidence that maximum depth of inundation	n is greater than 2 feet n is between 1 and 2 feet	

4.	Soil Texture/S	tructure – assessment area condition metric (skip for all marshes)
	Check a box f Make soil obse	rom each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ervations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B L □C L □D L	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
	=	Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge into	o Wetland – assessment area opportunity metric
	Check a box	in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B □B □C □C	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	I and Use - or	portunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
v.	Check all that draining to ass	t apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources essment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment within 2 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	□A ≥ 10% impervious surfaces□B Confined animal operations (or other local, concentrated source of pollutants)
	■D ■D ■E ■E □F □F	 □ C ≥ 20% coverage of pasture □ D ≥ 20% coverage of agricultural land (regularly plowed land) □ E ≥ 20% coverage of maintained grass/herb □ F ≥ 20% coverage of clear-cut land
	□G □G	☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland Actin	g as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	_	ment area within 50 feet of a tributary or other open water?
	7b. How muc	□No If Yes, continue to 7b. If No, skip to Metric 8 ch of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make Igment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) ≥ 50 feet
	■B □C □D	From 30 to < 50 feet From 15 to < 30 feet From 5 to < 15 feet
		< 5 feet or buffer bypassed by ditches
	7c. Tributary	width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
		eet wide
		No
	■Shelte	outary or other open water sheltered or exposed? red – open water width < 2500 feet and no regular boat traffic. ed – open water width ≥ 2500 feet or regular boat traffic.
8.		n at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and ody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	Check a box i	n each column . Select the average width for the wetland type at the assessment area (WT) and the wetland complex at t area (WC). See User Manual for WT and WC boundaries.
	WT WC □A □A	≥ 100 feet
	□B □B	From 80 to < 100 feet
	□c □c	From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
	□F □F □G □G	From 15 to < 30 feet From 5 to < 15 feet
	□G □G □H □H	From 5 to < 15 feet < 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) B Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). B Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre MK K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D D From 10 to < 50 acres E A 10 acres F F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." $\Box A 0$ $\Box B 1 \text{ to } 4$ $\Box C 5 \text{ to } 8$
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
. 5.	 ☐A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). ☐B Vegetation diversity is low or has > 10% to 50% cover of exotics. ☐C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	ive Struc	ture – asses	sment area/wet	land type co	ndition met	ric		
		•	n present?						
		Yes	No If Yes	, continue to 17b	o. If No, skip	to Metric 18.			
	17b. Ev	aluate pe	rcent covera	ge of assessmen	it area vegeta	tion for all r	narshes only.	Skip to17c for non-marsh we	etlands.
				e of vegetation					
		B < 2	25% coverag	e of vegetation					
	in :	airspace a	above the as	olumn for each seessment area (A		-		netric for non-marsh wetland ly.	ds. Consider structure
	AA ⊡ ≲				why alasad with	ith matural ar		with natural process	
	on ol			py closed, of flea py present, but o	-	_	-	with natural processes	
	□ □	c 🗆		py sparse or abs	•		2		
			_						
	l-Story ■ □	А		e mid-story/saplir rate density mid-		lavor			
	i j	C \square		tory/sapling layer		•			
	_				•				
	욕□	A 🛚		e shrub layer	1. 1				
	Shru □	B		rate density shru layer sparse or					
	•		O Omas	rayor oparoo or	abcont				
				e herb layer					
	Ę Ę	В 🗆 С 🗆		rate density herb layer sparse or a	•				
10						haa)			
10.				i on metric (skip nan one) are visih		-	arge relative to	species present and landsca	nne stahility)
	■В	Not A	- '	·					ipo otability).
19.				- wetland type o					
	□A	Majority present.	of canopy tre	es have stems >	> 6 inches in d	diameter at b	reast height (L	DBH); many large trees (> 12	inches DBH) are
	■B	Majority		es have stems b			DBH, few are >	> 12 inch DBH.	
	□С			es are < 6 inche					
20.	_	-		nd type conditio	•	ip for all ma	rshes)		
	Include b ■A			l man-placed nat n one) are visible		in diameter	or large relati	ve to species present and lan	dscape stability).
	⊟в	Not A	5 (,	`		3	, ,	7/
21.	Vegetati	ion/Open	Water Disp	ersion – wetland	d type/open	water condi	tion metric (e	valuate for Non-Tidal Fresh	water Marsh only)
				cribes the amou , while solid white		ate open wa		and open water in the growi	ng season. Patterned
					TO TO				
		To	2						
	\mathcal{C}) W) e	151				A		
			5/11/1						
22	Hydrolo	aic Conn	ectivity – as	sessment area	condition m	etric (evalu:	ite for rinaria	n wetlands and Salt/Brackis	th Marsh only)
	-	-	=			-	_	ensive ditching, fill, sedimen	= :
	diversion	n, man-ma	ade berms, b	eaver dams, and	stream incisi	ion. Docume	ntation require	ed if evaluated as B, C, or D.	
	■A □B			nd flow are not se erely altered in th			essment area.		
	□C	Overland	d flow is seve	rely altered in the	e assessmen	t area.			
	□D	Both ove	erbank <u>and</u> o	verland flow are	severely alter	ed in the ass	essment area		

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
Α	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B027a
Wetland Type		Non-Tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregion		Piedmont	Nearest Named Water Body	Cascade Creek
River Basin		Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.528131016/79.646126512
Ple rec	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. • Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) • Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) • Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) • Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed?			
□ □ Is t	Blackwater Brownwater Tidal (if tidal, che assessment area he assessment area	ream is associated with the wetland, if a neck one of the following boxes) Lun on a coastal island? Yes Now is surface water storage capacity or during experience overbank flooding during	nar	☐ Yes ■ No
1.	Check a box in each the assessment area bands of the session of th	a. Compare to reference wetland if app sed on evidence of an effect. lot severely altered severely altered over a majority of the asse edimentation, fire-plow lanes, skidder trac	ound surface (GS) in the assessment area dicable (see User Manual). If a reference essment area (ground surface alteration examples, bedding, fill, soil compaction, obvious	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2	re	educed diversity [if appropriate], hydrologic	·	opriate], exotic species, grazing,
2.		urface Storage Capacity and Duration –		a storage consoity and duration
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A A V B B B V C C C V	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if appet altered. The substantially (typically, not sufficiantially altered (typically, alteration sufficient on, filling, excessive sedimentation, underground in the substantially alteration, underground in the substantially altered (typically, alteration, underground in the substantially (typically, alteration) altered (typically, alteration, underground in the substantially (typically, alteration) altered (typically, alteration) altered (typically, alteration) altered (typically, altered (typically	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	AA WT 3a. □A □A M □B □B M □C □C M □D □D □	flajority of wetland with depressions able to flajority of wetland with depressions able to flajority of wetland with depressions able to pepressions able to pond water < 3 inches	o pond water > 1 foot deep o pond water 6 inches to 1 foot deep o pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

⊶.	Jon Texture/Strt	deture – assessment area condition metric (skip for an marshes)
		m each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. rations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
		ndy soil
	■B Loa	amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
		amy or clayey soils not exhibiting redoximorphic features
		amy or clayey gleyed soil
		stosol or histic epipedon
		il ribbon < 1 inch
	■B Soi	il ribbon ≥ 1 inch
		peat or muck presence
	□В Ар	peat or muck presence
5.	Discharge into V	Netland – assessment area opportunity metric
	Check a box in	n each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub).
		surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	Surf Sub	
	<u>■</u> A <u>■</u> A	Little or no evidence of pollutants or discharges entering the assessment area
	□в □в	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
	□с □с	treatment capacity of the assessment area Neticophle suidence of pollutante or discharges (notheres particulate or calluble) entering the assessment area and
	□c □c	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive
		sedimentation, odor)
•	Land Harman	, ,
6.		ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		sment area within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment ithin 2 miles and within the watershed draining to the assessment area (2M).
	WS 5M	2M
	□A □A	☐A ≥ 10% impervious surfaces
	□в □в	B Confined animal operations (or other local, concentrated source of pollutants)
	□c □c	☐C ≥ 20% coverage of pasture
		■D ≥ 20% coverage of agricultural land (regularly plowed land)
		■E ≥ 20% coverage of maintained grass/herb
	□F □F □G □G	 ☐F ≥ 20% coverage of clear-cut land ☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
	Па Па	the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the
		assessment area.
7.	Wotland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
١.	_	
		ent area within 50 feet of a tributary or other open water?]No If Yes, continue to 7b. If No, skip to Metric 8
		of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make
		ment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	∏A ≥	50 feet
	_	rom 30 to < 50 feet
		rom 15 to < 30 feet
		rom 5 to < 15 feet 5 feet <u>or</u> buffer bypassed by ditches
		idth. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	■≤ 15-feet	
	7d. Do roots of	assessment area vegetation extend into the bank of the tributary/open water?
]No
		ary or other open water sheltered or exposed?
		d – open water width < 2500 feet and no regular boat traffic. I – open water width ≥ 2500 feet or regular boat traffic.
	-	
8.		at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
		ly Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	each column. Coloct the average width for the wetland type at the acceptant area (MT) and the wetland complex at
		each column . Select the average width for the wetland type at the assessment area (WT) and the wetland complex at area (WC). See User Manual for WT and WC boundaries.
	WT WC	ilea (WO). See Osei Mandai loi WT and WO boundaries.
	□A □A	≥ 100 feet
	□B □B	From 80 to < 100 feet
		From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G	From 5 to < 15 feet
	□H □H	< 5 feet

7.	mundation buration – assessment area condition metric (skip for non-nparian wettands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) B Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
12	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres F F F From 10 to < 25 acres F F F From 5 to < 10 acres G G G G From 1 to < 5 acres H H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre Metland Intercrees — wetland type condition metric (evaluate for Posseins only)
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E C C From 50 to < 100 acres F C C To acres F C Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	■Yes □No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
4.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 ☐A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. ☐B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. ☐C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
6.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Struct	ure – assessment area/wetland type condition metric
	17a. Is vegetation ■Yes □N	·
	■ A ≥ 2	cent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. 5% coverage of vegetation 5% coverage of vegetation
	in airspace a	x in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands . Consider structure bove the assessment area (AA) and the wetland type (WT) separately.
	AA WT à□A □A e□B □E O□C □C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps
	Main Main Main Main Main Main Main Main	Moderate density mid-story/sapling layer
	Ø□C □C	Moderate density shrub layer
		Moderate density herb layer
18.	☐A Large sna	type condition metric (skip for all marshes) ags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
10	☐B Not A	istribution – wetland type condition metric (skip for all marshes)
13.	☐A Majority of	of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
		of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. of canopy trees are < 6 inches DBH or no trees.
20.	= -	oris – wetland type condition metric (skip for all marshes)
		al debris and man-placed natural debris. Is (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	•	Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
		nat best describes the amount of interspersion between vegetation and open water in the growing season. Patterned etated areas, while solid white areas indicate open water.
22.		ectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, man-mad A Overbank B Overbank C Overland	rities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, de berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. (and overland flow are not severely altered in the assessment area. (flow is severely altered in the assessment area. flow is severely altered in the assessment area. rbank and overland flow are severely altered in the assessment area.
Note	tes	

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USAC	E AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
Appli	cant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B028
Wetland Type		Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregion		Piedmont	Nearest Named Water Body	Cascade Creek
	River Basir	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.529337282/79.644831362
Please recent in the Regul Control of the Regul	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. • Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) • Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) • Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) • Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Ves No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community			
Is the	assessment area	heck one of the following boxes)	o ration substantially altered by beaver?	☐ Yes ■ No ■ No
C) th as G	heck a box in ea e assessment are ssessment area ba S VS]A □A I]B ■B	ea. Compare to reference wetland if appared on evidence of an effect. Not severely altered Severely altered over a majority of the assessedimentation, fire-plow lanes, skidder trans	ound surface (GS) in the assessment area blicable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximately compaction].	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2. Si	urface and Sub-S	surface Storage Capacity and Duration –	assessment area condition metric	
CI (S 1 SI	heck a box in eastub). Consider bot foot deep is expecturf Sub A	ach column. Consider surface storage count increase and decrease in hydrology. A steed to affect both surface and sub-surface. Water storage capacity and duration are now Nater storage capacity or duration are alternated water storage capacity or duration is substated.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect s water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3. W	ater Storage/Sur	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
C	heck a box in ead	ch column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	B B B I	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches Evidence that maximum depth of inundation	o pond water 6 inches to 1 foot deep o pond water 3 to 6 inches deep deep	
O.	□B E	Evidence that maximum depth of inundation Evidence that maximum depth of inundation Evidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil obs indicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	to Wetland – assessment area opportunity metric
	Check a box	t in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	cc	
6.	Land Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to as area (5M), <u>and</u> WS 5M	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	☐A ≥ 10% impervious surfaces ☐B Confined animal operations (or other local, concentrated source of pollutants)
		☐C ≥ 20% coverage of pasture
	\Box D \Box D	□D ≥ 20% coverage of agricultural land (regularly plowed land)
	□F □F □G □G	 ☐F ≥ 20% coverage of clear-cut land ☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland Activ	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
۲.		sment area within 50 feet of a tributary or other open water?
	☐Yes 7b. How mu buffer ju	■No If Yes, continue to 7b. If No, skip to Metric 8 ich of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make idgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□A □B □C	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet
	□D □E	From 5 to < 15 feet < 5 feet or buffer bypassed by ditches
	7c. Tributar	y width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	7d. Do roots	feet wide
	7e. Is the tri ☐Shelte	□No butary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic.
	•	sed – open water width ≥ 2500 feet or regular boat traffic.
8.		th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and body Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at nt area (WC). See User Manual for WT and WC boundaries.
	■A ■A	≥ 100 feet
	□в □в	From 80 to < 100 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G □H □H	
		5 O 100C

Э.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Cutoff to 30 consecutive days or more)
ın	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
10.	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre J J J J From 0.01 to < 0.1 acre K K K K K K K K C.0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D From 10 to < 50 acres E A 10 acres F F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." \square A 0 \square B 1 to 4 \square C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative St	ructure –	assessment area/wetland type condition metric
	17a. Is veget ■Yes	ation pres □No	ent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evaluate □A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. overage of vegetation overage of vegetation
			each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	Canoby B⊟C Call	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dund dund B □ V	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A⊟erb B⊟C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.			condition metric (skip for all marshes)
	□A Larg ■B Not	• .	more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			oution – wetland type condition metric (skip for all marshes) ropy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	pres	ent.	
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.			wetland type condition metric (skip for all marshes)
		e logs (mo	oris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/O	pen Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water.
		3	
22.			ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, mar A Over B Over C Over	n-made be rbank <u>and</u> rbank flow rland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area. is severely altered in the assessment area. is severely altered in the assessment area. is and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
Α	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B029
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.530525822/-79.642631657
Is t Reg	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply) Blackwater			
_	•	neck one of the following boxes) Lun		
		on a coastal island?		□ V ■ N-
		's surface water storage capacity or du rea experience overbank flooding durir	ig normal rainfall conditions?	☐ Yes ■ No ■ No
1.	Check a box in each the assessment are		nent area condition metric ound surface (GS) in the assessment area licable (see User Manual). If a reference	
	A A N B B B S s	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration examples, bedding, fill, soil compaction, obvious noe, herbicides, salt intrusion [where approximation)	pollutants) (vegetation structure
2.	Surface and Sub-Si	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A W B B B W C C V	h increase and decrease in hydrology. A sted to affect both surface and sub-surface and sub-surface and sub-surface and sub-surface are storage capacity or duration are alter atternance and a sub-steep attention are alternance and a sub-steep attention are alternance and a sub-sub-sub-sub-sub-sub-sub-sub-sub-sub-	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect sowater. Consider tidal flooding regime, if appetrate altered. The deed is the deep is considered to affect sowater. Consider tidal flooding regime, if appetrate altered. The deep is the deep is a factor of the deep is an independent of the deep is a factor of the deep is considered to affect the deep is a factor of the deep is considered to affect the deep is a factor of the	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
	=		for the assessment area (AA) and the wetla	
	AA WT	5 11 p 11 1 2 1 1 1	, , , , ,	· · · · /
	3a.	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to epressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil obs indicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	to Wetland – assessment area opportunity metric
	Check a box	t in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	cc	
6.	Land Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to as area (5M), <u>and</u> WS 5M	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	☐A ≥ 10% impervious surfaces ☐B Confined animal operations (or other local, concentrated source of pollutants)
		☐C ≥ 20% coverage of pasture
	\Box D \Box D	□D ≥ 20% coverage of agricultural land (regularly plowed land)
	□F □F □G □G	 ☐F ≥ 20% coverage of clear-cut land ☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland Activ	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
۲.		sment area within 50 feet of a tributary or other open water?
	☐Yes 7b. How mu buffer ju	■No If Yes, continue to 7b. If No, skip to Metric 8 ich of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make idgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□A □B □C	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet
	□D □E	From 5 to < 15 feet < 5 feet or buffer bypassed by ditches
	7c. Tributar	y width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	7d. Do roots	feet wide
	7e. Is the tri ☐Shelte	□No butary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic.
	•	sed – open water width ≥ 2500 feet or regular boat traffic.
8.		th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and body Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at nt area (WC). See User Manual for WT and WC boundaries.
	■A ■A	≥ 100 feet
	□в □в	From 80 to < 100 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G □H □H	
		5 O 100C

7.	indidation Duration – assessment area condition metric (skip for non-riparian wetlands)			
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)			
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)			
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.			
11.	Wetland Size – wetland type/wetland complex condition metric			
12	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) □A □A □A ≥ 500 acres □B □B □B From 100 to < 500 acres □C □C □C From 50 to < 100 acres □D □D □D From 25 to < 50 acres □E □E □E From 10 to < 25 acres □F □F □F From 5 to < 10 acres □G □G □G From 1 to < 5 acres □H □H □H From 0.5 to < 1 acre □H □H □H From 0.1 to < 0.5 acre □J □J □J □J From 0.01 to < 0.1 acre □K □K □K □K < 0.01 acre or assessment area is clear-cut			
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)			
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.			
13	Connectivity to Other Natural Areas – landscape condition metric			
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.			
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.			
 4.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8			
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)			
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum. 			
6.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)			
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics). 			

17.	Vegetative St	ructure –	assessment area/wetland type condition metric
	17a. Is veget ■Yes	ation pres □No	ent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evaluate □A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. overage of vegetation overage of vegetation
			each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	Canoby B⊟C Call	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dund dund B □ V	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A⊟erb B⊟C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.			condition metric (skip for all marshes)
	□A Larg ■B Not	• .	more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			oution – wetland type condition metric (skip for all marshes) ropy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	pres	ent.	
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.			wetland type condition metric (skip for all marshes)
		e logs (mo	oris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/O	pen Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water.
		3	
22.			ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, mar A Over B Over C Over	n-made be rbank <u>and</u> rbank flow rland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area. is severely altered in the assessment area. is severely altered in the assessment area. is and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
A	pplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B030
	Wetland Type	Non-tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.529299482/-79.643140079
Is t Rec	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply)			
x	Brownwater			
	lidal (if tidal, cr	neck one of the following boxes)	ar Wind Both	
ls t	he assessment area	on a coastal island?	0	
		's surface water storage capacity or du rea experience overbank flooding durir	ration substantially altered by beaver? ng normal rainfall conditions?	☐ Yes ■ No ■ No
1.	Check a box in each the assessment are		nent area condition metric ound surface (GS) in the assessment area licable (see User Manual). If a reference	
	A A N B B B S s	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration exar cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro calteration)	pollutants) (vegetation structure
2.	Surface and Sub-Si	urface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ea (Sub). Consider bot 1 foot deep is expect Surf Sub A A A W B B B B W C C C W	ch column. Consider surface storage ch increase and decrease in hydrology. A sted to affect both surface and sub-surface water storage capacity and duration are nowater storage capacity or duration are alterwater storage capacity or duration is substated.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch > slicable. The properties of th
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshes	5)
	_		for the assessment area (AA) and the wetla	
	AA WT 3a. □A □A M □B □B M ■C ■C M	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to lapressions able to lajority of wetland with depressions able to pond water < 3 inches	p pond water > 1 foot deep p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil obs indicators. 4a. □A ■B □C □D	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ervations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
	4b. <u>■</u> A	Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	o Wetland – assessment area opportunity metric
		tin each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Check all that draining to as	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland) In tapply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 1 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the assessment area (2M). In within 1 miles and within the watershed draining to the assessment area (2M). In within 2 miles and within the watershed draining to the a
7.	Wetland Acti	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7a. Is asses	In the property of the superscript of the superscr
8.	Estuarine Wo only) Check a box	

Э.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). BA Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre J J J From 0.01 to < 0.1 acre K K K K C.0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C From 50 to < 100 acres D From 10 to < 50 acres F C 10 acres F F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." \square A 0 \square B 1 to 4 \square C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Structure – assessment area/wetland type condition metric		
	7a. Is vegetation present? ■Yes □No If Yes, continue to 17b. If No, skip to Metric 18.		
	7b. Evaluate percent coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. □ A ≥ 25% coverage of vegetation □ B < 25% coverage of vegetation		
	7c. Check a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure in airspace above the assessment area (AA) and the wetland type (WT) separately.		
	AA WT AA WT Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent		
	Dense mid-story/sapling layer Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent		
	□A □A Dense shrub layer □B □B Moderate density shrub layer □C □C Shrub layer sparse or absent		
	□A □A Dense herb layer □□B □B Moderate density herb layer □□C □C Herb layer sparse or absent		
18.	Snags – wetland type condition metric (skip for all marshes) A Large snags (more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability). Not A		
19.	Diameter Class Distribution – wetland type condition metric (skip for all marshes)		
	 ☐A Majority of canopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are present. ☐B Majority of canopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. ☐C Majority of canopy trees are < 6 inches DBH or no trees. 		
20.	arge Woody Debris – wetland type condition metric (skip for all marshes)		
	nclude both natural debris and man-placed natural debris. A Large logs (more than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability). Not A		
21.	Regetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only) Relect the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned in the growing season indicate vegetated areas, while solid white areas indicate open water.		
22.	hydrologic Connectivity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)		
	Examples of activities that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, liversion, man-made berms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. A Overbank and overland flow are not severely altered in the assessment area. Overbank flow is severely altered in the assessment area. Overland flow is severely altered in the assessment area. Both overbank and overland flow are severely altered in the assessment area.		
Note			

Overbank flow impacted by stream incision

US.	ACE AID #:		NCDWR #:	
	•	MVP Southagate	Date of Evaluation	10/25/24
Αl	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B031a
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	n Piedmont	Nearest Named Water Body	Cascade Creek
	River Basir	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	y Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.530941150/-79.643797843
Is t Ree	dence of stressors ase circle and/or maent past (for instance Hydrological m Surface and si tanks, undergr Signs of veget Habitat/plant of he assessment area gulatory Considerat Anadromous fi Federally prote NCDWR ripari Abuts a Prima Publicly owned N.C. Division of Abuts a strean Designated NO Abuts a 303(d) tat type of natural si Blackwater Brownwater Tidal (if tidal, of	affecting the assessment area (may not ake note on the last page if evidence of ste, within 10 years). Noteworthy stressors in nodifications (examples: ditches, dams, beaub-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, eation stress (examples: vegetation mortalitionmunity alteration (examples: mowing, calintensively managed? Yes tions - Were regulatory considerations evaluated species or State endangered or threat an buffer rule in effect ry Nursery Area (PNA) diproperty of Coastal Management Area of Environments.	be within the assessment area) tressors is apparent. Consider departure frequency from the following aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollutions, and the following area of the following area of the following aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollutions, y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated?	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
		a's surface water storage capacity or du		☐ Yes ■ No
		area experience overbank flooding durir		■ No
1.	Check a box in earthe assessment area backs assessment area backs GS	ea. Compare to reference wetland if appased on evidence of an effect. Not severely altered Severely altered over a majority of the assesedimentation, fire-plow lanes, skidder trans	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the comp	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2.	Surface and Sub-S	Surface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ear (Sub). Consider bot 1 foot deep is expected Surf Sub	ach column. Consider surface storage counth increase and decrease in hydrology. A cted to affect both surface and sub-surface. Water storage capacity and duration are now water storage capacity or duration are alterwater storage capacity or duration is substantial.	apacity and duration (Surf) and sub-surface ditch ≤ 1 foot deep is considered to affect su water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Sur	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
	Check a box in each	ch column for each group below. Select	for the assessment area (AA) and the wetland	nd type (WT).
	□в □в I □С □С I	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B	Evidence that maximum depth of inundatior Evidence that maximum depth of inundatior Evidence that maximum depth of inundatior	n is between 1 and 2 feet	

	Make soil obs indicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	to Wetland – assessment area opportunity metric
	Check a box	t in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	cc	
6.	Land Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to as area (5M), <u>and</u> WS 5M	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	☐A ≥ 10% impervious surfaces ☐B Confined animal operations (or other local, concentrated source of pollutants)
		☐C ≥ 20% coverage of pasture
	\Box D \Box D	□D ≥ 20% coverage of agricultural land (regularly plowed land)
	□F □F □G □G	 ☐F ≥ 20% coverage of clear-cut land ☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland Activ	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
۲.		sment area within 50 feet of a tributary or other open water?
	☐Yes 7b. How mu buffer ju	■No If Yes, continue to 7b. If No, skip to Metric 8 ich of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make idgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□A □B □C	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet
	□D □E	From 5 to < 15 feet < 5 feet or buffer bypassed by ditches
	7c. Tributar	y width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	7d. Do roots	feet wide
	7e. Is the tri ☐Shelte	□No butary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic.
	•	sed – open water width ≥ 2500 feet or regular boat traffic.
8.		th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and body Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at nt area (WC). See User Manual for WT and WC boundaries.
	■A ■A	≥ 100 feet
	□в □в	From 80 to < 100 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G □H □H	
		5 O 100C

).	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)			
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Cutoff to 30 consecutive days or more)			
10. Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)				
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.			
11.	Wetland Size – wetland type/wetland complex condition metric			
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) □A □A □A □A ≥ 500 acres □B □B □B From 100 to < 500 acres □C □C □C From 50 to < 100 acres □D □D □D From 25 to < 50 acres □E □E □E From 10 to < 25 acres □F □F □F From 5 to < 10 acres □G □G □G G From 1 to < 5 acres □H □H □H From 0.5 to < 1 acre □I □I □I From 0.1 to < 0.5 acre □J □J □J From 0.01 to < 0.1 acre □K □K □K < 0.01 acre or assessment area is clear-cut			
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)			
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.			
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric			
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E = E < 10 acres F ■ F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.			
	Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.			
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 ■ C 5 to 8			
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)			
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum. 			
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)			
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics). 			

