

MVP Southgate Amendment Project

Docket No. CP25-XX-000

Resource Report 2 – Water Use and Quality

November 2018 (Docket No. CP19-14-000)

Amended February 2025



MVP Southgate Amendment Project Resource Report 2 – Water Use and Quality

Resource Report 2 – Filing Requirements	Location in
Information	Resource Report
Minimum Filing Requirements	
 Identify all perennial surface waterbodies crossed by the proposed project and their water quality classification. (§ 380.12(d)(1)) Identify by milepost Indicate if potable water intakes are within 3 miles downstream of the crossing. 	Section 2.3.1, Appendix 2-A
 Identify all waterbody crossings that may have contaminated waters or sediments. (§ 380.12(d)(1)) Identify by milepost Include offshore sediments. 	Section 2.3.1.6
 Identify watershed areas, designated surface water protection areas, and sensitive waterbodies crossed by the proposed project. (§ 380.12(d)(1)) Identify by milepost 	Section 2.3.1.5
4. Provide a table (based on NWI maps if delineations have not been done) identifying all wetlands, by milepost and length, crossed by the proposed project, and the total acreage and acreage of each wetland type that would be affected by construction. (§ 380.12(d)(I&4))	Section 2.4 and Appendix 2-B
5. Discuss construction and restoration methods proposed for crossing wetlands and compare them to staff's Wetland and Waterbody Construction and Mitigation Procedures. (§ 380.12(d)(2))	Section 2.4.3 and 2.4.4
 6. Describe the proposed waterbody construction, impact mitigation, and restoration methods to be used to cross surface waters and compare to the staff's Wetland and Waterbody Construction and Mitigation Procedures. (§ 380.12(d)(2)) Although the Procedures do not apply offshore, the first part of this requirement does apply. Be sure to include effects of sedimentation, etc. This information is needed on a mile-by-mile basis and will require completion of geophysical and other surveys before filing. (See also Resource Report 3.) 	Section 2.3.5
7. Provide original National Wetlands Inventory (NWI) maps or the appropriate state wetland maps, if NWI maps are not available, that show all proposed facilities and include milepost locations for proposed pipeline routes. (§ 380.12(d)(4))	Appendix 2-J
 8. Identify all U.S. Environmental Protection Agency (EPA) - or state-designated aquifers crossed. (§ 380.12(d)(9)) Identify the location of known public and private groundwater supply wells or springs within 150 feet of construction. 	Sections 2.24
Additional Information Often Missing and Resulting in Data Requests	
9. Identify proposed mitigation for impacts on groundwater resources.	Section 2.2.6
10. Discuss the potential for blasting to affect water wells, springs, and wetlands, and associated mitigation.	Section 2.2.6.2