17.	Vegetative St	ructure –	assessment area/wetland type condition metric
	17a. Is veget ■Yes	ation pres □No	ent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evaluate □A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. overage of vegetation overage of vegetation
			each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	Canoby B⊟C Call	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dund dund B □ V	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A⊟erb B⊟C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.			condition metric (skip for all marshes)
	□A Larg ■B Not	• .	more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			oution – wetland type condition metric (skip for all marshes) ropy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	pres	ent.	
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.			wetland type condition metric (skip for all marshes)
		e logs (mo	oris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/O	pen Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water.
		3	
22.			ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, mar A Over B Over C Over	n-made be rbank <u>and</u> rbank flow rland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area. is severely altered in the assessment area. is severely altered in the assessment area. is and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
Α	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B031b
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin		USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.531186704/-79.643498818
Ple	ase circle and/or mal ent past (for instance, • Hydrological m • Surface and su tanks, undergro	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beab-surface discharges into the wetland (examples), hog lagoons, examples and storage tanks (USTs), hog lagoons, examples and storage tanks (USTs).	ressors is apparent. Consider departure fi clude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollu	tants, presence of nearby septic
		ommunity alteration (examples: mowing, c		,
ls t	he assessment area	intensively managed? ■ Yes □	No	
	Anadromous fis Federally prote NCDWR riparia Abuts a Primar Publicly owned N.C. Division o Abuts a stream Designated NC Abuts a 303(d) at type of natural str Blackwater Brownwater	sh cted species or State endangered or threa an buffer rule in effect y Nursery Area (PNA) property f Coastal Management Area of Environme	ntal Concern (AEC) (including buffer) oplemental classifications of HQW, ORW, or ed stream any? (check all that apply)	
ls t	he assessment area	on a coastal island?	ration substantially altered by beaver?	☐ Yes ■ No ■ No
1.	Check a box in each the assessment area bands of the assessment area bands	 ca. Compare to reference wetland if app sed on evidence of an effect. lot severely altered severely altered over a majority of the asse 	ound surface (GS) in the assessment area licable (see User Manual). If a reference	is not applicable, then rate the mples: vehicle tracks, excessive
	а		cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro c alteration)	
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A A V B B B V C C C V	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter Vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surface ditch ≤ 1 foot deep is considered to affect substant. Consider tidal flooding regime, if apput altered. The substantially (typically, not sufficiantially altered (typically, alteration sufficient on, filling, excessive sedimentation, underground in the substantially altered (typically, alteration, underground in the substantially (typically, alteration) and the substantially	urface water only, while a ditch > blicable. ient to change vegetation). to result in vegetation change)
3.	•		ype condition metric (skip for all marshes	
o.	Check a box in eac AA WT 3a. A A A B B B A		for the assessment area (AA) and the wetla o pond water > 1 foot deep o pond water 6 inches to 1 foot deep	
		Depressions able to pond water < 3 inches		
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil obs indicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	4a.	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
	4b. ■ A □B	Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
	4c. ■ A □B	No peat or muck presence A peat or muck presence
5.	Discharge in	to Wetland – assessment area opportunity metric
	Check a box	c in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B □B	Little or no evidence of pollutants or discharges entering the assessment area
	□c □c	
6.	Land Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to as area (5M), <u>and</u> WS 5M	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	
		☐C ≥ 20% coverage of pasture
	\Box D \Box D	D ≥ 20% coverage of agricultural land (regularly plowed land)
	□F □F □G □G	 ☐F ≥ 20% coverage of clear-cut land ☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Acti	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
		ssment area within 50 feet of a tributary or other open water?
	buffer ju	■No If Yes, continue to 7b. If No, skip to Metric 8 ich of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make lidgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□А □В □С	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet
		From 5 to < 15 feet
	□E 7c. Tributar	< 5 feet <u>or</u> buffer bypassed by ditches y width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	<u></u> ≤ 15-	feet wide □> 15-feet wide □ Other open water (no tributary present)
	7d. Do roots ☐Yes	s of assessment area vegetation extend into the bank of the tributary/open water? ■No
	□Shelt	ibutary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic. sed – open water width ≥ 2500 feet or regular boat traffic.
8.	Wetland Wid	th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and cody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only) Check a hox	in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
	the assessme WT WC	Int area (WC). See User Manual for WT and WC boundaries.
	■A ■A	
	□в □в	
	□D □D □E □E	
	□r □r	
	□H □H	

7.	indidation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
12	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) □A □A □A ≥ 500 acres □B □B □B From 100 to < 500 acres □C □C □C From 50 to < 100 acres □D □D □D From 25 to < 50 acres □E □E □E From 10 to < 25 acres □F □F □F From 5 to < 10 acres □G □G □G From 1 to < 5 acres □H □H □H From 0.5 to < 1 acre □H □H □H From 0.1 to < 0.5 acre □J □J □J □J From 0.01 to < 0.1 acre □K □K □K □K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative St	ructure –	assessment area/wetland type condition metric
	17a. Is vegeta ■Yes	ation pres∈ □No	ent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evaluate ∏A ∏B	≥ 25% co	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. overage of vegetation overage of vegetation
	in airspa	ce above	ach column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA O⊟B □C	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story B ■B	□A ■B □C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	SIII C SIII C SIII C	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	Q□A Q□B H□C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.		e snags (r	condition metric (skip for all marshes) nore than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.	Diameter Clas	s Distrib	ution – wetland type condition metric (skip for all marshes)
			opy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
		rity of can	opy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. opy trees are < 6 inches DBH <u>or</u> no trees.
20.			wetland type condition metric (skip for all marshes)
		e logs (mo	ris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/Op	oen Wate	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned I areas, while solid white areas indicate open water.
		3	
22.			ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, man A Over B Over C Over	-made be bank <u>and</u> bank flow land flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, rms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area. is severely altered in the assessment area. is severely altered in the assessment area. and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/25/24
Ap	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B032
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.534483915/-79.639091413
Is t Reg	dence of stressors a ase circle and/or malent past (for instance,	inffecting the assessment area (may not be note on the last page if evidence of structure within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beat be-surface discharges into the wetland (exampled storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes ons - Were regulatory considerations evaluated species or State endangered or threat in buffer rule in effect y Nursery Area (PNA) property	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that tened species Intal Concern (AEC) (including buffer) pelemental classifications of HQW, ORW, or ed stream	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
ls t	he assessment area he assessment area	neck one of the following boxes) Lun on a coastal island? Yes No 's surface water storage capacity or dure rea experience overbank flooding during		☐ Yes ■ No ■ No
1.	Check a box in each the assessment area bands of the session of th	Compare to reference wetland if app sed on evidence of an effect. Int severely altered everely altered over a majority of the asse edimentation, fire-plow lanes, skidder trace	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the comp	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2.	Surface and Sub-Si	urface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ear (Sub). Consider bot 1 foot deep is expect Surf Sub A A A W B B B B W C C C	ch column. Consider surface storage ch increase and decrease in hydrology. A sted to affect both surface and sub-surface water storage capacity and duration are nowater storage capacity or duration are alterwater storage capacity or duration is substated.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect s water. Consider tidal flooding regime, if app	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshes	s)
	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	B B M C C M D D	flajority of wetland with depressions able to flajority of wetland with depressions able to flajority of wetland with depressions able to depressions able to pond water < 3 inches widence that maximum depth of inundation	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil obs indicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ervations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	o Wetland – assessment area opportunity metric
	Check a box	in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	□A ■A □B	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	■ C □C	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Land Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to ass area (5M), <u>and</u> WS 5M	t apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	☐A ≥ 10% impervious surfaces☐B Confined animal operations (or other local, concentrated source of pollutants)
	□c □c	☐C ≥ 20% coverage of pasture
		□D ≥ 20% coverage of agricultural land (regularly plowed land)
		☐E ≥ 20% coverage of maintained grass/herb ☐F ≥ 20% coverage of clear-cut land
	□G □G	Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Actir	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
		sment area within 50 feet of a tributary or other open water?
	7b. How mu	■No If Yes, continue to 7b. If No, skip to Metric 8 ch of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make dgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) ≥ 50 feet
	□B □C □D	From 30 to < 50 feet From 15 to < 30 feet From 5 to < 15 feet
		< 5 feet or bypassed by ditches
		width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	7d. Do roots	eet wide
	_	□No butary or other open water sheltered or exposed?
	□Shelte	ered – open water width < 2500 feet and no regular boat traffic. sed – open water width ≥ 2500 feet or regular boat traffic.
8.		h at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		nt area (WC). See User Manual for WT and WC boundaries.
	■A ■A	≥ 100 feet
	□в □в	From 80 to < 100 feet
		From 50 to < 80 feet
	□D □D	From 40 to < 50 feet
		From 30 to < 40 feet From 15 to < 30 feet
	□F □F	From 5 to < 15 feet
	□G □G	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre II From 0.1 to < 0.5 acre II From 0.01 to < 0.1 acre K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	 □A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E E < 10 acres F F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □A 0 □B 1 to 4
	■C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	□ Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ Vegetation diversity is low or has > 10% to 50% cover of exotics. □ Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative S	Structure -	- assessment area/wetland type condition metric
	17a. Is vege ■Yes		sent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evalua ■A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation
	in airs	oace above	each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA S□DB D□C	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dunds dunde B C	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A E B C C C C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.	Snags - we	tland type	condition metric (skip for all marshes)
	□A Lar ■B No		more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			bution – wetland type condition metric (skip for all marshes)
		jority of cai sent.	nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.	_	-	- wetland type condition metric (skip for all marshes)
		ge logs (m	bris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/	Open Wate	er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned d areas, while solid white areas indicate open water.
	6		
22.			ity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, ma	an-made be erbank <u>anc</u> erbank flow erland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. doverland flow are not severely altered in the assessment area. vis severely altered in the assessment area. vis severely altered in the assessment area. kis and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
Αŗ	pplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B034
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.519147103, -79.669861591
Is t	ase circle and/or malent past (for instance,	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beab-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, extion stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes ons - Were regulatory considerations evaluated species or State endangered or threat an buffer rule in effect y Nursery Area (PNA)	tressors is apparent. Consider departure ficlude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustc.) y, insect damage, disease, storm damage, slear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that	stants, presence of nearby septic
_	Abuts a stream Designated NC Abuts a 303(d) at type of natural str	Coastal Management Area of Environme	pplemental classifications of HQW, ORW, or ed stream	Trout
	he assessment area	neck one of the following boxes)		☐ Yes ■ No
Doe	es the assessment a	rea experience overbank flooding during	ng normal rainfall conditions?	■ No
1.	Check a box in each the assessment area bar GS VS		ment area condition metric bund surface (GS) in the assessment area licable (see User Manual). If a reference	
	■B ■B S	Severely altered over a majority of the asse edimentation, fire-plow lanes, skidder trace	essment area (ground surface alteration exal cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro c alteration)	pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	(Sub). Consider bot 1 foot deep is expec Surf Sub	h increase and decrease in hydrology. A	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch >
	■B □B V	Vater storage capacity <u>or d</u> uration are alter Vater storage capacity <u>or</u> duration is substa	red, but not substantially (typically, not sufficentially altered (typically, alteration sufficient on, filling, excessive sedimentation, underground in the second	to result in vegetation change)
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	5)
		h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	□B □B M	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep	
	□B E	vidence that maximum depth of inundatior vidence that maximum depth of inundatior vidence that maximum depth of inundatior	n is between 1 and 2 feet	

→.	Jon Texture/St	didition – assessment area condition metric (skip for an marshes)
		rom each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. rvations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
		Sandy soil
	■ B Lo	oamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres)
	□C Lo	oamy or clayey soils not exhibiting redoximorphic features
		oamy or clayey gleyed soil
	□E H	listosol or histic epipedon
		oil ribbon < 1 inch
	□B S	oil ribbon ≥ 1 inch
	4c. ■ A N	lo peat or muck presence
	□B A	peat or muck presence
5.	Discharge into	Wetland – assessment area opportunity metric
٠.	ŭ	in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub).
		b-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	Surf Sub	s surface district gos molado protonos or modro) soprio ramir, andorground storage ramir (55 m), stor
	■ A ■ A	Little or no evidence of pollutants or discharges entering the assessment area
	□в □в	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the
		treatment capacity of the assessment area
	□c □c	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
		potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive
		sedimentation, odor)
6.	Land Use - opp	portunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	Check all that	apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources
		essment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment
		within 2 miles and within the watershed draining to the assessment area (2M).
	<u>W</u> S <u>5</u> M	<u>2M</u>
		□A ≥ 10% impervious surfaces
	□в □в	B Confined animal operations (or other local, concentrated source of pollutants)
	□C □C □D □D	□C ≥ 20% coverage of pasture□D ≥ 20% coverage of agricultural land (regularly plowed land)
		☐E ≥ 20% coverage of agricultural land (regularly plowed land)
		☐F ≥ 20% coverage of clear-cut land
	□G □G	G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in
		the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the
		assessment area.
7.	Wetland Actino	g as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	_	ment area within 50 feet of a tributary or other open water?
		■No If Yes, continue to 7b. If No, skip to Metric 8
		h of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make
		gment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
		≥ 50 feet
	_	From 30 to < 50 feet
		From 15 to < 30 feet
	_	From 5 to < 15 feet
		< 5 feet <u>or</u> buffer bypassed by ditches width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	76. Tributary (
		of assessment area vegetation extend into the bank of the tributary/open water?
		■No
		utary or other open water sheltered or exposed?
		red – open water width < 2500 feet and no regular boat traffic.
	∐Expose	ed – open water width ≥ 2500 feet or regular boat traffic.
8.	Wetland Width	at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
	Estuarine Woo	dy Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	only)	
	Check a box in	n each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		t area (WC). See User Manual for WT and WC boundaries.
	WT WC	
		≥ 100 feet
	\Box A \Box A	
	□A □A □B □B	From 80 to < 100 feet
	□A □A □B □B □C □C	From 80 to < 100 feet From 50 to < 80 feet
	□A □A □B □B □C □C □D □D	
	□A □A □B □B □C □C	From 50 to < 80 feet
	□A □A □B □B □C □C □D □D	From 50 to < 80 feet From 40 to < 50 feet
	□A □A □B □B □C □C □D □D □E □E	From 50 to < 80 feet From 40 to < 50 feet From 30 to < 40 feet

).	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) □A □A □A □A ≥ 500 acres □B □B □B From 100 to < 500 acres □C □C □C From 50 to < 100 acres □D □D □D From 25 to < 50 acres □E □E □E From 10 to < 25 acres □F □F □F From 5 to < 10 acres □G □G □G □G From 1 to < 5 acres □H □H □H □From 0.5 to < 1 acre □I □I □I From 0.1 to < 0.5 acre □J □J □J From 0.01 to < 0.1 acre □K □K □K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size. Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E = E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative S	Structure -	- assessment area/wetland type condition metric
	17a. Is vege ■Yes		sent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evalua ■A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation
	in airs	oace above	each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA S□DB D□C	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dunds dunde B C	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A E B C C C C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.	Snags - we	tland type	condition metric (skip for all marshes)
	□A Lar ■B No		more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			bution – wetland type condition metric (skip for all marshes)
		jority of cai sent.	nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.	_	-	- wetland type condition metric (skip for all marshes)
		ge logs (m	bris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/	Open Wate	er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned d areas, while solid white areas indicate open water.
	6		
22.			ity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, ma	an-made be erbank <u>anc</u> erbank flow erland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. doverland flow are not severely altered in the assessment area. vis severely altered in the assessment area. vis severely altered in the assessment area. kis and overland flow are severely altered in the assessment area.

USAC	CE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/23/24
App	licant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B051
Wetland Type		Headwater Forest	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregion		Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.494690513N, 79.677658628W
Is the Regu	ence of stressors as se circle and/or man at past (for instance of Hydrological man Surface and surface and surface and surface and surface and surface and surface of Habitat/plant or expenses and the surface assessment area allatory Consideration Anadromous fix Federally prote NCDWR riparia Abuts a Primar Publicly owned N.C. Division of Abuts a stream Designated NC Abuts a 303(d)	affecting the assessment area (may not ke note on the last page if evidence of st within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beat-b-surface discharges into the wetland (example stress), hog lagoons, eation stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes forms - Were regulatory considerations evaluated species or State endangered or threat an buffer rule in effect yn Nursery Area (PNA) property footstal Management Area of Environment with a NCDWQ classification of SA or supported stream or a tributary to a 303(d)-listed-listed stream or a tributary to a 303(d)-listed-listed stream or a tributary to a 303(d)-listed-listed-listed stream or a tributary to a 303(d)-listed-li	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that the tened species Intal Concern (AEC) (including buffer) pelemental classifications of HQW, ORW, or ed stream	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.)
Is the	Blackwater Brownwater Tidal (if tidal, cl assessment area a assessment area	ream is associated with the wetland, if a neck one of the following boxes) Lunon on a coastal island? Yes Noway Now Yes urface water storage capacity or during a experience overbank flooding during	nar	☐ Yes ■ No ■ No
tl a	Check a box in eache assessment area basessment area bases VS		ment area condition metric bund surface (GS) in the assessment area dicable (see User Manual). If a reference	
	□B □B S s a	edimentation, fire-plow lanes, skidder trace	essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approbalteration)	pollutants) (vegetation structure
2. 8	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
() 1 S [[Sub). Consider bot foot deep is expect furf Sub A BA V B B B V C C C	th increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter Vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surface ditch ≤ 1 foot deep is considered to affect substant. Consider tidal flooding regime, if appet altered. The substantially (typically, not sufficient antially altered (typically, alteration sufficient on, filling, excessive sedimentation, underground it is considered.	urface water only, while a ditch > slicable. The state of the state o
3. V	Vater Storage/Sur	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	5)
C	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
3	AA WT Ba.	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches Evidence that maximum depth of inundation	o pond water > 1 foot deep o pond water 6 inches to 1 foot deep o pond water 3 to 6 inches deep deep	
3	□B E	Evidence that maximum depth of inundation structures that maximum depth of inundations are structured to the structure of the str	n is between 1 and 2 feet	

	Make soil obseindicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature ervations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional Sandy soil
	■B L □C L □D L	Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge into	o Wetland – assessment area opportunity metric
	Check a box	in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Little or no evidence of pollutants or discharges entering the assessment area
	□в □в	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Land Use – op	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	Check all that draining to ass	t apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources essment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M A 2 10% impervious surfaces B Confined animal operations (or other local, concentrated source of pollutants) C 2 20% coverage of pasture D 2 20% coverage of agricultural land (regularly plowed land) E 2 20% coverage of maintained grass/herb F 2 20% coverage of clear-cut land C Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7	Motland Actin	
 8. 	7a. Is assess Yes 7b. How much buffer juch land land land land land land land land	g as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands) sment area within 50 feet of a tributary or other open water? □No If Yes, continue to 7b. If No, skip to Metric 8 ch of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make digment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) ≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet From 5 to < 15 feet From 5 to < 15 feet or buffer bypassed by ditches width. If the tributary is anastomosed, combine widths of channels/braids for a total width. bet wide □> 15-feet wide □ Other open water (no tributary present) of assessment area vegetation extend into the bank of the tributary/open water? □No outary or other open water sheltered or exposed? red – open water width < 2500 feet and no regular boat traffic. ed – open water width ≥ 2500 feet or regular boat traffic. at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
	Estuarine Wood only) Check a box i	ody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest n each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at tarea (WC). See User Manual for WT and WC boundaries.
	□A ■ A	≥ 100 feet
	□В □В	From 80 to < 100 feet
		From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet From 15 to < 30 feet
	□F □F	From 15 to < 30 feet From 5 to < 15 feet
	□H □H	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). B Sediment deposition is not excessive, but at approximately natural levels. Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre II I From 0.1 to < 0.5 acre K K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size.
	Connectivity to Other Natural Areas – landscape condition metric 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." \square A 0 \square B 1 to 4 \square C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 ■A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	ive Struc	ture – asses	sment area/wet	land type co	ndition met	ric		
		•	n present?						
		Yes	No If Yes	, continue to 17b	o. If No, skip	to Metric 18.			
	17b. Ev	aluate pe	rcent covera	ge of assessmen	it area vegeta	tion for all r	narshes only.	Skip to17c for non-marsh we	etlands.
				e of vegetation					
		B < 2	25% coverag	e of vegetation					
	in :	airspace a	above the as	olumn for each seessment area (A		-		netric for non-marsh wetland ly.	ds. Consider structure
	AA ⊡ ≲				why alasad with	ith matural ar		with natural process	
	on ol			py closed, of flea py present, but o	-	_	-	with natural processes	
	□ □	c 🗀		py sparse or abs	•		2		
			_						
	l-Story ■ □	А		e mid-story/saplir rate density mid-		lavor			
	i j	C \square		tory/sapling layer		•			
	_				•				
	욕□	A 🛚		e shrub layer	1. 1				
	Shru □	B ☐ C ■		rate density shru layer sparse or					
	•		O Omas	rayor oparoo or	abcont				
				e herb layer					
	Ę Ę	В 🗆 С 🗆		rate density herb layer sparse or a	•				
10						haa)			
10.				i on metric (skip nan one) are visih		-	arge relative to	species present and landsca	nne stahility)
	■В	Not A	- '	·					po otability).
19.				- wetland type o					
	□A	Majority present.	of canopy tre	es have stems >	> 6 inches in d	diameter at b	reast height (L	DBH); many large trees (> 12	inches DBH) are
	■B	Majority		es have stems b			DBH, few are >	> 12 inch DBH.	
	□С			es are < 6 inche					
20.	_	-		nd type conditio	•	ip for all ma	rshes)		
	Include b ■A			l man-placed nat n one) are visible		in diameter	or large relati	ve to species present and lan	dscape stability).
	⊟в	Not A	5 (,	`		3	, ,	7/
21.	Vegetati	ion/Open	Water Disp	ersion – wetland	d type/open	water condi	tion metric (e	valuate for Non-Tidal Fresh	water Marsh only)
				cribes the amou , while solid white		ate open wa		and open water in the growi	ng season. Patterned
					TO TO				
		To	2						
	\mathcal{C}) W) e	151				A		
			5/11/1						
22	Hydrolo	aic Conn	ectivity – as	sessment area	condition m	etric (evalu:	ite for rinaria	n wetlands and Salt/Brackis	th Marsh only)
	-	-	=			-	_	ensive ditching, fill, sedimen	= :
	diversion	n, man-ma	ade berms, b	eaver dams, and	stream incisi	ion. Docume	ntation require	ed if evaluated as B, C, or D.	
	■A □B			nd flow are not se erely altered in th			essment area.		
	□C	Overland	d flow is seve	rely altered in the	e assessmen	t area.			
	□D	Both ove	erbank <u>and</u> o	verland flow are	severely alter	ed in the ass	essment area		

US	ACE AID #:		NCDWR #:			
Project Name		MVP Southagate	Date of Evaluation	10/24/24		
Applicant/Owner Name		Mountain Valley Pipeline, LLC	Wetland Site Name	W-B052a		
Wetland Type		Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD		
Level III Ecoregion		Piedmont	Nearest Named Water Body	Dan River		
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103		
	County	Rockingham	NCDWR Region	Winston-Salem		
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.508010944N/79.665355594W		
Is t Rea	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply)					
_	•	neck one of the following boxes) Lun on a coastal island? Yes				
				□ Vaa ■ Na		
		's surface water storage capacity or du rea experience overbank flooding durin	ng normal rainfall conditions?	☐ Yes ■ No ■ No		
<u> </u>						
1.	Check a box in each the assessment area basessment area bases VS	 a. Compare to reference wetland if app sed on evidence of an effect. lot severely altered 	nent area condition metric bund surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exal	is not applicable, then rate the		
	s _e	edimentation, fire-plow lanes, skidder tra	cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro	pollutants) (vegetation structure		
2.	Surface and Sub-Su	urface Storage Capacity and Duration –	assessment area condition metric			
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A	h increase and decrease in hydrology. A ted to affect both surface and sub-surface vater storage capacity and duration are no	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app t altered. red, but not substantially (typically, not suffice	urface water only, while a ditch > olicable.		
	C C W	examples: draining, flooding, soil compacti	antially altered (typically, alteration sufficient on, filling, excessive sedimentation, undergr	ound utility lines).		
3.	=		ype condition metric (skip for all marshes			
		h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).		
	□B □B M □C □C M	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to epressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep			
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation vidence.	n is between 1 and 2 feet			

4.	Check a k	oox from each	assessment area condition metric (skip for all marshes) of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature thin the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils region.
	indicators. 4a. A B B C D D E	Sandy soil Loamy or cla Loamy or cla Loamy or cla Loamy or cla	ayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) ayey soils not exhibiting redoximorphic features ayey gleyed soil nistic epipedon
	4b.		
	4c. ■ A □B		nuck presence uck presence
5.	Discharge	-	- assessment area opportunity metric
	Check a Examples	box in each c	column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sublischarges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A	■A Little or □B Noticea	no evidence of pollutants or discharges entering the assessment area able evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the ent capacity of the assessment area
	□C [C Noticea potentia	able evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and ally overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive ntation, odor)
6.	I and I lea		metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
0.	Check all draining to area (5M),	that apply (at assessment ar	least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider source ea within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment area (2M).
	□B [□A □A □B □B □C □C	≥ 10% impervious surfaces Confined animal operations (or other local, concentrated source of pollutants) ≥ 20% coverage of pasture
	□D [□E [□D □D □E □E	≥ 20% coverage of agricultural land (regularly plowed land) ≥ 20% coverage of maintained grass/herb
		□F □F □G □G	≥ 20% coverage of clear-cut land Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland A	Acting as Veget	ated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	7a. Is as □Y		within 50 feet of a tributary or other open water? Yes, continue to 7b. If No, skip to Metric 8
	7b. How	/ much of the firs er judgment base	st 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Maked on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□B □C	From 30 to	
	□D □E		< 15 feet buffer bypassed by ditches
	7c. Trib	utary width. If th	e tributary is anastomosed, combine widths of channels/braids for a total width.
	7d. Dor	oots o <u>f</u> assessm	□> 15-feet wide □ Other open water (no tributary present) lent area vegetation extend into the bank of the tributary/open water?
		e tributary or oth	ner open water sheltered or exposed?
			water width < 2500 feet and no regular boat traffic. vater width ≥ 2500 feet or regular boat traffic.
8.			sessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	Check a lethe assess		umn . Select the average width for the wetland type at the assessment area (WT) and the wetland complex and the USE of the average width for the wetland type at the assessment area (WT) and the wetland complex are used to be used
		■A ≥ 100 fe	eet
	□B [B From 8	0 to < 100 feet
			0 to < 80 feet
			0 to < 50 feet 0 to < 40 feet
			5 to < 30 feet
			to < 15 feet
		☐H < 5 fee	t en

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E F From 10 to < 25 acres F F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I I From 0.1 to < 0.5 acre I I From 0.01 to < 0.1 acre K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.□B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C From 50 to < 100 acres D D From 10 to < 50 acres E = < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
. •.	□ Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ Vegetation diversity is low or has > 10% to 50% cover of exotics. □ Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative Structure – assessment area/wetland type condition metric				
	17a.	Is vegeta ■Yes	ation pres □No	sent? If Yes, continue to 17b. If No, skip to Metric 18.	
	17b.	Evaluate □A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation	
	17c.	in airspa	ce above	each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.	
	Canony	AA I■A □B □C	WT ■A □B □C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent	
	ζ	□A □B ■C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent	
	ק ק	□A □□B □■C	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent	
	T C	■A □B □C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent	
18.	Snag □A ■B		e snags (condition metric (skip for all marshes) more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).	
19.				oution – wetland type condition metric (skip for all marshes)	
	□A	Majo prese		nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are	
	■B □C			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. The popy trees are < 6 inches DBH or no trees.	
20.	Large	e Woody	Debris -	wetland type condition metric (skip for all marshes)	
	Includ □A ■B		e logs (m	oris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).	
21.	_			er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)	
				est describes the amount of interspersion between vegetation and open water in the growing season. Patterned d areas, while solid white areas indicate open water.	
		0	DA SS		
22.	-	_		ity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)	
		sion, man Over Over Over	i-made be bank <u>and</u> bank flow land flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area. is severely altered in the assessment area. is severely altered in the assessment area. It is severely altered in the assessment area. It is severely altered in the assessment area.	
Note	es				

USA	ACE AID #:		NCDWR #:	
Project Name		MVP Southagate	Date of Evaluation	10/24/24
Ар	plicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B052b
Wetland Type		Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
Level III Ecoregion		Piedmont	Nearest Named Water Body	Dan River
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.508394N/-79.665329W
Is the Reg	dence of stressors as circle and/or may the past (for instance). Hydrological meants, undergrees Signs of vegeta Habitat/plant cone assessment area aulatory Consideration Anadromous fis Federally prote NCDWR riparia Abuts a Primar Publicly owned N.C. Division of Abuts a stream Designated NC Abuts a 303(d)	affecting the assessment area (may not ke note on the last page if evidence of state within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beauth-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, eation stress (examples: vegetation mortality ommunity alteration (examples: mowing, contensively managed? Yes ones - Were regulatory considerations evaluated species or State endangered or threat an buffer rule in effect y Nursery Area (PNA) property	be within the assessment area) tressors is apparent. Consider departure for clude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollustic.) y, insect damage, disease, storm damage, selear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that the tened species Intal Concern (AEC) (including buffer) pelemental classifications of HQW, ORW, or ed stream	rom reference, if appropriate, in tants, presence of nearby septic salt intrusion, etc.)
Is th	ne assessment area ne assessment area	neck one of the following boxes) Lun on a coastal island? Yes No 's surface water storage capacity or dul area experience overbank flooding during	ration substantially altered by beaver?	☐ Yes ■ No ■ No
	Check a box in ear the assessment area ba assessment area ba GS VS A A A B B B B	ea. Compare to reference wetland if apposed on evidence of an effect. Not severely altered Severely altered over a majority of the assectimentation, fire-plow lanes, skidder trace	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate the compact of the comp	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ea (Sub). Consider bot 1 foot deep is expect Surf Sub	ch column. Consider surface storage continuous and decrease in hydrology. A sted to affect both surface and sub-surface. Vater storage capacity and duration are nowater storage capacity or duration are altered to a sub-surface.	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch > slicable. The state of the state o
3.	Water Storage/Surf	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	5)
	Check a box in eac	h column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).
	□B □B M □C □C M ■D ■D E	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches Evidence that maximum depth of inundation	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep	
	□B E	Evidence that maximum depth of inundation structures the structure structures that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil ob indicators. 4a. □A	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional Sandy soil
	■B □C □D □E	Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
	4b.	Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
	4c.	No peat or muck presence A peat or muck presence
5.	Discharge in	to Wetland – assessment area opportunity metric
	Check a bo Examples of s Surf Sub	x in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub) sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B □E	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and
		potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Land Use - o	opportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to as area (5M), <u>an</u> WS 5M □A □A	
	□B □B	
		D ≥ 20% coverage of agricultural land (regularly plowed land)
	□G □G	
7.	Wetland Act	ing as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	_	ssment area within 50 feet of a tributary or other open water?
		■No If Yes, continue to 7b. If No, skip to Metric 8 uch of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make udgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) ≥ 50 feet
	<u>□</u> в □С	From 30 to < 50 feet From 15 to < 30 feet
	□D □E	From 5 to < 15 feet < 5 feet or buffer bypassed by ditches
	_	ry width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
		feet wide
	■Yes 7e. Is the tr	□No ibutary or other open water sheltered or exposed?
	□Shel	tered – open water width < 2500 feet and no regular boat traffic. sed – open water width ≥ 2500 feet or regular boat traffic.
8.		th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and oody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Fores
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex a
	the assessme WT WC	ent area (WC). See User Manual for WT and WC boundaries.
	□A ■A	
	□в □в	From 80 to < 100 feet
	□G □G	
	H DF	

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) B Evidence of saturation, without evidence of inundation
	© Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WC FW (if applicable) A A A S 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres F F F F F F F F F F F F F F F F F F F
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely □A □A ≥ 500 acres □B ■B From 100 to < 500 acres □C □C From 50 to < 100 acres □D □D From 10 to < 50 acres □E □E < 10 acres □F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. □Yes □No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
4.4	
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." □ A 0 □ B 1 to 4 □ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. ■C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 ☐ A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). ☐ B Vegetation diversity is low or has > 10% to 50% cover of exotics. ☐ C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Veget	ative St	ructure –	assessment area/wetland type condition metric
		Is vegeta ■Yes	ation pres □No	ent? If Yes, continue to 17b. If No, skip to Metric 18.
		Evaluate ■ A ∐B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. overage of vegetation overage of vegetation
				each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	>	□A □B ■C	□A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story	`□A □B ■C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	Shrub	□A □B ■C	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	erb	■A □B □C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.	Snags	s – wetla	nd type	condition metric (skip for all marshes)
	□A ■B	Large Not A	• •	more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.				ution – wetland type condition metric (skip for all marshes)
	□A	Majo prese		nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	□B ■C			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.	_	_		wetland type condition metric (skip for all marshes)
	Includ □A ■B		e logs (mo	oris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	_			r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
				est describes the amount of interspersion between vegetation and open water in the growing season. Patterned dareas, while solid white areas indicate open water.
			∏Ă ∭>—	□B □C □D
		0	S.	
22.	-	_		ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
		ion, man Over	-made be bank <u>and</u>	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area.
	□C □D	Over	land flow	is severely altered in the assessment area. and overland flow are severely altered in the assessment area.
Note	es			
	WL	in cleare	ed gas R	OW.

USA	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
Ap	pplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B053
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.525511600/-79.648538989
Plea rece	ase circle and/or maent past (for instance	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beath-surface discharges into the wetland (example storage tanks (USTs), hog lagoons, eation stress (examples: vegetation mortality ommunity alteration (examples: mowing, continuous intensively managed? Yes intensively managed? Yes intensively managed? In Yes intensively managed?	tressors is apparent. Consider departure frictude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollution.) y, insect damage, disease, storm damage, silear-cutting, exotics, etc.) No uated? Yes No If Yes, check all that a tened species	tants, presence of nearby septic salt intrusion, etc.) apply to the assessment area.
Is ti	at type of natural st Blackwater Brownwater Tidal (if tidal, continued) he assessment area he assessment area	listed stream or a tributary to a 303(d)-listed ream is associated with the wetland, if a neck one of the following boxes) Luration a coastal island? Yes Now it is surface water storage capacity or durate a experience overbank flooding during the real storage.	any? (check all that apply) har	☐ Yes ■ No
	Ground Surface Co Check a box in ea the assessment are	ondition/Vegetation Condition – assessr		
	■A □A M □B ■B S s	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration exar cks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where appro c alteration)	pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
-	Check a box in ear (Sub). Consider bot 1 foot deep is expect Surf Sub	ch column. Consider surface storage cath increase and decrease in hydrology. A sted to affect both surface and sub-surface. Vater storage capacity and duration are now vater storage capacity or duration are altered vater storage capacity or duration is substated.	apacity and duration (Surf) and sub-surface ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch > licable. ent to change vegetation). to result in vegetation change)
3.	Water Storage/Sur	face Relief – assessment area/wetland t	ype condition metric (skip for all marshes	3)
	Check a box in each AA WT 3a. A A A B B B M C C C A		for the assessment area (AA) and the wetland oppond water > 1 foot deep oppond water 6 inches to 1 foot deep oppond water 3 to 6 inches deep	
	□B E	Evidence that maximum depth of inundation Evidence that maximum depth of inundation Evidence that maximum depth of inundation	n is between 1 and 2 feet	

⊶.	. Son rexture/Struc	ture – assessment area condition metric (skip for all marshes)
		each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ions within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	4a. □A Sand	ly soil
		ny or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) ny or clayey soils not exhibiting redoximorphic features
	□D Loam	ny or clayey gleyed soil sol or histic epipedon
	4b. □A Soil r	ribbon < 1 inch
	<u></u>	ibbon ≥ 1 inch
		eat or muck presence at or muck presence
5.	. Discharge into We	etland – assessment area opportunity metric
	Examples of sub-su	each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). urface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	Surf Sub ■A ■A I	Little or no evidence of pollutants or discharges entering the assessment area
		Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
		Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	. Land Use – opport	tunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
		ply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources ment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment
		in 2 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A [□A ≥ 10% impervious surfaces
	□c □c [□B Confined animal operations (or other local, concentrated source of pollutants)□C ≥ 20% coverage of pasture
		□D ≥ 20% coverage of agricultural land (regularly plowed land) □E ≥ 20% coverage of maintained grass/herb
	□F □F [□F ≥ 20% coverage of clear-cut land
	□G □G [G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	. Wetland Acting as	Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
		nt area within 50 feet of a tributary or other open water?
		If Yes, continue to 7b. If No, skip to Metric 8 the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make ent based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	_A ≥ 50	0 feet m 30 to < 50 feet
	☐C Fror	m 15 to < 30 feet
		m 5 to < 15 feet feet <u>or</u> buffer bypassed by ditches
	7c. Tributary widt	th. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	∐≤ 15-feet w 7d. Do roots of as	vide □> 15-feet wide □ Other open water (no tributary present) ssessment area vegetation extend into the bank of the tributary/open water?
	☐Yes ☐N	lo y or other open water sheltered or exposed?
	☐Sheltered -	– open water width < 2500 feet and no regular boat traffic. - open water width ≥ 2500 feet or regular boat traffic.
8.	•	the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and
		Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		ach column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at ea (WC). See User Manual for WT and WC boundaries.
	WT WC	4 (110). God Oser ivianual for 1111 and 110 boundaries.
		≥ 100 feet From 90 to < 100 feet
		From 80 to < 100 feet From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet
		From 15 to < 30 feet From 5 to < 15 feet
		From 5 to < 15 feet < 5 feet

J .	inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) B Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
12	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A ≥ 500 acres B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E F From 10 to < 25 acres F F F F F F F F F F F F F F F F F F F
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only.
	☐Yes ■No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland) May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas ≥ 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." □ A 0 □ B 1 to 4 ■ C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. ■C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetative S	Structure -	- assessment area/wetland type condition metric
	17a. Is vege ■Yes		sent? If Yes, continue to 17b. If No, skip to Metric 18.
	17b. Evalua ■A □B	≥ 25% c	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands. coverage of vegetation coverage of vegetation
	in airs	oace above	each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA S□DB D□C	WT □A □B ■C	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
	Mid-Story □ B □ C	□A □B ■C	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	dunds dunde B C	□A □B ■C	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	A E B C C C C C	■A □B □C	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.	Snags - we	tland type	condition metric (skip for all marshes)
	□A Lar ■B No		more than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
19.			bution – wetland type condition metric (skip for all marshes)
		jority of cai sent.	nopy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
			nopy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH. nopy trees are < 6 inches DBH <u>or</u> no trees.
20.	_	-	- wetland type condition metric (skip for all marshes)
		ge logs (m	bris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
21.	Vegetation/	Open Wate	er Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)
			est describes the amount of interspersion between vegetation and open water in the growing season. Patterned d areas, while solid white areas indicate open water.
	6		
22.			ity – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	diversion, ma	an-made be erbank <u>anc</u> erbank flow erland flow	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, erms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. doverland flow are not severely altered in the assessment area. vis severely altered in the assessment area. vis severely altered in the assessment area. kis and overland flow are severely altered in the assessment area.

US	ACE AID #:		NCDWR #:			
	Project Name	MVP Southagate	Date of Evaluation	10/23/24		
A	pplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B055		
	Wetland Type	Non-Tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD		
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River		
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103		
	County	Rockingham	NCDWR Region	Winston-Salem		
	☐ Yes 🔳 No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.493255956N/79.678782714W		
Is t Rea	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply) Blackwater					
ls t	☐ Tidal (if tidal, check one of the following boxes) ☐ Lunar ☐ Wind ☐ Both Is the assessment area on a coastal island? ☐ Yes ■ No					
	Is the assessment area's surface water storage capacity or duration substantially altered by beaver? Yes No					
		rea experience overbank flooding durin		□ No		
<u> </u>				_		
1.	Check a box in each the assessment area backs SS VS A A A N B B B SS A A A SS A A A A A A A A A A A	a. Compare to reference wetland if app sed on evidence of an effect. lot severely altered everely altered over a majority of the asse edimentation, fire-plow lanes, skidder trad lteration examples: mechanical disturbal	ound surface (GS) in the assessment area licable (see User Manual). If a reference essment area (ground surface alteration examples, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximate]	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure		
	re	educed diversity [if appropriate], hydrologic	c alteration)			
2.		urface Storage Capacity and Duration –				
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A W B B B W C C W	h increase and decrease in hydrology. A ted to affect both surface and sub-surface vater storage capacity <u>and</u> duration are no vater storage capacity <u>or</u> duration are alter vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect sowater. Consider tidal flooding regime, if appet altered. The substantially (typically, not sufficient on, filling, excessive sedimentation, underground in the substantially alteration sufficient on, filling, excessive sedimentation, underground in the substantially alteration sufficient on, filling, excessive sedimentation, underground in the substantial su	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)		
3.	Water Storage/Surf	ace Relief – assessment area/wetland t	ype condition metric (skip for all marshe	s)		
	_		for the assessment area (AA) and the wetla			
	<u>A</u> A <u>W</u> T		. ,			
	□B □B M □C □C M	lajority of wetland with depressions able to lajority of wetland with depressions able to lajority of wetland with depressions able to repressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep			
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet			

		from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. ervations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	4a.	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
	_	No peat or muck presence A peat or muck presence
5.	Discharge int	o Wetland – assessment area opportunity metric
	Examples of s Surf Sub ☐A ■A	in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc. Little or no evidence of pollutants or discharges entering the assessment area
	■B □B	Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Land Use - o	oportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	Check all that draining to ass	t apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment area (2M). 2M □A ≥ 10% impervious surfaces □B Confined animal operations (or other local, concentrated source of pollutants) □C ≥ 20% coverage of pasture □D ≥ 20% coverage of agricultural land (regularly plowed land)
	■E ■E □F □F □G □G	 ■E ≥ 20% coverage of maintained grass/herb □F ≥ 20% coverage of clear-cut land □G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland Actir	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	Tb. How murbuffer judger judge	sment area within 50 feet of a tributary or other open water? ☐No If Yes, continue to 7b. If No, skip to Metric 8 ch of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make dgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.) ≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet From 5 to < 15 feet < 5 feet or buffer bypassed by ditches width. If the tributary is anastomosed, combine widths of channels/braids for a total width. eet wide ☐> 15-feet wide ☐ Other open water (no tributary present)
		of assessment area vegetation extend into the bank of the tributary/open water?
	■Shelte	∐No outary or other open water sheltered or exposed? ored – open water width < 2500 feet and no regular boat traffic. open water width ≥ 2500 feet or regular boat traffic.
8.		h at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and ody Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at
		nt area (WC). See User Manual for WT and WC boundaries.
	■A □A	≥ 100 feet
	□В □В	From 80 to < 100 feet
		From 50 to < 80 feet
		From 40 to < 50 feet
		From 30 to < 40 feet From 15 to < 30 feet
		From 15 to < 30 feet From 5 to < 15 feet
	□G □G	From 5 to < 15 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). B Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I From 0.1 to < 0.5 acre J J J J From 0.01 to < 0.1 acre K K K K K K K C.0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.□B Pocosin is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E A < 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." $\Box A 0$ $\Box B 1 \text{ to } 4$ $\blacksquare C 5 \text{ to } 8$
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
٠.	 □ A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □ B Vegetation diversity is low or has > 10% to 50% cover of exotics. □ C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	ve Stru	cture –	assessment area/wetland type condition metric
	17a. Is v	•		
		Yes [□No	If Yes, continue to 17b. If No, skip to Metric 18.
				overage of assessment area vegetation for all marshes only. Skip to17c for non-marsh wetlands.
				overage of vegetation overage of vegetation
			2070 00	verage of vegetation
	in a	airspace	e above t	ach column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.
	AA ,⊟≦	Α [NT ⊒A	Canopy closed, or nearly closed, with natural gaps associated with natural processes
	Canor	в [⊒в	Canopy present, but opened more than natural gaps
	Ö□	C [□C	Canopy sparse or absent
	<u>-</u>	Α [□A	Dense mid-story/sapling layer
	Mid-Story	В [⊒в	Moderate density mid-story/sapling layer
	ĕ⊔	C [□c	Mid-story/sapling layer sparse or absent
	ا	Α [□A	Dense shrub layer
	Shrub 	В [⊒B ⊐o	Moderate density shrub layer
	லட		□с	Shrub layer sparse or absent
	ا_م		⊒A	Dense herb layer
	Her.		_]В ⊒С	Moderate density herb layer Herb layer sparse or absent
1Ω		_		condition metric (skip for all marshes)
10.				nore than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).
	□в	Not A	3 (, , , , , , , , , , , , , , , , , , , ,
19.				ution – wetland type condition metric (skip for all marshes)
	□A	Majorit presen		opy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are
	□в	Majorit	ty of can	opy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH.
	c			opy trees are < 6 inches DBH or no trees.
20.	_	_		wetland type condition metric (skip for all marshes) ris and man-placed natural debris.
	$\square A$	Large		re than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).
	В	Not A		
21.	-	-		Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only) st describes the amount of interspersion between vegetation and open water in the growing season. Patterned
				areas, while solid white areas indicate open water.
	177		JA	
			5	
	10			
	4	200		
22	Hydrolo	aic Cor	nectivit	y – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)
	Example	s of a	ctivities	that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization,
	diversion			rms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D. overland flow are not severely altered in the assessment area.
	□в	Overba	ank flow	is severely altered in the assessment area.
	□C ■D			s severely altered in the assessment area. <u>and</u> overland flow are severely altered in the assessment area.
		טוווטם	verbank	and overland now are severely altered in the assessment area.

Area is cleared with tire ruts and ditches, and functions as a road. Herbicide use and mowing present.

US	ACE AID #:		NCDWR #:			
	Project Name	MVP Southagate	Date of Evaluation	10/23/24		
Α	oplicant/Owner Name	EQT	Wetland Site Name	W-B056		
	Wetland Type	Non-Tidal Freshwater Marsh	Assessor Name/Organization	L. Cooper/BMcD		
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Dan River		
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103		
	County	Rockingham	NCDWR Region	Winston-Salem		
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.493750053N/79.678614699W		
Is t Reg	Evidence of stressors affecting the assessment area (may not be within the assessment area) Please circle and/or make note on the last page if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past (for instance, within 10 years). Noteworthy stressors include, but are not limited to the following. • Hydrological modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) • Surface and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby septic tanks, underground storage tanks (USTs), hog lagoons, etc.) • Signs of vegetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) • Habitat/plant community alteration (examples: mowing, clear-cutting, exotics, etc.) Is the assessment area intensively managed? Yes No Regulatory Considerations - Were regulatory considerations evaluated? Yes No If Yes, check all that apply to the assessment area. Anadromous fish Federally protected species or State endangered or threatened species NCDWR riparian buffer rule in effect Abuts a Primary Nursery Area (PNA) Publicly owned property N.C. Division of Coastal Management Area of Environmental Concern (AEC) (including buffer) Abuts a stream with a NCDWQ classification of SA or supplemental classifications of HQW, ORW, or Trout Designated NCNHP reference community Abuts a 303(d)-listed stream or a tributary to a 303(d)-listed stream What type of natural stream is associated with the wetland, if any? (check all that apply)					
	Brownwater					
	Tidal (if tidal, ch	neck one of the following boxes)	nar ∐ Wind ∐ Both			
ls t	Is the assessment area on a coastal island? Yes No					
		's surface water storage capacity or du rea experience overbank flooding durir	ration substantially altered by beaver? ng normal rainfall conditions? Yes	☐ Yes ■ No ■ No		
				_		
1.	Check a box in each the assessment area bar GS VS	Compare to reference wetland if app sed on evidence of an effect.	nent area condition metric ound surface (GS) in the assessment area licable (see User Manual). If a reference			
	■B ■B S si a	edimentation, fire-plow lanes, skidder tra	essment area (ground surface alteration examples, bedding, fill, soil compaction, obvious noe, herbicides, salt intrusion [where approximation]	pollutants) (vegetation structure		
2.	Surface and Sub-Si	urface Storage Capacity and Duration –	assessment area condition metric			
	(Sub). Consider bot 1 foot deep is expect Surf Sub A A W B B B W C C W	h increase and decrease in hydrology. A ted to affect both surface and sub-surface Vater storage capacity <u>and</u> duration are no Vater storage capacity <u>or</u> duration are alter vater storage capacity <u>or</u> duration is substa	apacity and duration (Surf) and sub-surfact ditch ≤ 1 foot deep is considered to affect swater. Consider tidal flooding regime, if apput altered. Ted, but not substantially (typically, not sufficientially altered (typically, alteration sufficientian), filling, excessive sedimentation, undergrantially altered.	urface water only, while a ditch > plicable. ient to change vegetation). to result in vegetation change)		
_	·					
3.	=		ype condition metric (skip for all marshe			
		n column for each group below. Select	for the assessment area (AA) and the wetla	nd type (WT).		
	□B □B M □C □C M □D □D D	flajority of wetland with depressions able to flajority of wetland with depressions able to flajority of wetland with depressions able to depressions able to pond water < 3 inches	p pond water 6 inches to 1 foot deep p pond water 3 to 6 inches deep deep			
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet			

	Make soil observindicators.	m each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. vations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	□B Lo: □C Lo: □D Lo:	ndy soil amy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) amy or clayey soils not exhibiting redoximorphic features amy or clayey gleyed soil stosol or histic epipedon
		il ribbon < 1 inch il ribbon ≥ 1 inch
		peat or muck presence peat or muck presence
5.	Discharge into V	Netland – assessment area opportunity metric
		n each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B □B	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	_c _c	Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation, odor)
6.	Land Use - opp	ortunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to asses	apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources is sment area within entire upstream watershed (WS), within 5 miles <u>and</u> within the watershed draining to the assessment ithin 2 miles and within the watershed draining to the assessment area (2M). 2M □A ≥ 10% impervious surfaces
	□B □B	B Confined animal operations (or other local, concentrated source of pollutants)
	□C ■C	■C ≥ 20% coverage of pasture
		□D ≥ 20% coverage of agricultural land (regularly plowed land)
	■E ■E □F □F	■E ≥ 20% coverage of maintained grass/herb□F ≥ 20% coverage of clear-cut land
	□G □G	Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed <u>or</u> hydrologic alterations that prevent drainage <u>and/or</u> overbank flow from affecting the assessment area.
7.	Wetland Acting	as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
	=	ent area within 50 feet of a tributary or other open water?
	7b. How much buffer judgi	No If Yes, continue to 7b. If No, skip to Metric 8 of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make ment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□B F □C F	50 feet rom 30 to < 50 feet rom 15 to < 30 feet
		rom 5 to < 15 feet 5 feet <u>or</u> buffer bypassed by ditches
		idth. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	☐≤ 15-feet	t wide
	☐Yes ■	No
	☐Sheltere	ary or other open water sheltered or exposed? d – open water width < 2500 feet and no regular boat traffic. l – open water width ≥ 2500 feet or regular boat traffic.
8.		at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and by Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
	Check a box in	each column . Select the average width for the wetland type at the assessment area (WT) and the wetland complex at area (WC). See User Manual for WT and WC boundaries.
	W1 WC	≥ 100 feet
	□A □A	From 80 to < 100 feet
	□c □c	From 50 to < 80 feet
	■ D □D	From 40 to < 50 feet
	□E □E	From 30 to < 40 feet
	□F □F	From 15 to < 30 feet
	□G □G	From 5 to < 15 feet
	\square H \square H	< 5 feet

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see Use Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre II I From 0.1 to < 0.5 acre K K K K K K K C K < 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size.
	B Pocosin is < 90% of the full extent of its natural landscape size.
	Connectivity to Other Natural Areas – landscape condition metric 13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Conside the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut select option "C." $\Box A 0$ $\Box B 1 \text{ to } 4$ $\Box C 5 \text{ to } 8$
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting of clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in a least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	Vegetati	7. Vegetative Structure – assessment area/wetland type condition metric						
	17a. Is	•						
		Yes	□No	If Yes, continue to 17b. If No, skip to Metric 18.				
	17b. Ev	aluate	percent c	coverage of assessment area vegetation for all marshes only. Skip to17c for non-marsh wetlands.				
				overage of vegetation				
		В	< 25% cc	overage of vegetation				
	in a	airspac	e above	ach column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure the assessment area (AA) and the wetland type (WT) separately.				
	AA ⊡≦		WT □A	Canopy closed, or nearly closed, with natural gaps associated with natural processes				
	Canor	В	□Л □В	Canopy present, but opened more than natural gaps				
	ပိံြ	С	□С	Canopy sparse or absent				
	≧□	Δ	□A	Dense mid-story/sapling layer				
	-Stc	В	□∧ □В	Moderate density mid-story/sapling layer				
	Mid-Story	С	□С	Mid-story/sapling layer sparse or absent				
			□A	Dense shrub layer				
	Shrub 	В	□Л □В	Moderate density shrub layer				
	స□	С	□с	Shrub layer sparse or absent				
		Α	□A	Dense herb layer				
		В	□В	Moderate density herb layer				
	$\pm\Box$	С	□С	Herb layer sparse or absent				
18.	_			condition metric (skip for all marshes)				
	□A ■B	Not A		nore than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).				
19.				ution – wetland type condition metric (skip for all marshes)				
	□A	Majori presei		opy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are				
	□B	Majori	ty of can	opy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH.				
	■ C			opy trees are < 6 inches DBH or no trees.				
20.	_	-		wetland type condition metric (skip for all marshes)				
	□A ■B			ris and man-placed natural debris. ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).				
21.	Vegetati	ion/Op	en Wateı	r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)				
				est describes the amount of interspersion between vegetation and open water in the growing season. Patterned I areas, while solid white areas indicate open water. □B □D				
			5					
	O		22					
		100						
22.	-	_		ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)				
				that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, rms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D.				
	$\square A$	Overb	ank <u>and</u>	overland flow are not severely altered in the assessment area.				
	□B ■C			is severely altered in the assessment area. is severely altered in the assessment area.				
	D			and overland flow are severely altered in the assessment area.				

Wetland is within a maintained margin of a crop field. Overland flow altered by tilling.

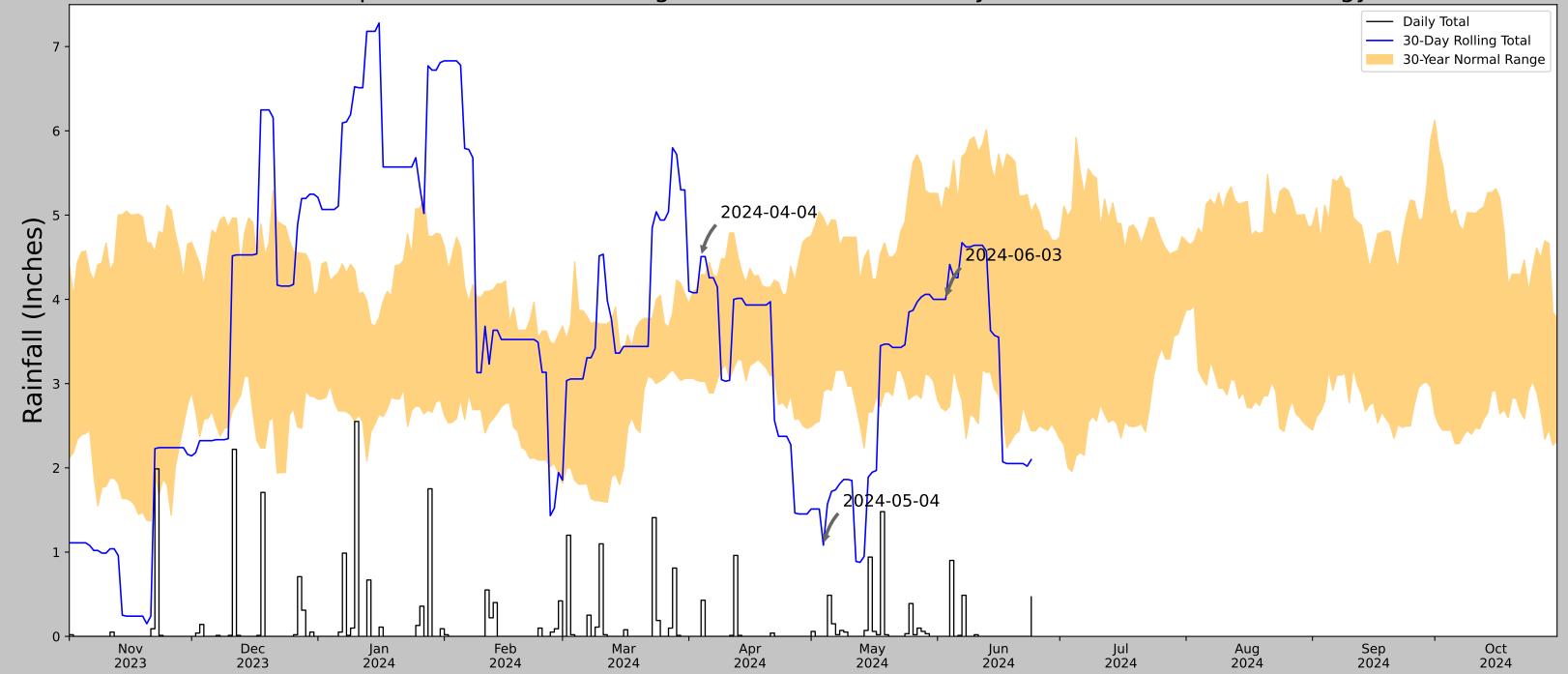
US	ACE AID #:		NCDWR #:	
	Project Name	MVP Southagate	Date of Evaluation	10/24/24
Α	oplicant/Owner Name	Mountain Valley Pipeline, LLC	Wetland Site Name	W-B056a
	Wetland Type	Basin Wetland	Assessor Name/Organization	L. Cooper/BMcD
	Level III Ecoregion	Piedmont	Nearest Named Water Body	Cascade Creek
	River Basin	Roanoke	USGS 8-Digit Catalogue Unit	03010103
	County	Rockingham	NCDWR Region	Winston-Salem
	☐ Yes ■ No	Precipitation within 48 hours?	Latitude/Longitude (deci-degrees)	36.528623856/-79.645871784
Ple	ase circle and/or mal ent past (for instance, • Hydrological m • Surface and su tanks, undergro • Signs of vegeta	within 10 years). Noteworthy stressors in odifications (examples: ditches, dams, beab-surface discharges into the wetland (examples to the wetland) (examples), hog lagoons, examples to stress (examples).	ressors is apparent. Consider departure ficlude, but are not limited to the following. aver dams, dikes, berms, ponds, etc.) amples: discharges containing obvious pollutc.) y, insect damage, disease, storm damage, s	tants, presence of nearby septic
10.4	•	ommunity alteration (examples: mowing, c		
		intensively managed? Yes		
	Anadromous fis Federally prote NCDWR riparia Abuts a Primar Publicly owned N.C. Division of Abuts a stream Designated NC	sh cted species or State endangered or threa an buffer rule in effect y Nursery Area (PNA) property f Coastal Management Area of Environme	ntal Concern (AEC) (including buffer) oplemental classifications of HQW, ORW, or	
Wh	Blackwater Brownwater	ream is associated with the wetland, if a		
ls t	he assessment area	on a coastal island?	0	
ls t	he assessment area	's surface water storage capacity or du	ration substantially altered by beaver?	☐ Yes ■ No
		rea experience overbank flooding durin		■ No
1.	Check a box in each the assessment area bands of the assessment area bands	a. Compare to reference wetland if app sed on evidence of an effect. lot severely altered severely altered over a majority of the asse edimentation, fire-plow lanes, skidder trace	ound surface (GS) in the assessment area licable (see User Manual). If a reference assment area (ground surface alteration exarcks, bedding, fill, soil compaction, obvious nce, herbicides, salt intrusion [where approximates]	is not applicable, then rate the mples: vehicle tracks, excessive pollutants) (vegetation structure
2.	Surface and Sub-S	urface Storage Capacity and Duration –	assessment area condition metric	
	Check a box in ea (Sub). Consider bot 1 foot deep is expect Surf Sub	ch column. Consider surface storage ch increase and decrease in hydrology. A sted to affect both surface and sub-surface water storage capacity and duration are no	apacity and duration (Surf) and sub-surfac ditch ≤ 1 foot deep is considered to affect so water. Consider tidal flooding regime, if app	urface water only, while a ditch > olicable.
2	(6	examples: draining, flooding, soil compacti	antially altered (typically, alteration sufficient on, filling, excessive sedimentation, undergr	round utility lines).
3.	=		ype condition metric (skip for all marshes	
	AA WT	in column for each group below. Select	for the assessment area (AA) and the wetla	nd type (vv i).
	3a. □A □A N □B □B N □C □C N ■D ■D C	Majority of wetland with depressions able to Majority of wetland with depressions able to Majority of wetland with depressions able to Depressions able to pond water < 3 inches	pond water 6 inches to 1 foot deep pond water 3 to 6 inches deep deep	
	□B E	vidence that maximum depth of inundation vidence that maximum depth of inundation vidence that maximum depth of inundation	n is between 1 and 2 feet	

	Make soil obs indicators.	from each of the three soil property groups below. Dig soil profile in the dominant assessment area landscape feature. servations within the top 12 inches. Use most recent guidance for National Technical Committee for Hydric Soils regional
	■B □C □D	Sandy soil Loamy or clayey soils exhibiting redoximorphic features (concentrations, depletions, or rhizospheres) Loamy or clayey soils not exhibiting redoximorphic features Loamy or clayey gleyed soil Histosol or histic epipedon
		Soil ribbon < 1 inch Soil ribbon ≥ 1 inch
		No peat or muck presence A peat or muck presence
5.	Discharge int	to Wetland – assessment area opportunity metric
	Check a box	t in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). sub-surface discharges include presence of nearby septic tank, underground storage tank (UST), etc.
	■A ■A □B	Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the treatment capacity of the assessment area
	cc	
6.	Land Use - o	pportunity metric (skip for non-riparian wetlands, tidal marshes, and Estuarine Woody Wetland)
	draining to as area (5M), <u>and</u> WS 5M	at apply (at least one box in each column). Evaluation involves a GIS effort with field adjustment. Consider sources sessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (2M). 2M
	□A □A □B □B	☐A ≥ 10% impervious surfaces ☐B Confined animal operations (or other local, concentrated source of pollutants)
		☐C ≥ 20% coverage of pasture
	\Box D \Box D	□D ≥ 20% coverage of agricultural land (regularly plowed land)
	□F □F □G □G	 ☐F ≥ 20% coverage of clear-cut land ☐G Little or no opportunity to improve water quality. Lack of opportunity may result from little or no disturbance in the watershed or hydrologic alterations that prevent drainage and/or overbank flow from affecting the assessment area.
7.	Wetland Activ	ng as Vegetated Buffer – assessment area/wetland complex condition metric (skip for non-riparian wetlands)
۲.		sment area within 50 feet of a tributary or other open water?
	☐Yes 7b. How mu buffer ju	■No If Yes, continue to 7b. If No, skip to Metric 8 ich of the first 50 feet from the bank is wetland? (Wetland buffer need only be present on one side of the .water body. Make idgment based on the average width of wetland. Record a note if a portion of the buffer has been removed or disturbed.)
	□A □B □C	≥ 50 feet From 30 to < 50 feet From 15 to < 30 feet
	□D □E	From 5 to < 15 feet < 5 feet or buffer bypassed by ditches
	7c. Tributar	y width. If the tributary is anastomosed, combine widths of channels/braids for a total width.
	7d. Do roots	feet wide
	7e. Is the tri ☐Shelte	□No butary or other open water sheltered or exposed? ered – open water width < 2500 feet and no regular boat traffic.
	•	sed – open water width ≥ 2500 feet or regular boat traffic.
8.		th at the Assessment Area – wetland type/wetland complex condition metric (evaluate WT for all marshes and body Wetland only; evaluate WC for Bottomland Hardwood Forest, Headwater Forest, and Riverine Swamp Forest
		in each column. Select the average width for the wetland type at the assessment area (WT) and the wetland complex at nt area (WC). See User Manual for WT and WC boundaries.
	■A ■A	≥ 100 feet
	□в □в	From 80 to < 100 feet
		From 30 to < 40 feet
		From 15 to < 30 feet
	□G □G □H □H	
		5 O 100C

9.	Inundation Duration – assessment area condition metric (skip for non-riparian wetlands)
	Answer for assessment area dominant landform. A Evidence of short-duration inundation (< 7 consecutive days) B Evidence of saturation, without evidence of inundation C Evidence of long-duration inundation or very long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric (skip for non-riparian wetlands and all marshes)
	Consider recent deposition only (no plant growth since deposition). A Sediment deposition is not excessive, but at approximately natural levels. B Sediment deposition is excessive, but not overwhelming the wetland. C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the wetland complex (WC), and the size of the forested wetland (FW) (if applicable, see User Manual). See the User Manual for boundaries of these evaluation areas. If assessment area is clear-cut, select "K" for the FW column. WT WC FW (if applicable) A A A ≥ 500 acres B B B From 100 to < 500 acres C C C From 50 to < 100 acres D D D From 25 to < 50 acres E E From 10 to < 25 acres F F F From 5 to < 10 acres G G G From 1 to < 5 acres H H H From 0.5 to < 1 acre I I From 0.1 to < 0.5 acre I J J From 0.01 to < 0.1 acre K K K K K K C 0.01 acre or assessment area is clear-cut
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	□A Pocosin is the full extent (≥ 90%) of its natural landscape size. □B Pocosin is < 90% of the full extent of its natural landscape size.
13	Connectivity to Other Natural Areas – landscape condition metric
	13a. Check appropriate box(es) (a box may be checked in each column). Involves a GIS effort with field adjustment. This metric evaluates whether the wetland is well connected (Well) and/or loosely connected (Loosely) to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate). Boundaries are formed by four-lane roads, regularly maintained utility line corridors the width of a four-lane road or wider, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Well Loosely A A ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D D From 10 to < 50 acres E A 10 acres F Wetland type has a poor or no connection to other natural habitats 13b. Evaluate for marshes only. Yes No Wetland type has a surface hydrology connection to open waters/tributary or tidal wetlands.
14.	Edge Effect – wetland type condition metric (skip for all marshes and Estuarine Woody Wetland)
	May involve a GIS effort with field adjustment. Estimate distance from wetland type boundary to artificial edges. Artificial edges include non-forested areas \geq 40 feet wide such as fields, development, roads, regularly maintained utility line corridors, and clear-cuts. Consider the eight main points of the compass. Artificial edge occurs within 150 feet in how many directions? If the assessment area is clear cut, select option "C." \square A 0 \square B 1 to 4 \square C 5 to 8
15.	Vegetative Composition – assessment area condition metric (skip for all marshes and Pine Flat)
	 □A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate species, with exotic plants absent or sparse within the assessment area. □B Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. □C Vegetation severely altered from reference in composition, or expected species are unnaturally absent (planted stands of non-characteristic species or at least one stratum inappropriately composed of a single species), or exotic species are dominant in at least one stratum.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	 □A Vegetation diversity is high and is composed primarily of native species (< 10% cover of exotics). □B Vegetation diversity is low or has > 10% to 50% cover of exotics. □C Vegetation is dominated by exotic species (> 50% cover of exotics).

17.	7. Vegetative Structure – assessment area/wetland type condition metric						
		•	tion prese	ent?			
		Yes	□No	If Yes, continue to 17b. If No, skip to Metric 18.			
	17b. Ev	aluate	percent of	coverage of assessment area vegetation for all marshes only . Skip to17c for non-marsh wetlands.			
				overage of vegetation			
		В	< 25% co	overage of vegetation			
	17c. C h	neck a	box in e	ach column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider structure			
				the assessment area (AA) and the wetland type (WT) separately.			
	AA		WT				
		A	ΠA	Canopy closed, or nearly closed, with natural gaps associated with natural processes			
	Cano ■	C.	□B ■C	Canopy present, but opened more than natural gaps Canopy sparse or absent			
				Carropy sparse of absent			
	F-Story □	Α	$\square A$	Dense mid-story/sapling layer			
	Ω ■	В	■B	Moderate density mid-story/sapling layer			
	Μğ	С	□С	Mid-story/sapling layer sparse or absent			
	\Box	Α	□A	Dense shrub layer			
	Shrub 	В	⊟B	Moderate density shrub layer			
	రు⊟	С	□с	Shrub layer sparse or absent			
		А	■A	Dense herb layer			
	er G	В	В	Moderate density herb layer			
	Ĭ	С	□С	Herb layer sparse or absent			
18.	Snags -	wetla	nd type o	condition metric (skip for all marshes)			
	□A ■B	Large Not A		nore than one) are visible (> 12 inches DBH, or large relative to species present and landscape stability).			
19.	Diamete	r Clas	s Distrib	ution – wetland type condition metric (skip for all marshes)			
	□A			opy trees have stems > 6 inches in diameter at breast height (DBH); many large trees (> 12 inches DBH) are			
	□в	prese Major		opy trees have stems between 6 and 12 inches DBH, few are > 12 inch DBH.			
	■ C			opy trees are < 6 inches DBH <u>or</u> no trees.			
20.	Large W	oody l	Debris –	wetland type condition metric (skip for all marshes)			
				ris and man-placed natural debris.			
	□A ■B	Large Not A		ore than one) are visible (> 12 inches in diameter, or large relative to species present and landscape stability).			
21.				r Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)			
	_	-		est describes the amount of interspersion between vegetation and open water in the growing season. Patterned			
	areas inc	dicate \	/egetated	d areas, while solid white areas indicate open water.			
	ATT OF						
			5				
	\Q						
			3(1)				
22.	-	_		ty – assessment area condition metric (evaluate for riparian wetlands and Salt/Brackish Marsh only)			
				that may severely alter hydrologic connectivity include intensive ditching, fill, sedimentation, channelization, rms, beaver dams, and stream incision. Documentation required if evaluated as B, C, or D.			
	■A	Overb	ank <u>and</u>	overland flow are not severely altered in the assessment area.			
	□В □С			is severely altered in the assessment area. is severely altered in the assessment area.			
	□C □D			and overland flow are severely altered in the assessment area.			





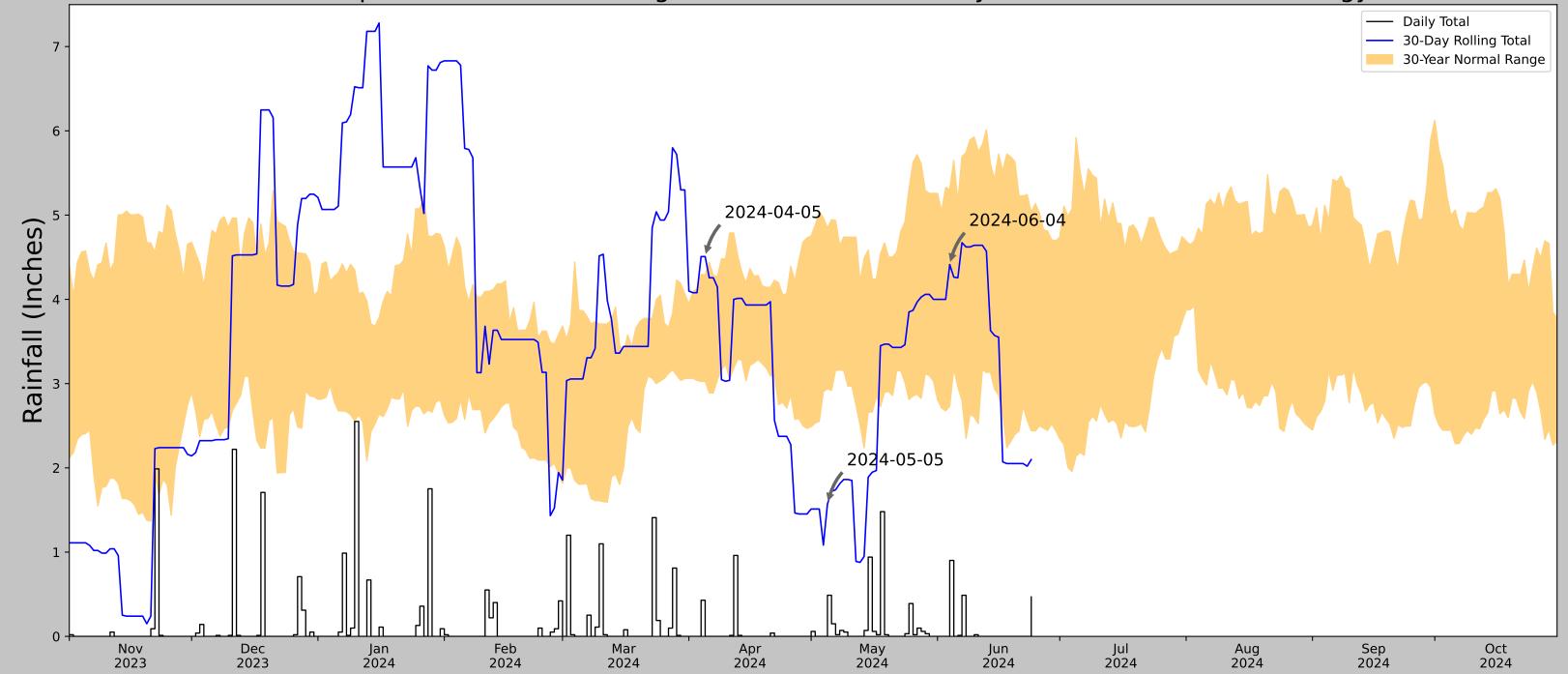
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-03
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-03	2.676378	5.329134	4.0	Normal	2	3	6
2024-05-04	2.904725	4.967323	1.082677	Dry	1	2	2
2024-04-04	3.025197	4.296851	4.507874	Wet	3	1	3
Result							Normal Conditions - 11



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



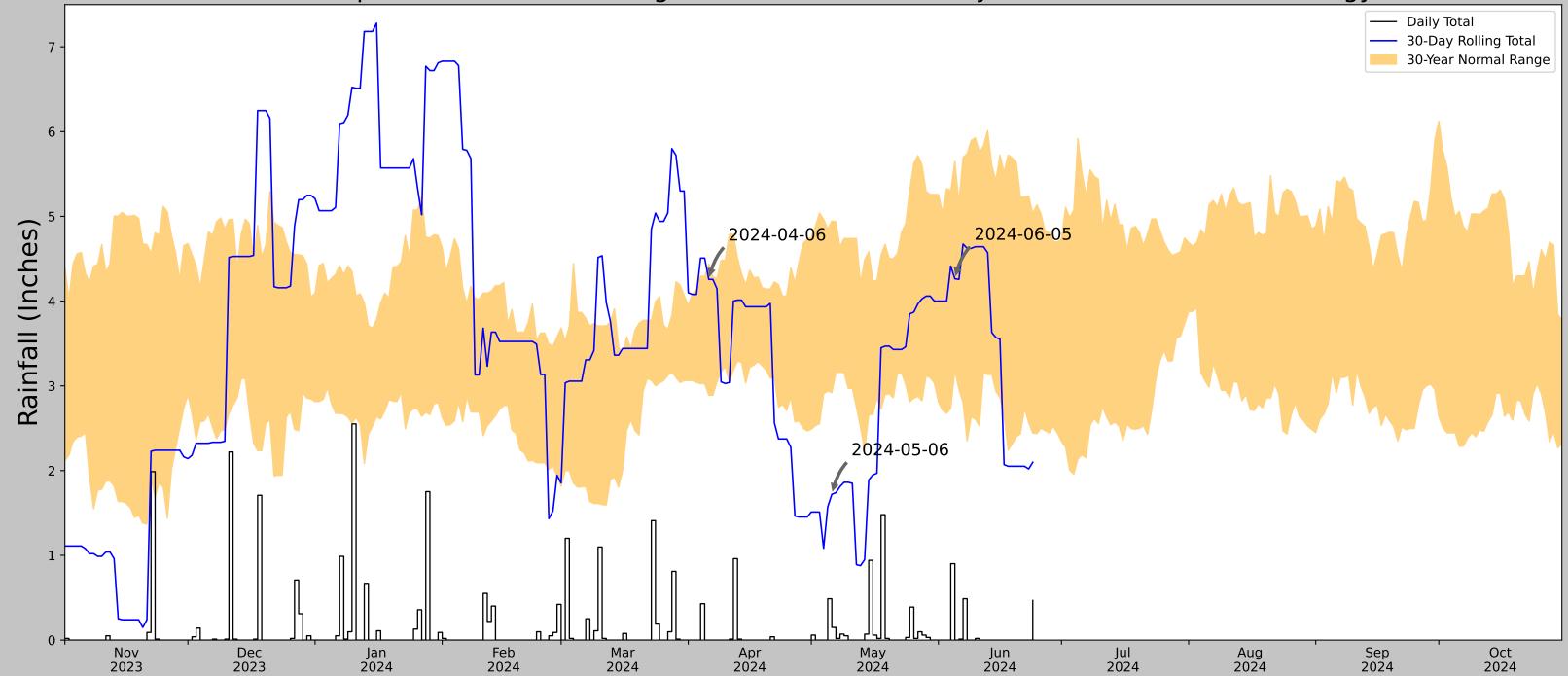
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-04
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-04	2.733465	5.303543	4.413386	Normal	2	3	6
2024-05-05	2.940158	4.846063	1.570866	Dry	1	2	2
2024-04-05	3.027953	4.290945	4.507874	Wet	3	1	3
Result							Normal Conditions - 11



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



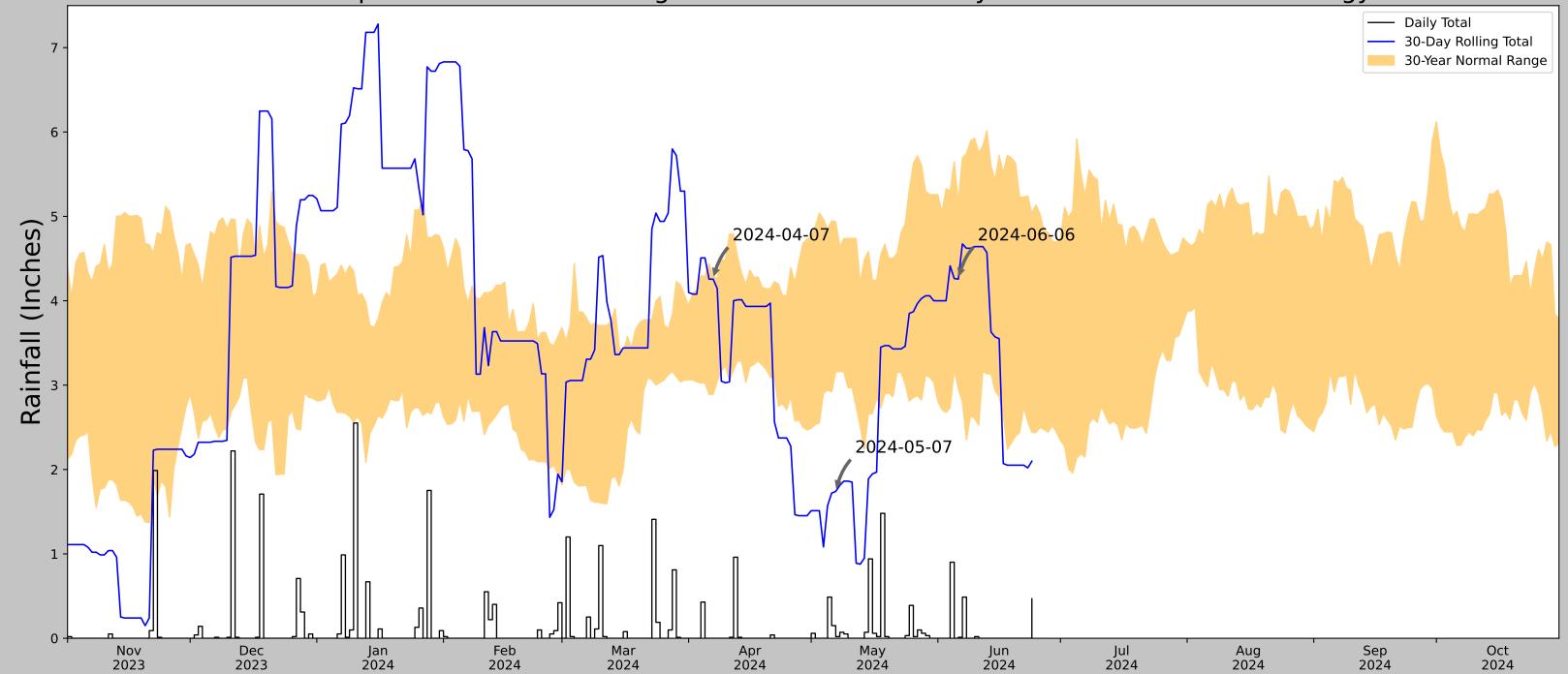
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-05
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-05	3.182677	5.648425	4.26378	Normal	2	3	6
2024-05-06	2.918898	4.946063	1.720472	Dry	1	2	2
2024-04-06	2.88937	4.438583	4.255906	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



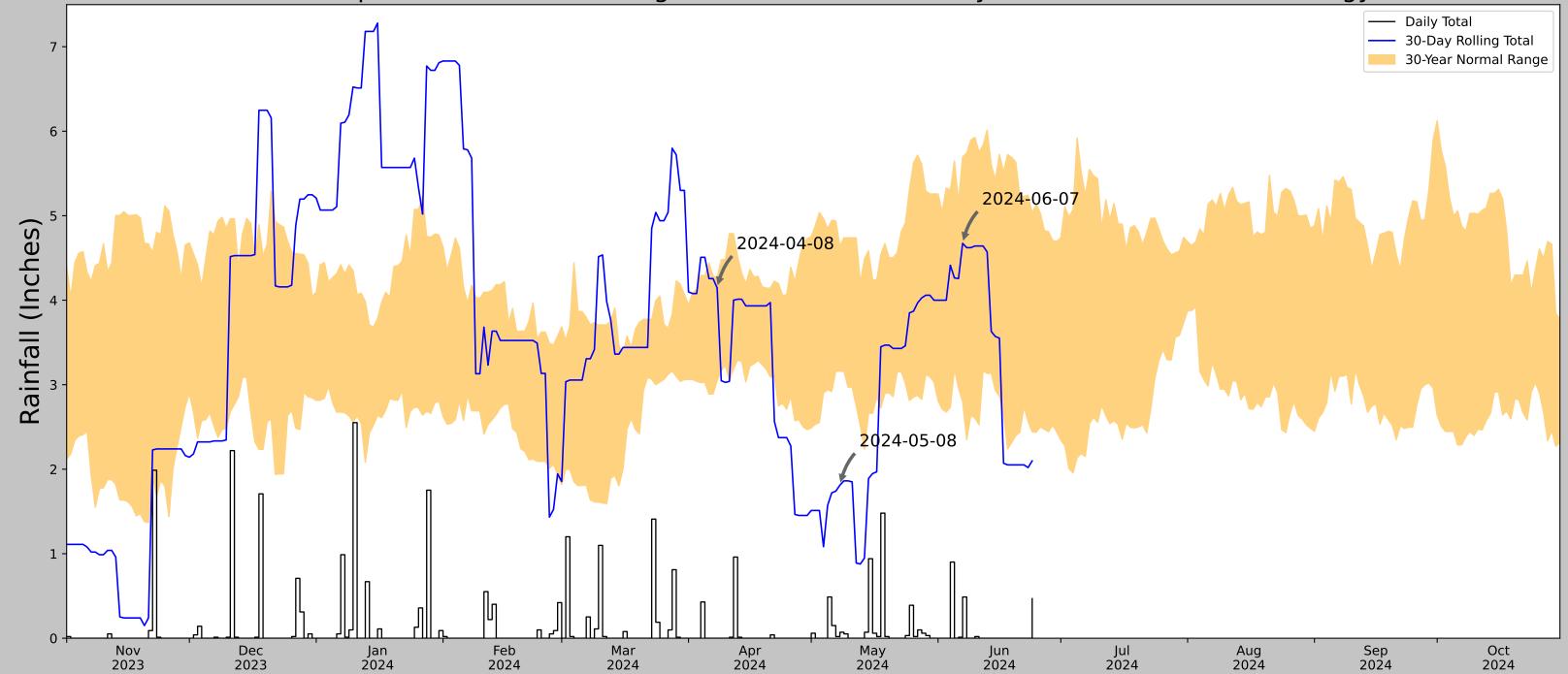
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-06
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-06	2.956693	5.162992	4.255906	Normal	2	3	6
2024-05-07	3.158268	4.937795	1.740158	Dry	1	2	2
2024-04-07	2.88937	4.285433	4.255906	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



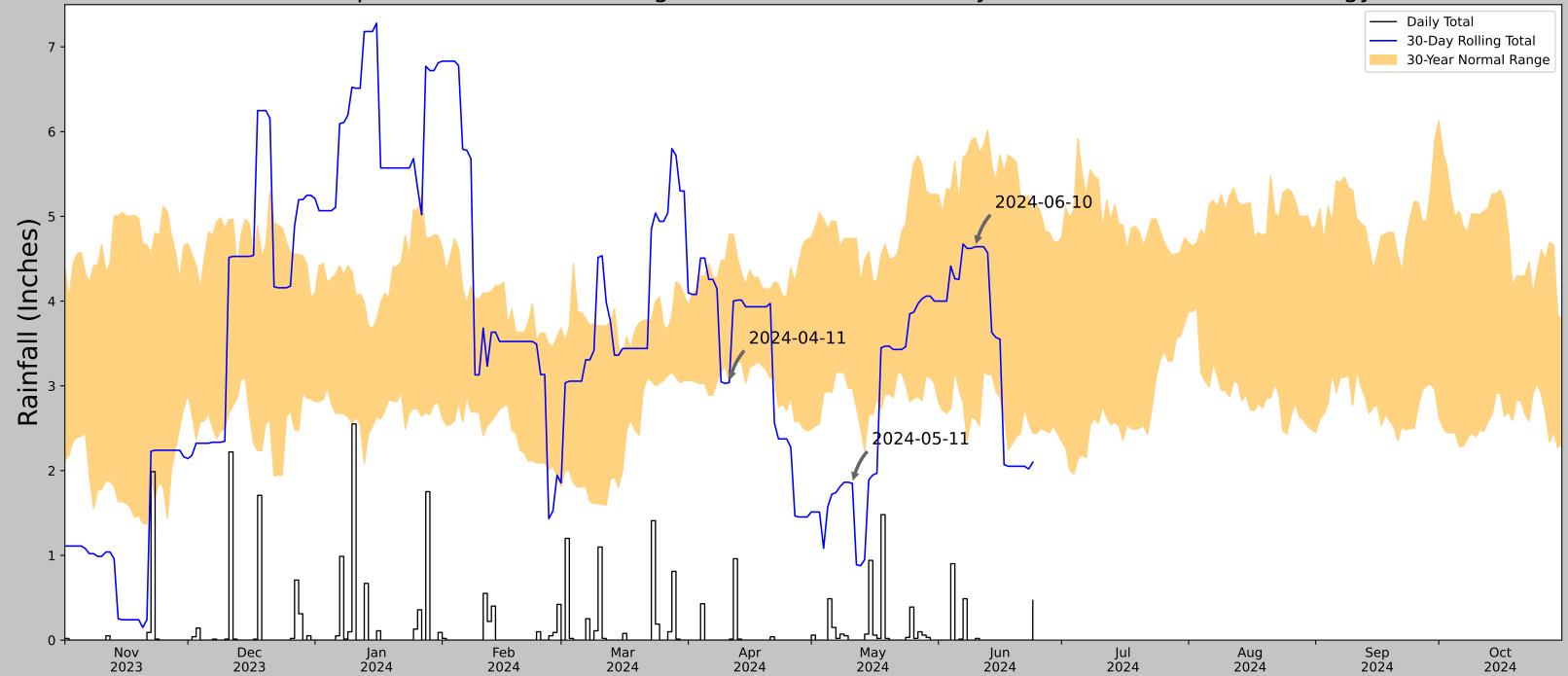
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-07
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-07	2.802362	5.695276	4.673228	Normal	2	3	6
2024-05-08	3.16063	4.63937	1.811024	Dry	1	2	2
2024-04-08	3.04685	4.268898	4.145669	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



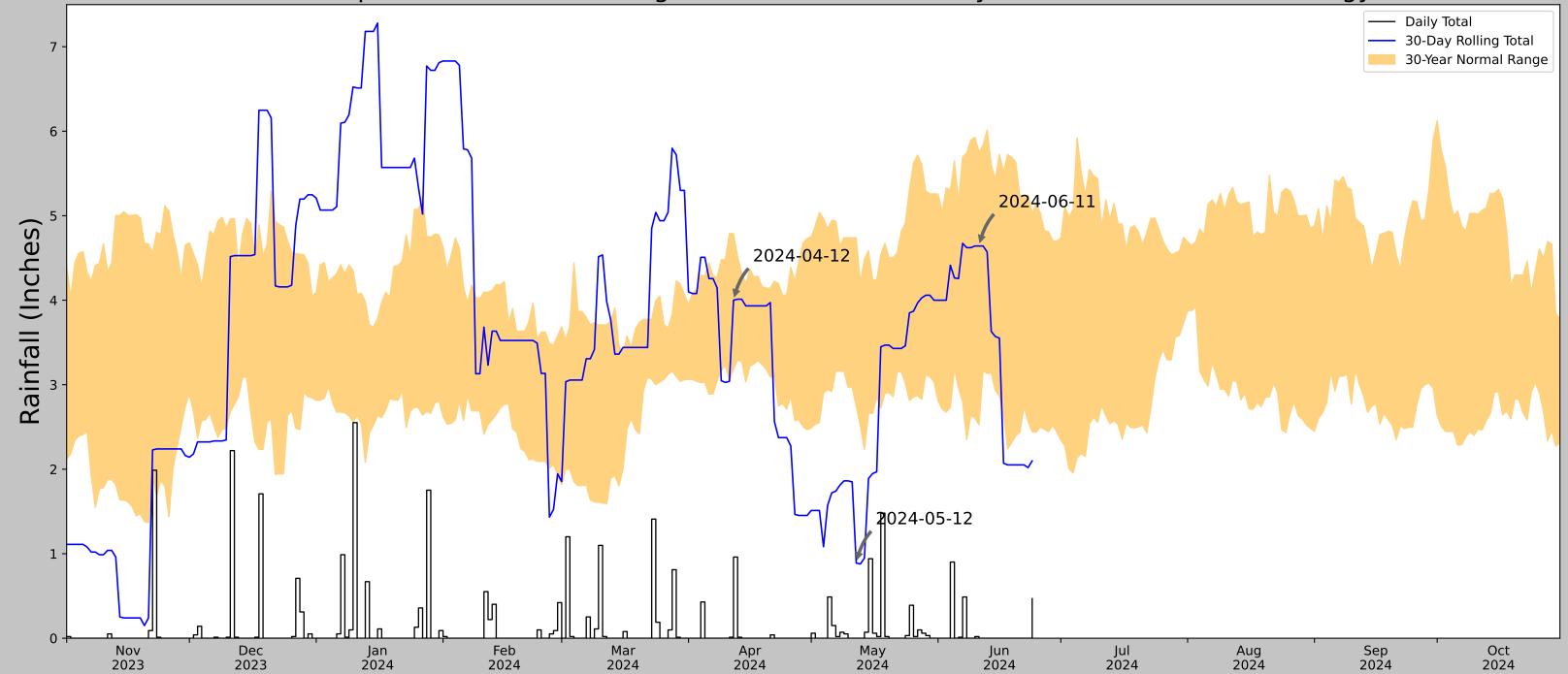
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-10
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-10	2.605906	5.927559	4.641732	Normal	2	3	6
2024-05-11	2.970473	4.738189	1.850394	Dry	1	2	2
2024-04-11	3.051181	4.787795	3.03937	Dry	1	1	1
Result							Drier than Normal - 9



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
36.643, -79.312	676.837	13.506	29.855	6.481	1	0
37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0
	36.8219, -79.4103 36.8576, -79.3237 36.7512, -79.4635 36.643, -79.312 37.0508, -79.4822 36.5728, -79.335	36.8219, -79.4103 646.982 36.8576, -79.3237 692.913 36.7512, -79.4635 812.992 36.643, -79.312 676.837 37.0508, -79.4822 683.071 36.5728, -79.335 551.837	36.8219, -79.4103 646.982 12.538 36.8576, -79.3237 692.913 5.387 36.7512, -79.4635 812.992 5.703 36.643, -79.312 676.837 13.506 37.0508, -79.4822 683.071 16.306 36.5728, -79.335 551.837 17.709	36.8219, -79.4103 646.982 12.538 47.167 36.8576, -79.3237 692.913 5.387 45.931 36.7512, -79.4635 812.992 5.703 166.01 36.643, -79.312 676.837 13.506 29.855 37.0508, -79.4822 683.071 16.306 36.089 36.5728, -79.335 551.837 17.709 95.145	36.8219, -79.4103 646.982 12.538 47.167 6.234 36.8576, -79.3237 692.913 5.387 45.931 2.672 36.7512, -79.4635 812.992 5.703 166.01 3.513 36.643, -79.312 676.837 13.506 29.855 6.481 37.0508, -79.4822 683.071 16.306 36.089 7.926 36.5728, -79.335 551.837 17.709 95.145 9.654	36.8219, -79.4103 646.982 12.538 47.167 6.234 11342 36.8576, -79.3237 692.913 5.387 45.931 2.672 0 36.7512, -79.4635 812.992 5.703 166.01 3.513 4 36.643, -79.312 676.837 13.506 29.855 6.481 1 37.0508, -79.4822 683.071 16.306 36.089 7.926 1 36.5728, -79.335 551.837 17.709 95.145 9.654 1



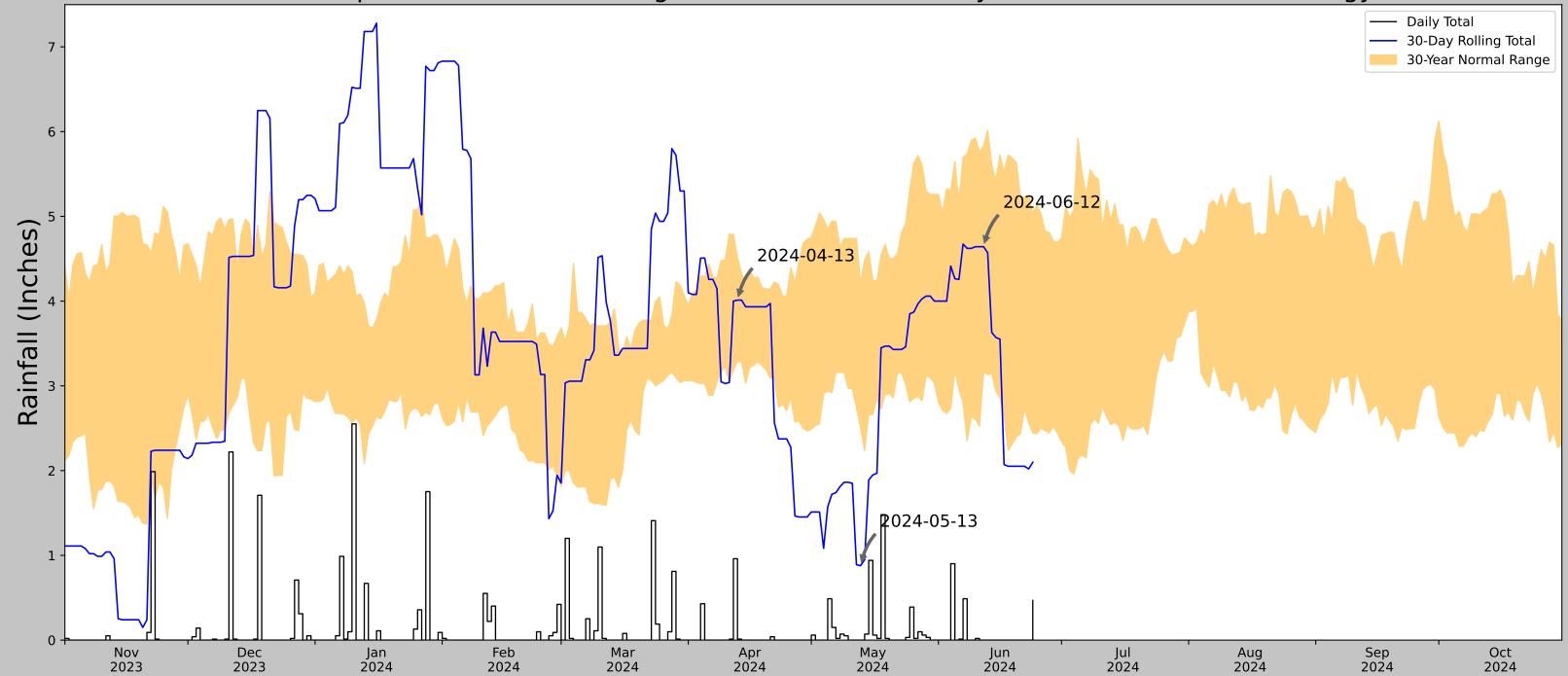
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-11
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-11	2.52441	5.755118	4.641732	Normal	2	3	6
2024-05-12	2.74685	4.738189	0.889764	Dry	1	2	2
2024-04-12	3.183465	4.787795	4.0	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



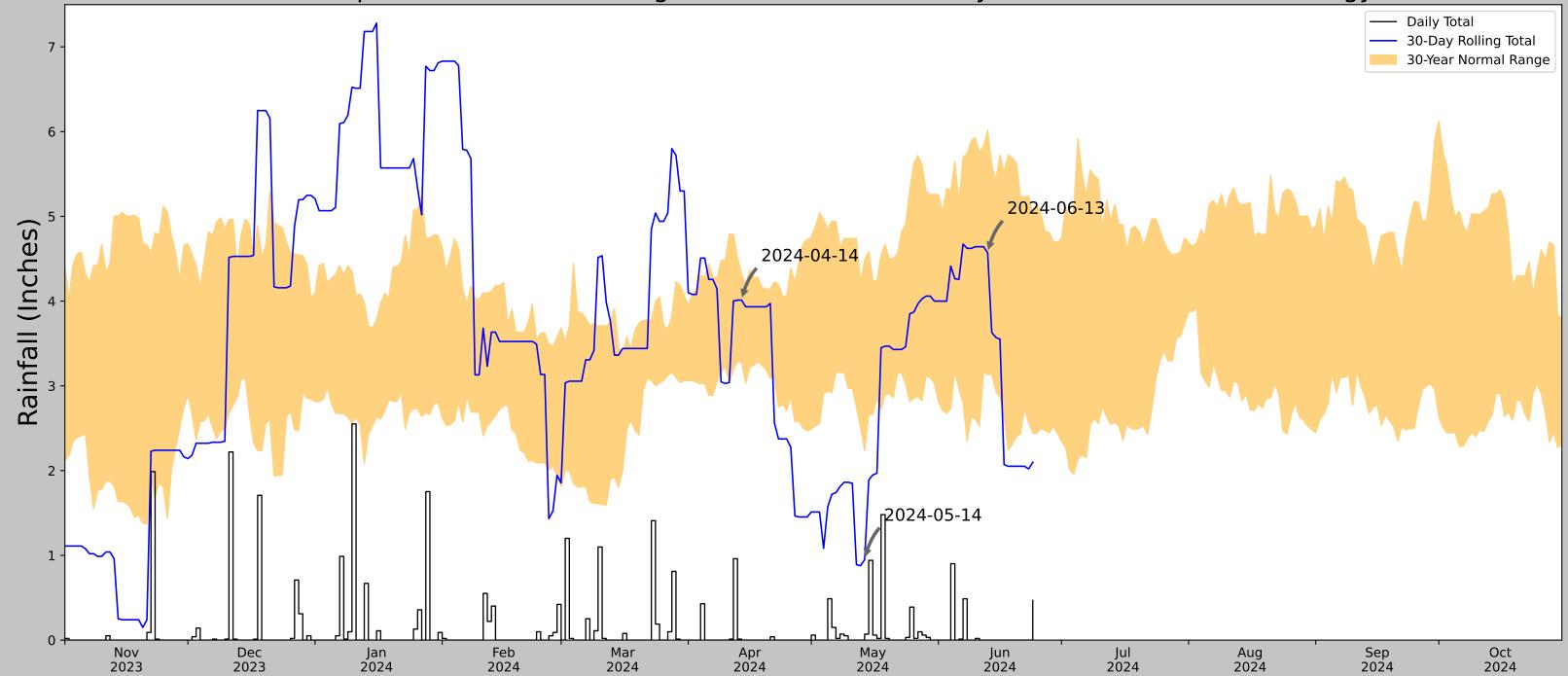
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-12
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-12	3.166142	5.833071	4.641732	Normal	2	3	6
2024-05-13	2.511024	4.208662	0.877953	Dry	1	2	2
2024-04-13	3.291339	4.514567	4.011811	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



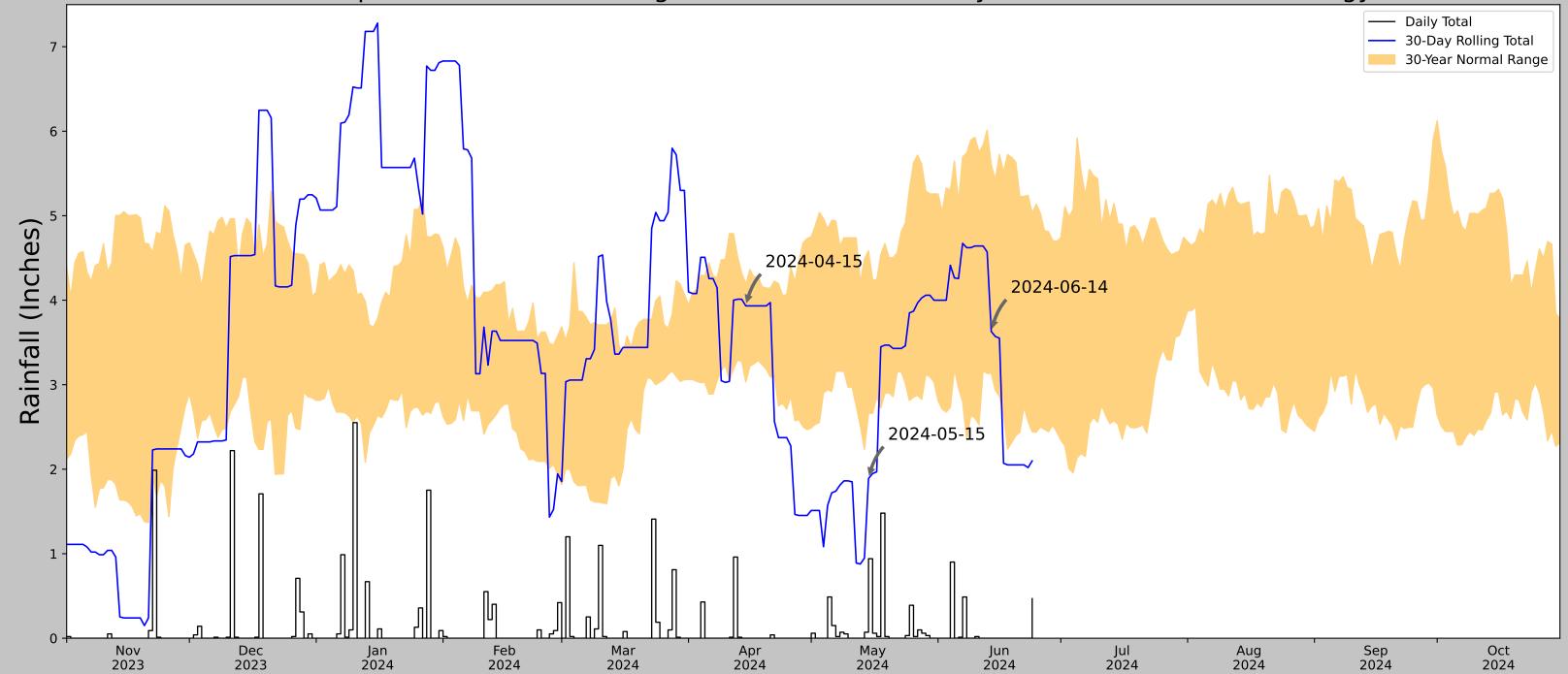
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-13
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-13	3.13189	6.014567	4.570866	Normal	2	3	6
2024-05-14	2.237008	4.487008	0.948819	Dry	1	2	2
2024-04-14	3.275984	4.322047	4.011811	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



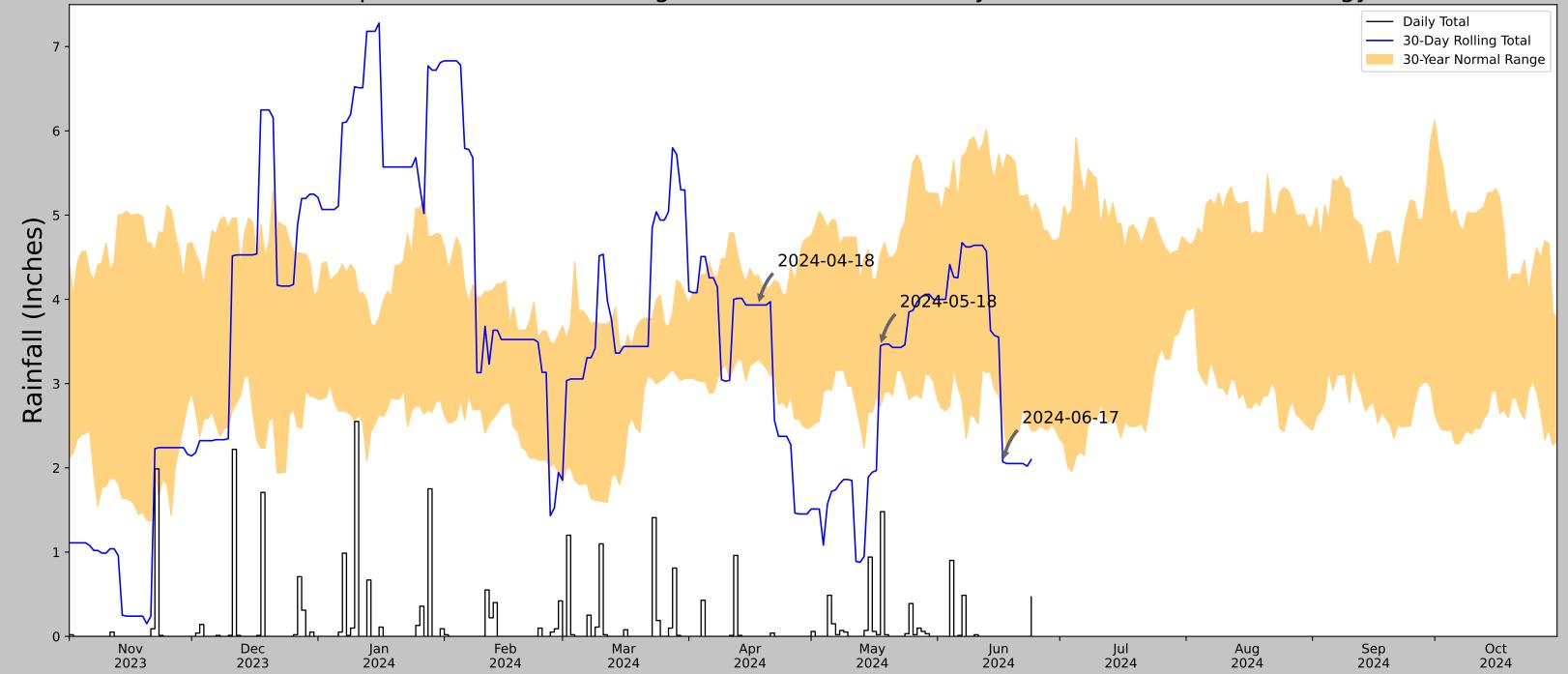
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-14
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-14	3.135827	5.602362	3.629921	Normal	2	3	6
2024-05-15	2.661024	4.585433	1.889764	Dry	1	2	2
2024-04-15	3.03189	4.193701	3.933071	Normal	2	1	2
Result							Normal Conditions - 10



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



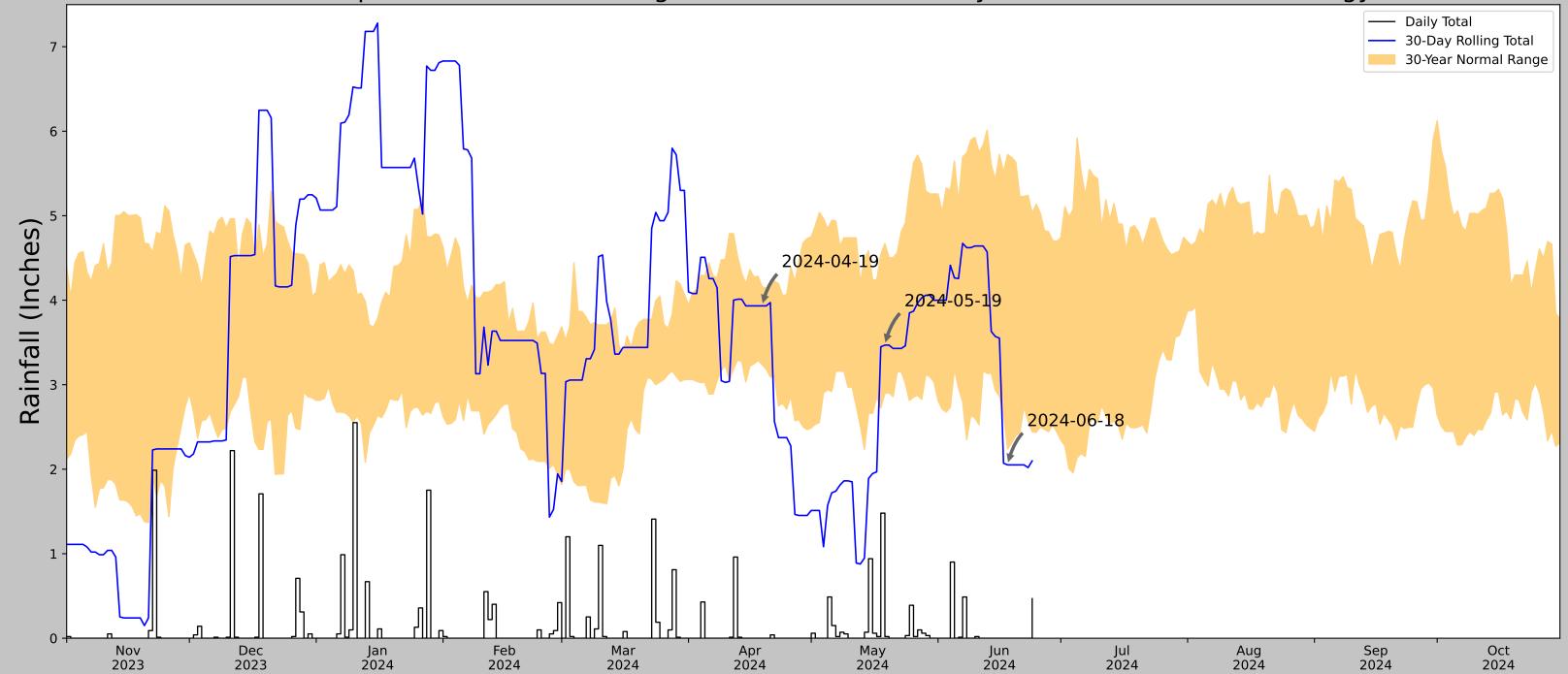
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-17
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H₂O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-17	2.647638	5.52126	2.070866	Dry	1	3	3
2024-05-18	2.725591	4.541732	3.448819	Normal	2	2	4
2024-04-18	3.286614	4.284252	3.933071	Normal	2	1	2
Result							Drier than Normal - 9



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



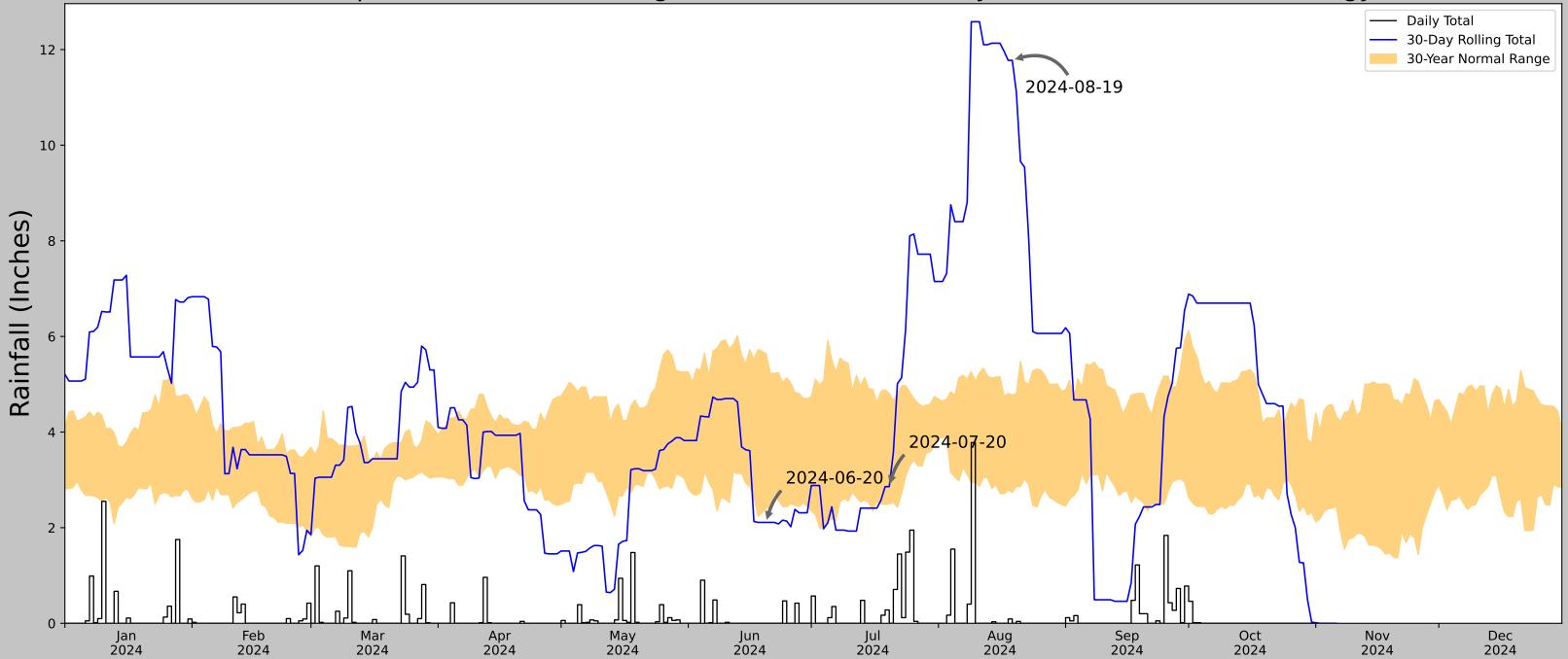
Coordinates	36.6602981, -79.5133263
Observation Date	2024-06-18
Elevation (ft)	694.149
Drought Index (PDSI)	Normal (2024-05)
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-18	2.238583	5.72441	2.051181	Dry	1	3	3
2024-05-19	2.89685	4.670079	3.468504	Normal	2	2	4
2024-04-19	3.237795	4.159843	3.933071	Normal	2	1	2
Result							Drier than Normal - 9



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.538	47.167	6.234	11342	88
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



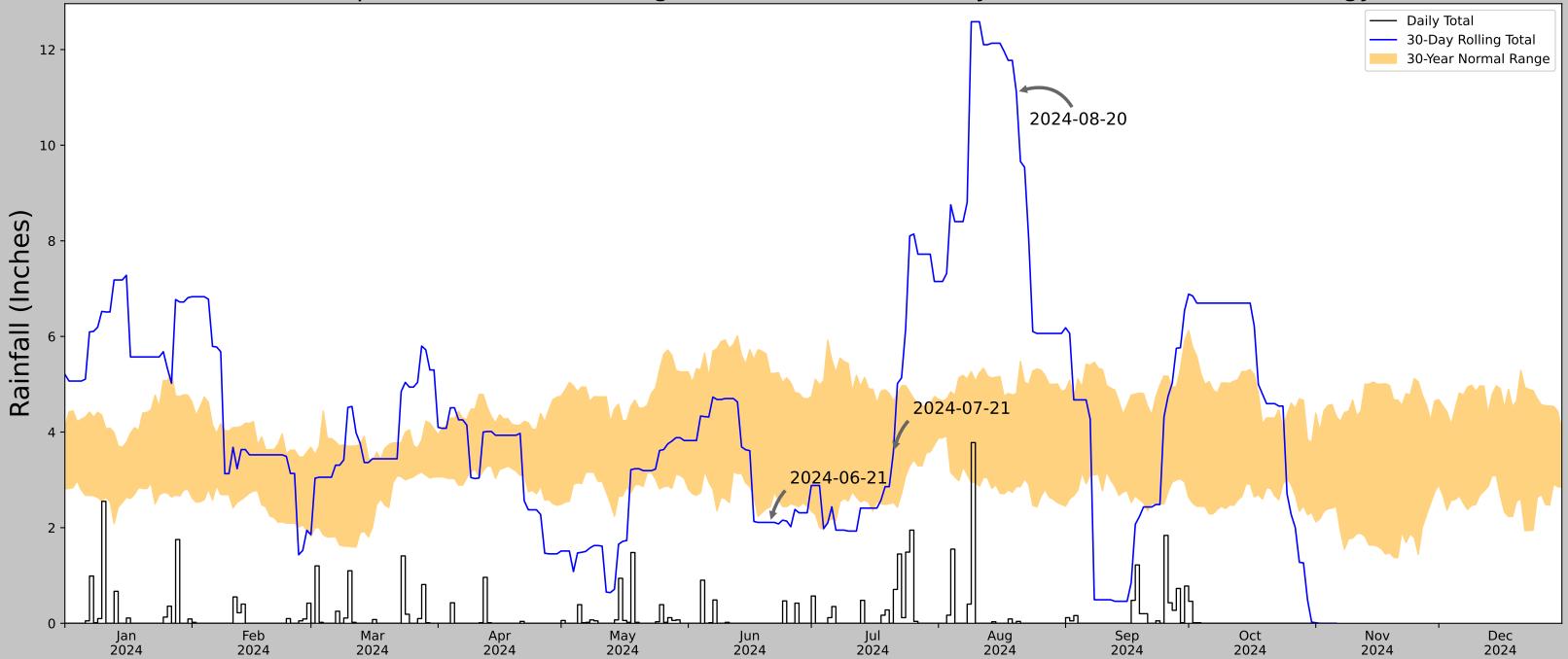
Coordinates	36.666523, -79.507490
Observation Date	2024-08-19
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-19	2.738976	4.776772	11.775591	Wet	3	3	9
2024-07-20	2.499606	4.808662	2.858268	Normal	2	2	4
2024-06-20	2.397244	5.633071	2.110236	Dry	1	1	1
Result							Normal Conditions - 14



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	85
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	2
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



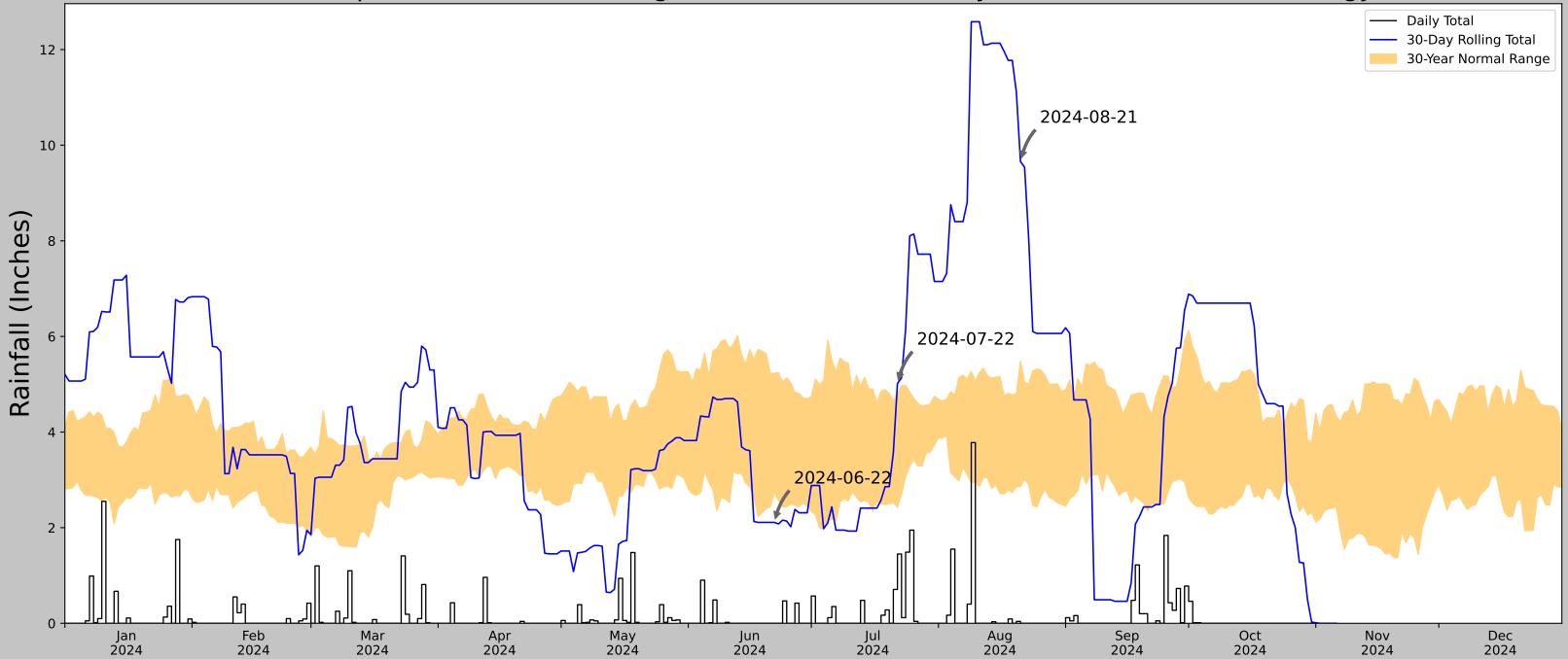
Coordinates	36.666523, -79.507490
Observation Date	2024-08-20
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-20	2.856299	4.803543	11.1063	Wet	3	3	9
2024-07-21	2.527165	4.655906	3.566929	Normal	2	2	4
2024-06-21	2.436614	5.228347	2.110236	Dry	1	1	1
Result							Normal Conditions - 14



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	85
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	2
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



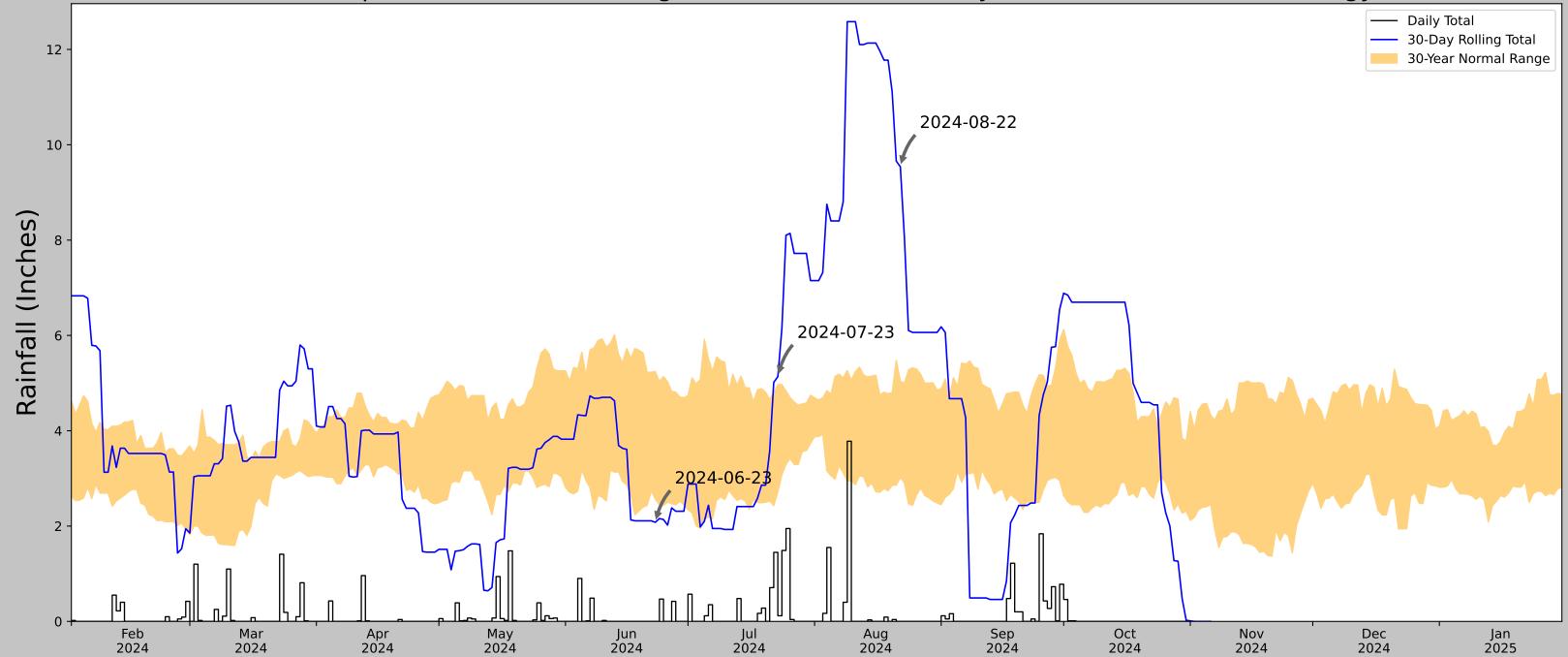
Coordinates	36.666523, -79.507490
Observation Date	2024-08-21
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-21	2.856299	5.479134	9.657481	Wet	3	3	9
2024-07-22	2.427953	4.800394	5.015748	Wet	3	2	6
2024-06-22	2.737402	5.228347	2.110236	Dry	1	1	1
Result	_		_				Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	84
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	3
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



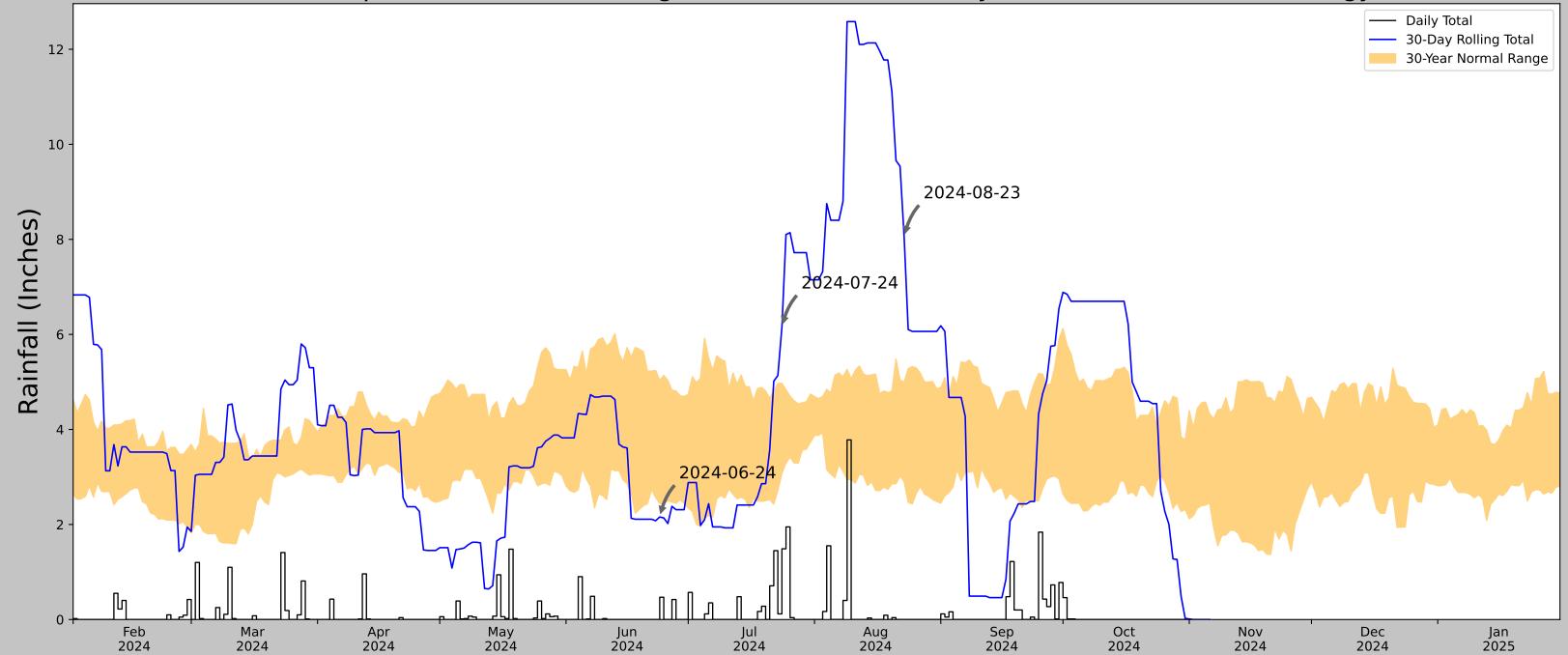
Coordinates	36.666523, -79.507490
Observation Date	2024-08-22
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-22	3.02126	5.040158	9.53937	Wet	3	3	9
2024-07-23	2.713386	4.968504	5.133858	Wet	3	2	6
2024-06-23	2.566142	5.242126	2.07874	Dry	1	1	1
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



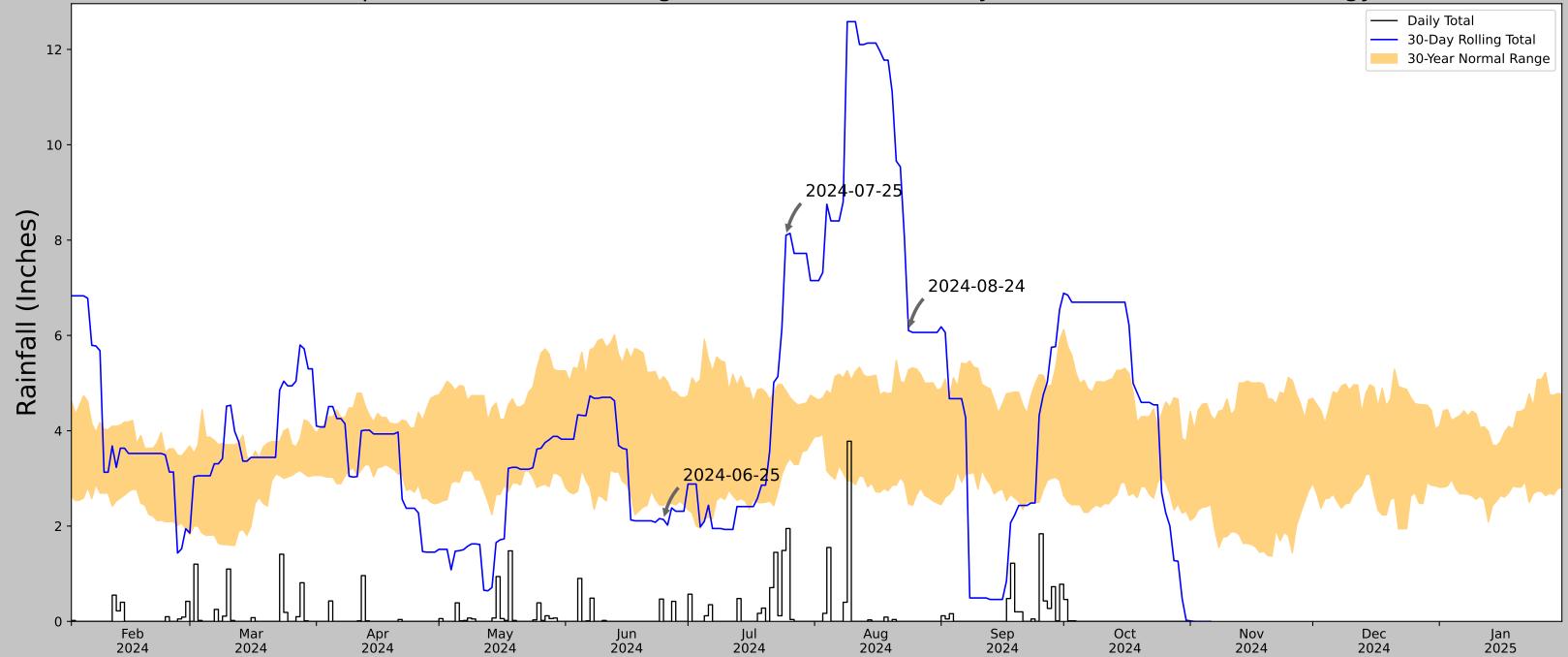
Coordinates	36.666523, -79.507490
Observation Date	2024-08-23
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-23	2.903937	4.996063	8.051181	Wet	3	3	9
2024-07-24	3.078347	4.97126	6.153544	Wet	3	2	6
2024-06-24	2.442126	5.033071	2.15748	Dry	1	1	1
Result	_		_				Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



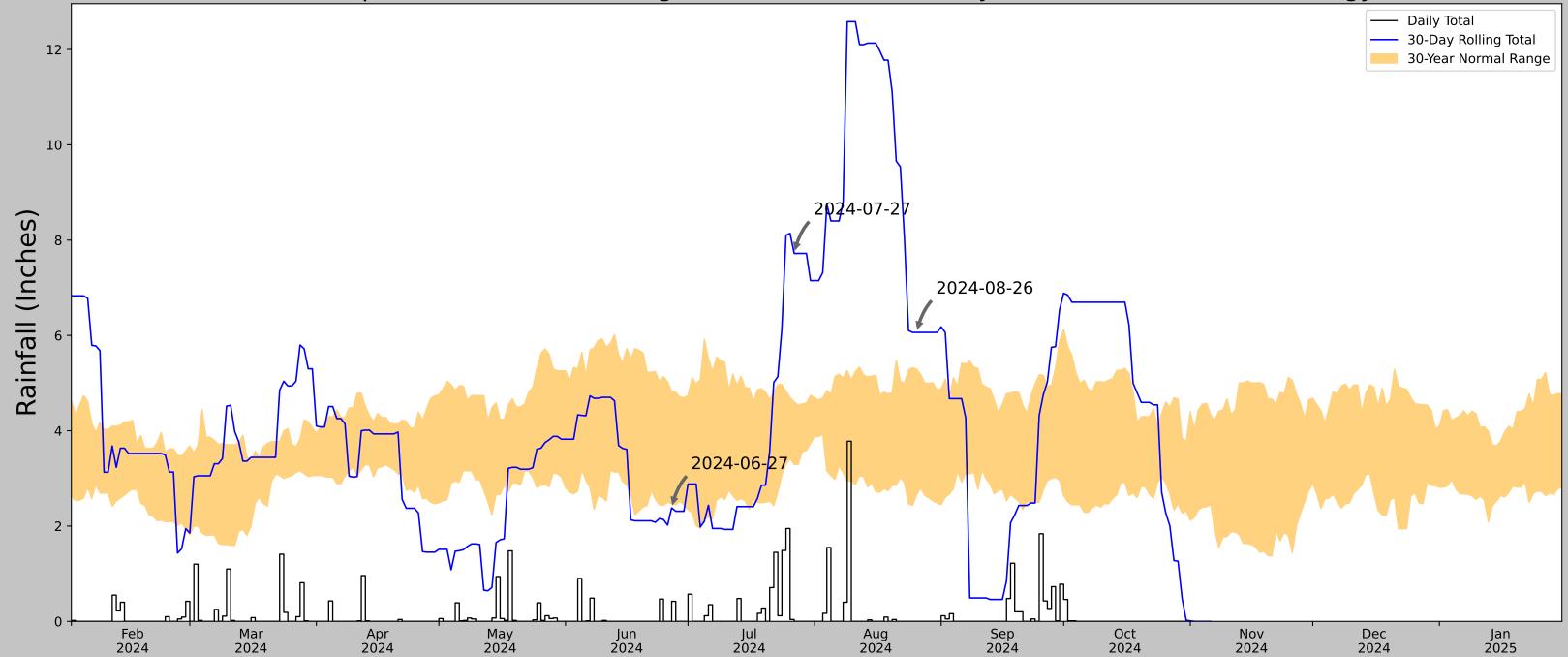
Coordinates	36.666523, -79.507490
Observation Date	2024-08-24
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-24	2.466929	5.277166	6.102362	Wet	3	3	9
2024-07-25	3.293307	4.836221	8.102362	Wet	3	2	6
2024-06-25	2.436614	5.137008	2.137795	Dry	1	1	1
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



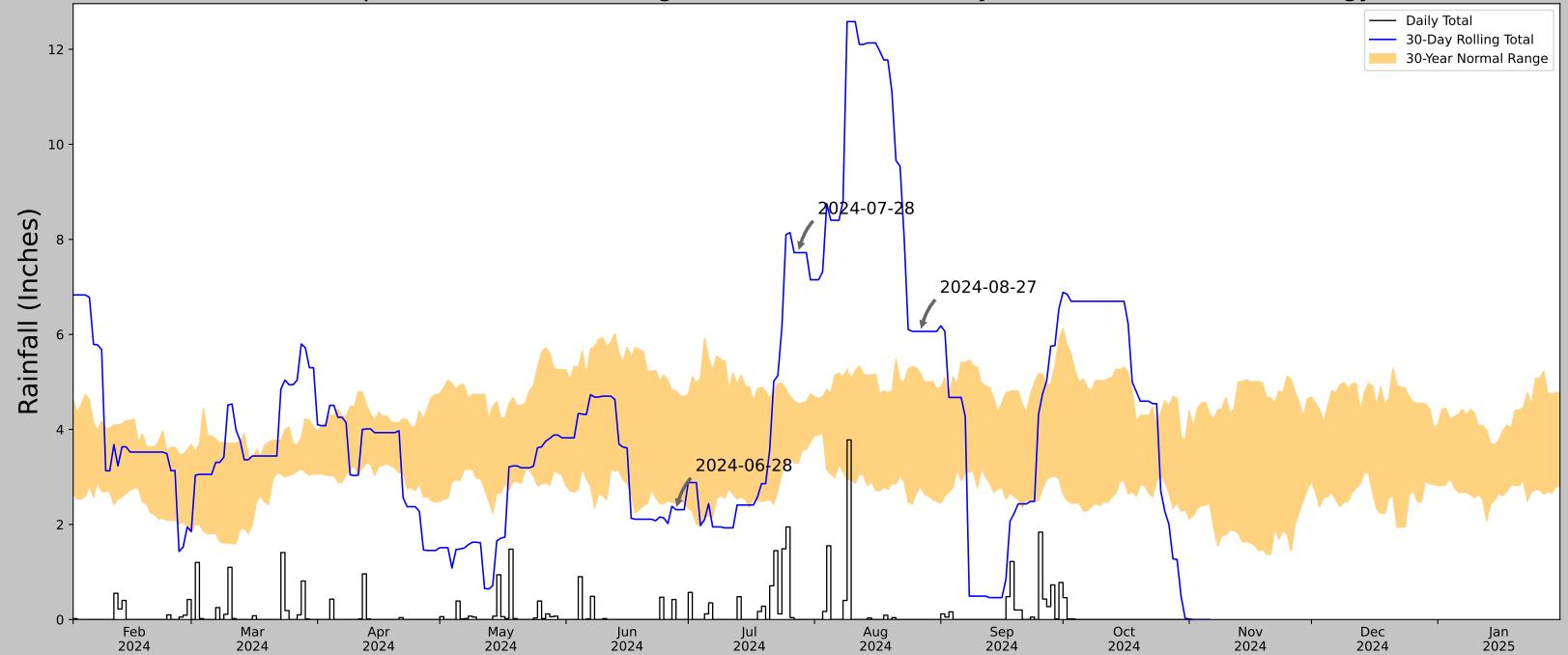
Coordinates	36.666523, -79.507490
Observation Date	2024-08-26
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-26	2.655906	5.294882	6.062992	Wet	3	3	9
2024-07-27	3.293307	4.604331	7.720473	Wet	3	2	6
2024-06-27	2.472441	4.825197	2.38189	Dry	1	1	1
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



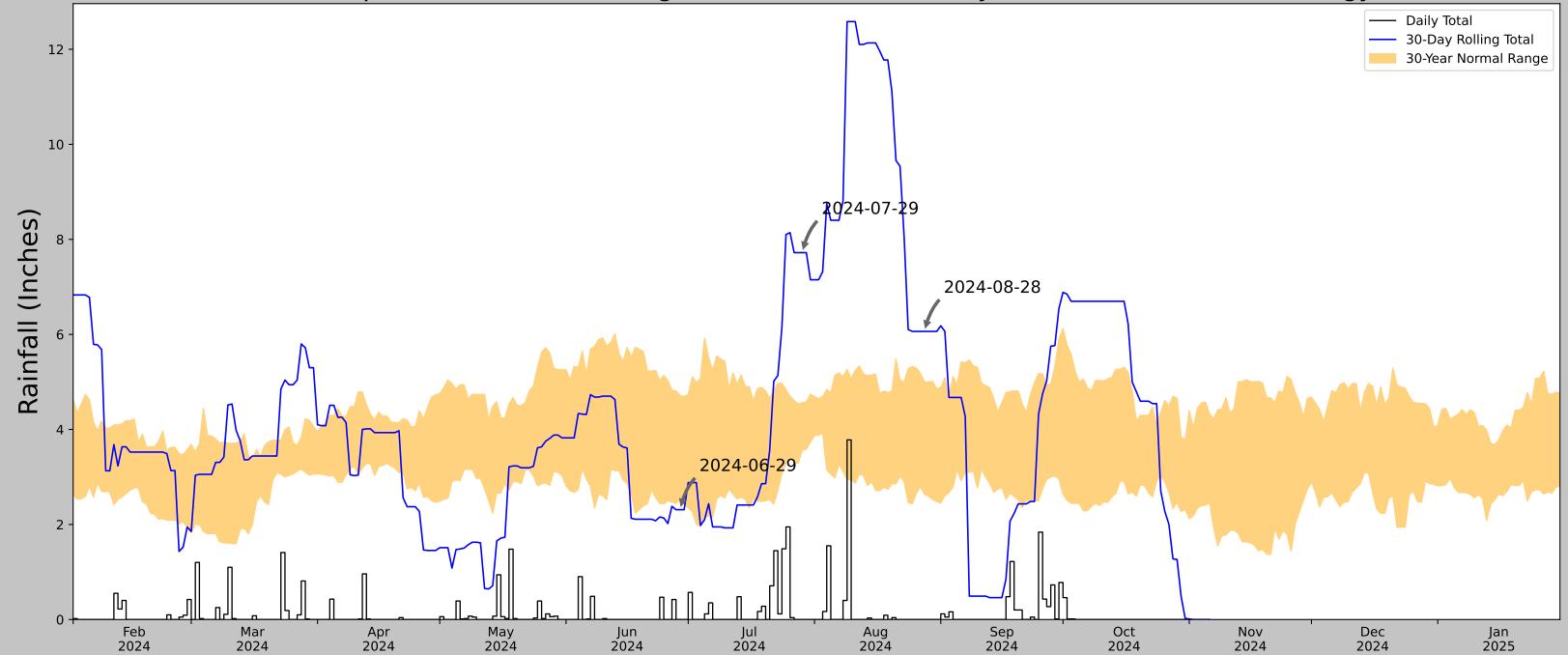
Coordinates	36.666523, -79.507490
Observation Date	2024-08-27
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-27	2.800394	5.181103	6.062992	Wet	3	3	9
2024-07-28	3.293307	4.537402	7.720473	Wet	3	2	6
2024-06-28	2.442913	4.811024	2.311024	Dry	1	1	1
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



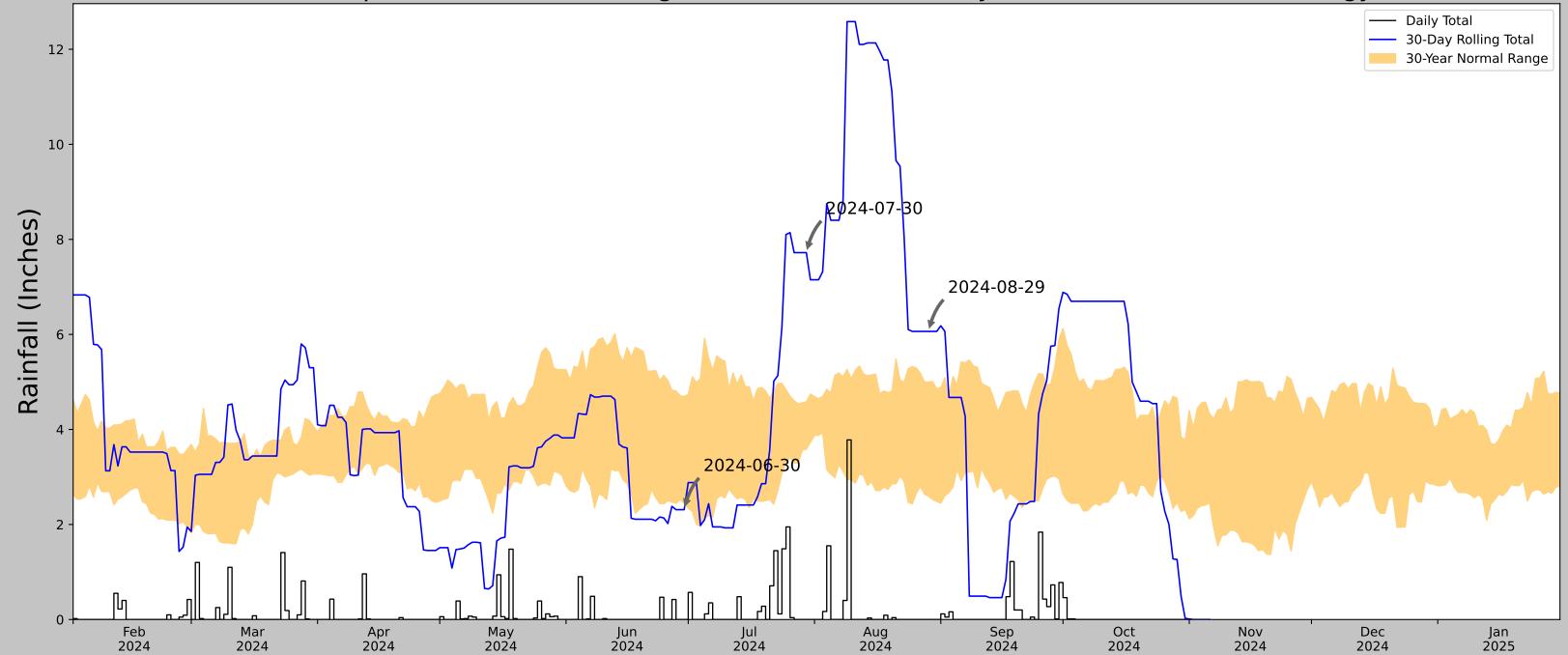
Coordinates	36.666523, -79.507490
Observation Date	2024-08-28
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-28	2.637795	4.999213	6.062992	Wet	3	3	9
2024-07-29	3.562992	4.56063	7.720473	Wet	3	2	6
2024-06-29	2.520866	4.707874	2.311024	Dry	1	1	1
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



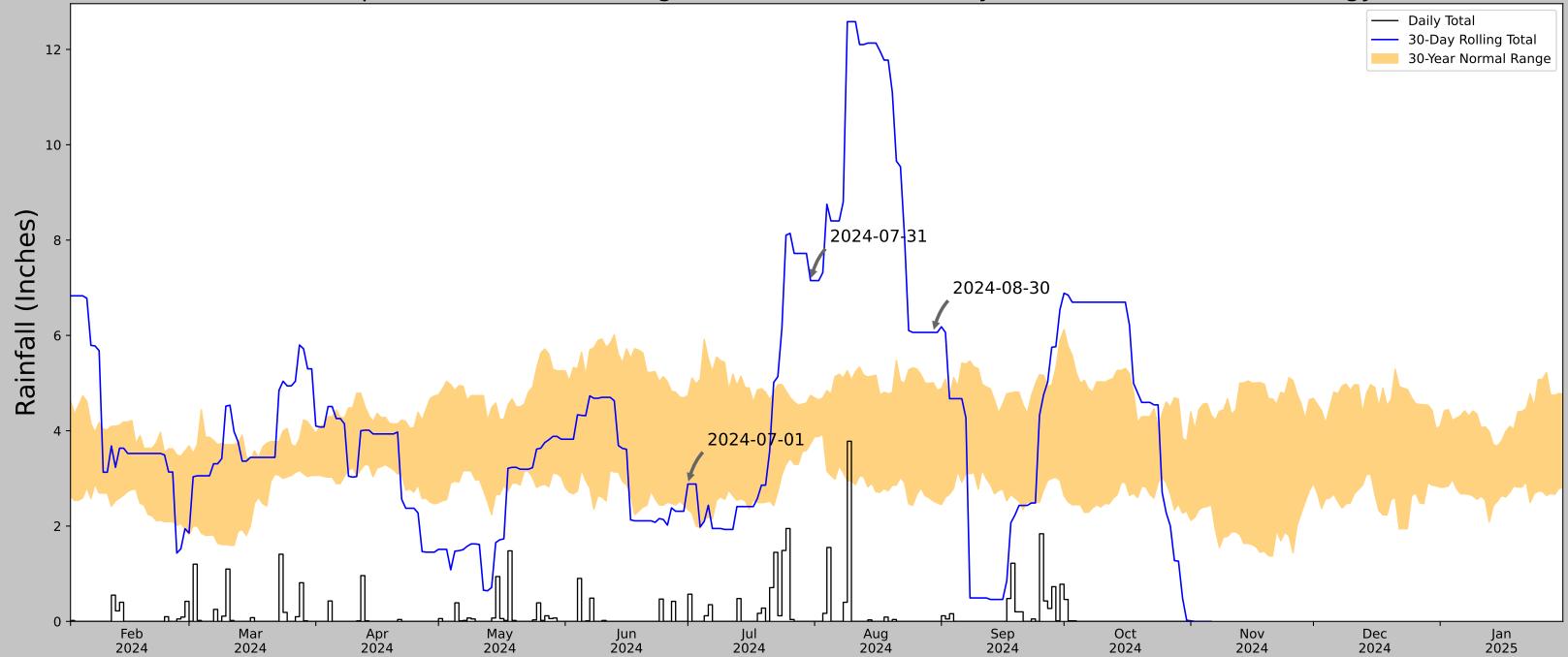
Coordinates	36.666523, -79.507490
Observation Date	2024-08-29
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-29	2.59252	4.999213	6.062992	Wet	3	3	9
2024-07-30	3.585039	4.582284	7.720473	Wet	3	2	6
2024-06-30	2.443701	4.694095	2.311024	Dry	1	1	1
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



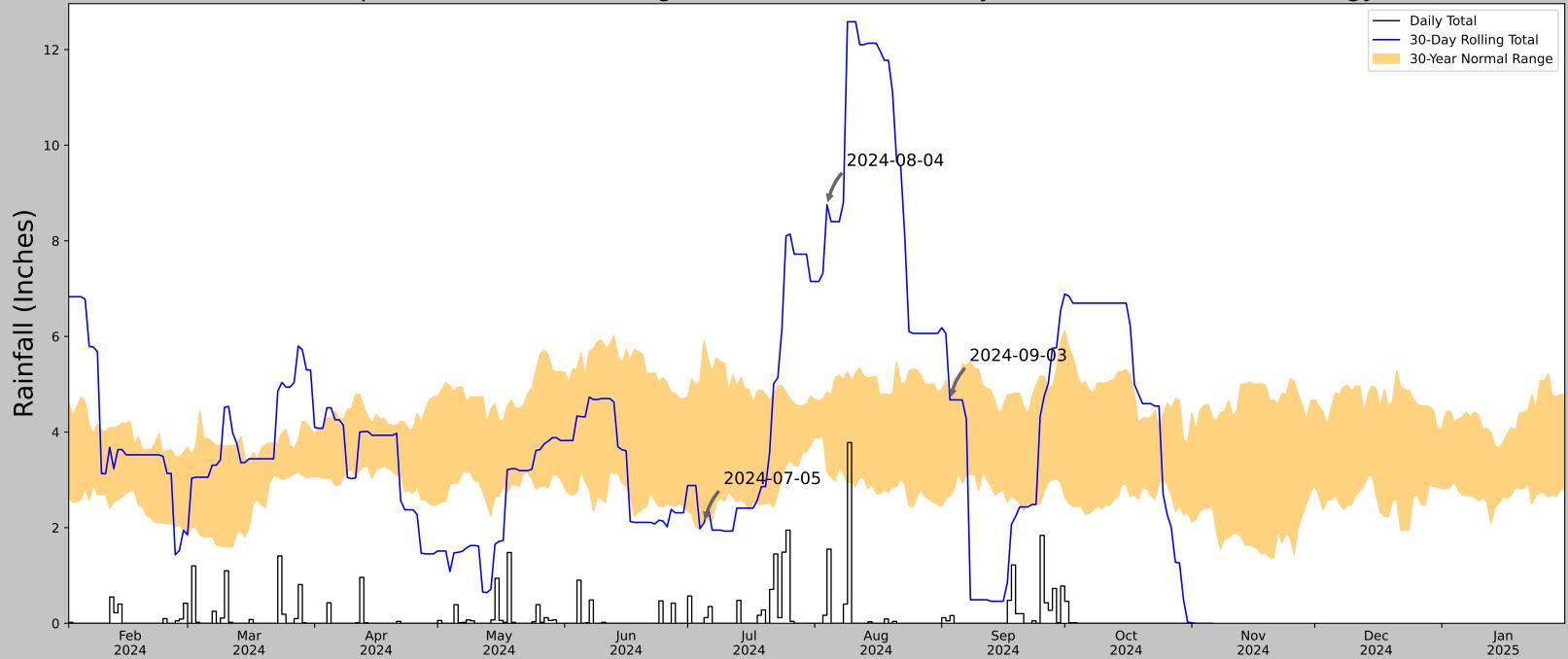
Coordinates	36.666523, -79.507490
Observation Date	2024-08-30
Elevation (ft)	742.562
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-30	2.526378	5.00748	6.062992	Wet	3	3	9
2024-07-31	3.731102	4.744095	7.149607	Wet	3	2	6
2024-07-01	2.344488	4.738583	2.88189	Normal	2	1	2
Result							Wetter than Normal - 17



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



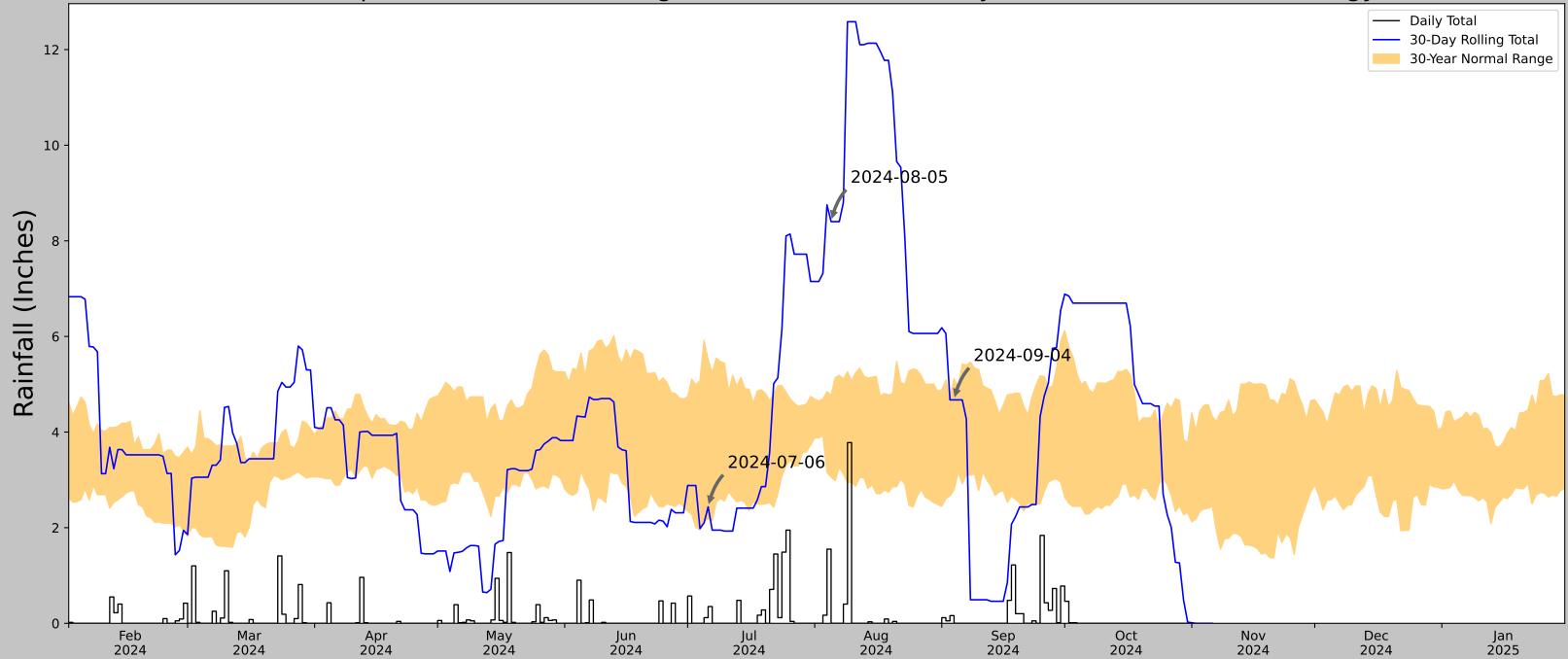
Coordinates	36.666523, -79.507490
Observation Date	2024-09-03
Elevation (ft)	742.562
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-03	2.66811	4.703937	4.673228	Normal	2	3	6
2024-08-04	3.155906	4.844095	8.751969	Wet	3	2	6
2024-07-05	2.137008	5.920473	2.098425	Dry	1	1	1
Result							Normal Conditions - 13



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



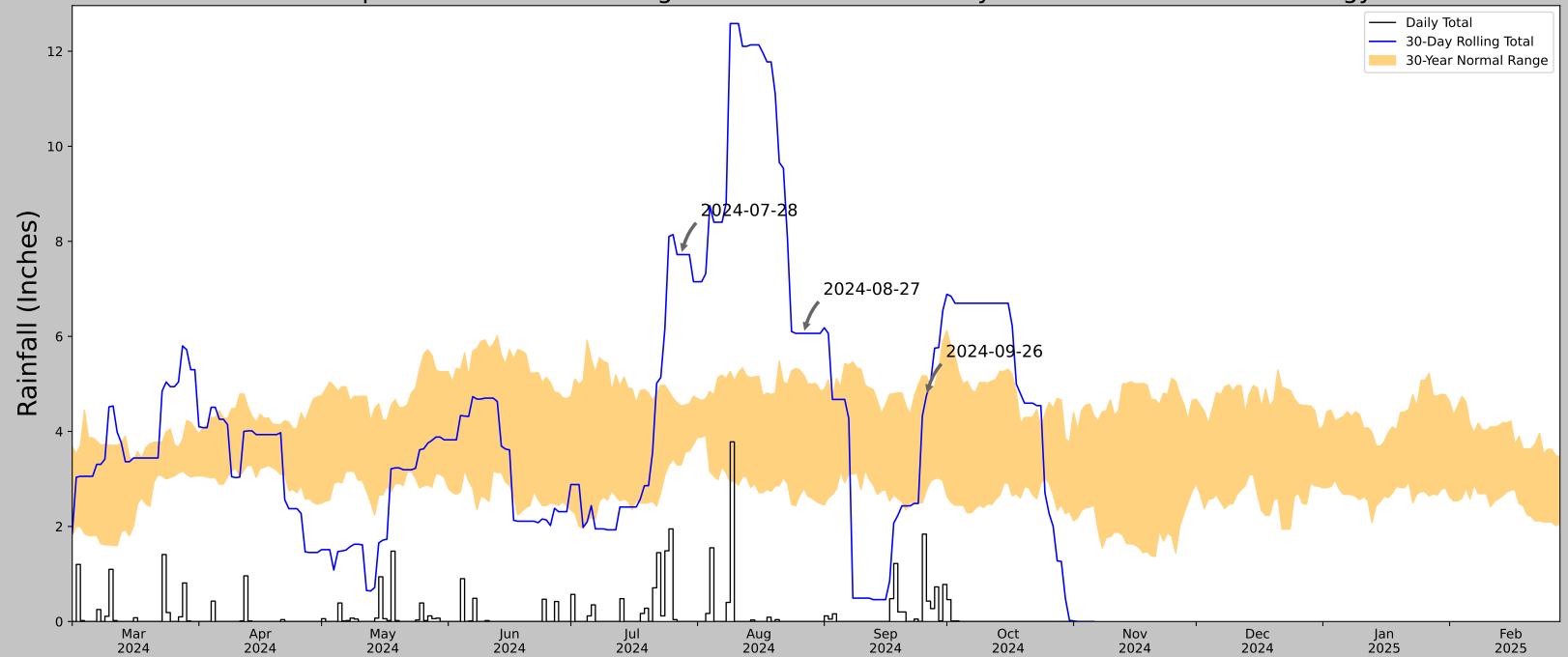
Coordinates	36.666523, -79.507490
Observation Date	2024-09-04
Elevation (ft)	742.562
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Wet Season

20 Davis Ending	20th 0(:1- (:-)	70th 0(:1- (:-)	Observed (in)	Mata and Condition	Canalitian Value	Manth Mainh	Dungdoork
30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-04	2.787008	5.116929	4.673228	Normal	2	3	6
2024-08-05	3.058662	4.771654	8.401575	Wet	3	2	6
2024-07-06	2.185039	5.515355	2.437008	Normal	2	1	2
Result			_				Normal Conditions - 14



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



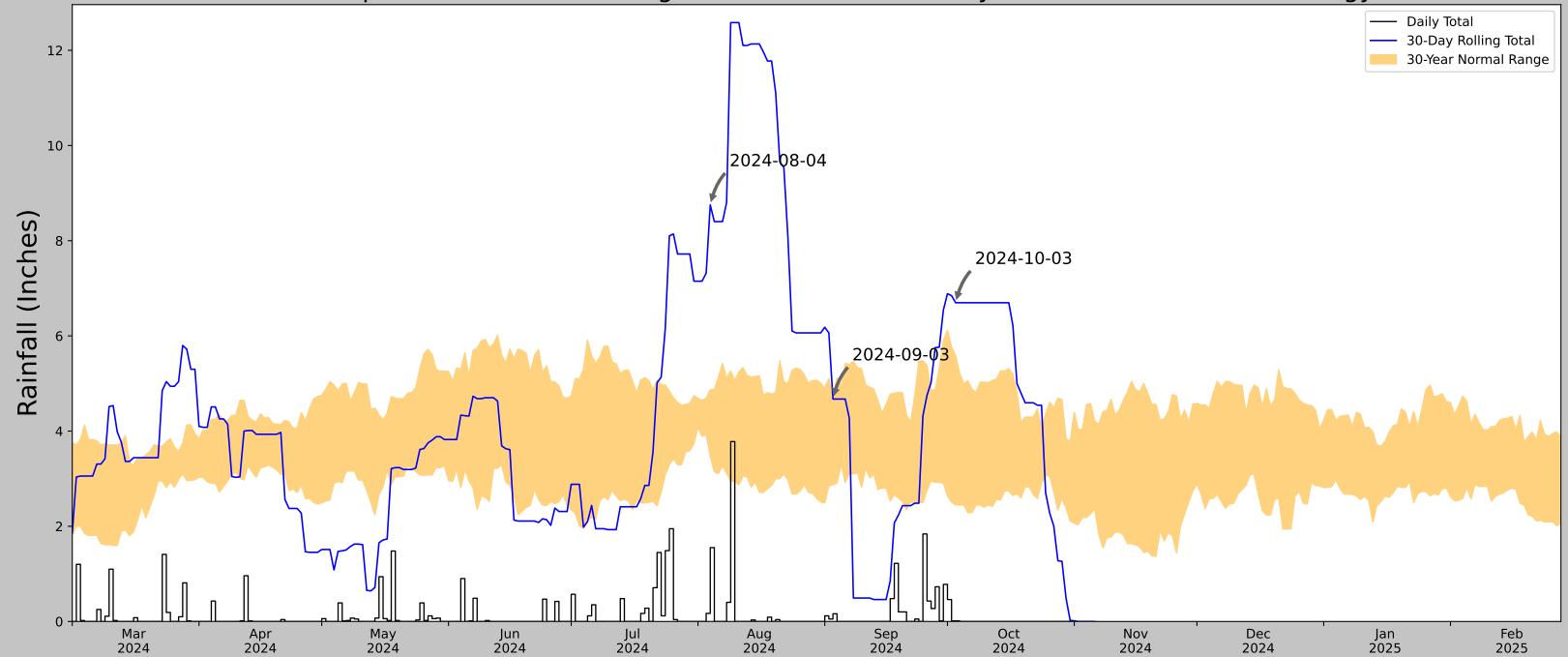
Coordinates	36.666523, -79.507490
Observation Date	2024-09-26
Elevation (ft)	742.562
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-09-26	2.753543	5.166536	4.751969	Normal	2	3	6
2024-08-27	2.800394	5.181103	6.062992	Wet	3	2	6
2024-07-28	3.293307	4.537402	7.720473	Wet	3	1	3
Result							Wetter than Normal - 15



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
CHATHAM	36.8219, -79.4103	646.982	12.009	95.58	6.552	11342	83
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	0	2
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	0	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	0	4
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0



Coordinates	36.666523, -79.507490
Observation Date	2024-10-03
Elevation (ft)	742.562
Drought Index (PDSI)	Mild wetness (2024-09)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-10-03	2.445669	5.585433	6.696851	Wet	3	3	9
2024-09-03	2.872047	4.703937	4.673228	Normal	2	2	4
2024-08-04	3.472047	4.866142	8.751969	Wet	3	1	3
Result							Wetter than Normal - 16



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
СНАТНАМ	36.8219, -79.4103	646.982	12.009	95.58	6.552	11336	86
CHATHAM 4.9 ENE	36.8576, -79.3237	692.913	5.387	45.931	2.672	2	1
CHATHAM 5.9 SW	36.7512, -79.4635	812.992	5.703	166.01	3.513	4	0
DANVILLE 5.5 N	36.6627, -79.4199	670.932	11.013	23.95	5.22	1	1
RINGGOLD 2.6 NNW	36.643, -79.312	676.837	13.506	29.855	6.481	1	0
GRETNA 0.5 WNW	36.9545, -79.3724	910.105	9.398	263.123	6.702	4	2
PITTSVILLE 4.5 NNW	37.0508, -79.4822	683.071	16.306	36.089	7.926	1	0
DANVILLE RGNL AP	36.5728, -79.335	551.837	17.709	95.145	9.654	1	0
DANVILLE 2 SE	36.5628, -79.3633	392.06	18.09	254.922	12.752	3	0