	Resource Report 2 – Filing Requirements				
	Information	Location in Resource Report			
11.	Identify all sources of water required for construction (e.g., hydrostatic testing, dust suppression, horizontal directional drills [HDD]), the quantity of water required, and methods for withdrawal. Identify the treatment of discharge, discharge volumes, rates, and locations, and any waste products generated.	Section 2.3.2, Section 2.3.3, Section 2.3.4			
12.	Identify operating water requirements for proposed liquefied natural gas facilities, including the water use, source(s), and volumes.	Not Applicable (no liquefied natural gas facilities)			
13.	If underground storage of natural gas is proposed, identify how water produced from the storage field will be disposed.	Not Applicable (no underground storage)			
14.	If salt caverns are proposed for storage of natural gas, identify the source locations, the quantity required, the method and rate of water withdrawal, and disposal methods.	Not Applicable (no salt cavern storage)			
15.	Provide a site-specific construction plan for each proposed HDD crossing in accordance with section V.B.6.d of the Federal Energy Regulatory Commission's Wetland and Waterbody Construction and Mitigation Procedures.	Appendix 1-C1 of Resource Report 1			
16.	Provide a site-specific construction plan for crossing each waterbody greater than 100 feet wide. Include a discussion on the feasibility of a trenchless crossing method.	Appendix 1-C1 of Resource Report 1			
17.	Identify mitigation measures to avoid impacts on springs, especially those used for drinking water or livestock.	Section 2.2.6.1			
18.	Identify mitigation measures to ensure that public or private water supplies are returned to their former capacity or replaced in the event of damage resulting from construction.	Section 2.2.6.1			
19.	In addition to identifying perennial surface waterbodies crossed or affected by the project, also identify intermittent and ephemeral waterbodies.	Sections 2.3.1.3 and Appendix 2-A			
20.	Show the locations of wetlands and waterbodies relative to the construction and permanent rights-of-way and additional temporary workspaces on mile-posted alignment sheets or aerial photography.	Appendix 1-A of Resource Report 1			
21.	If wetlands would be filled or permanently lost, describe proposed measures to compensate for permanent wetland losses. Include copies of any compensatory mitigation plans and discuss the status of agency consultations/approvals.	Section 2.4.4			
22.	Describe measures to avoid or minimize impacts on forested wetlands. If impacts are unavoidable, describe proposed measures to restore forested wetlands following construction.	Section 2.4.4			
23.	Describe techniques to be used to minimize turbidity and sedimentation impacts associated with offshore trenching, if applicable.	Not Applicable (no offshore trenching)			



RESOURCE REPORT 2 WATER USE AND QUALITY

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LIST OF ACRONYMS AND ABBREVIATIONS

Amendment Project MVP Southgate Amendment Project
ATWS additional temporary workspace
Catalog Virginia Wetlands Catalog
CFR Code of Federal Regulations

E. coli Escherichia coli

EDR Environmental Data Resources Inc.
E&SC Erosion and Sediment Control

FEIS Final Environmental Impact Statement
FEMA Federal Emergency Management Agency
FERC or Commission Federal Energy Regulatory Commission

HDD horizontal directional drill
HUC hydrologic unit code
MGD million gallons per day

MP milepost

Mountain Valley Mountain Valley Pipeline, LLC

NCDEQ North Carolina Department of Environmental Quality

NCDWQ North Carolina Division of Water Quality
NCDWR North Carolina Division of Water Resources
NCWRC North Carolina Wildlife Resources Commission

NHD National Hydrography Database

NPS National Park Service
NRI National Rivers Inventory
NSF National Sanitation Foundation

NPS National Park Service

Original Certificated Project MVP Southgate Project, as approved on June 18, 2020

PCB polychlorinated biphenyl
PEM palustrine emergent
PFO palustrine forested

Plan Upland Erosion Control, Revegetation, and Maintenance Plan
Procedures Wetland and Waterbody Construction and Mitigation Procedures

PSS palustrine scrub/shrub

PUB palustrine, unconsolidated bottom

SDWA Safe Drinking Water Act

SPCC Spill Prevention, Control and Countermeasure

SWAP Source Water Assessment Program

U.S. United States

USACE U.S. Army Corps of Engineers
USDOT U.S. Department of Transportation
USEPA U.S. Environmental Protection Agency

USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Society



VADEQ Virginia Department of Environmental Quality
VDCR Virginia Department of Conservation and Recreation

VDE Virginia Department of Energy

VDH-ODW Virginia Department of Health – Office of Drinking Water

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RESOURCE REPORT 2 WATER USE AND QUALITY

2.1 INTRODUCTION

On June 18, 2020, in Docket No. CP19-14-000, the Federal Energy Regulatory Commission ("FERC" or "Commission") issued a Certificate of Public Convenience and Necessity pursuant to Section 7(c) of the Natural Gas Act to Mountain Valley Pipeline, LLC ("Mountain Valley") authorizing Mountain Valley to construct and operate the MVP Southgate Project (or "Original Certificated Project"). A Final Environmental Impact Statement ("FEIS") was issued by FERC on February 14, 2020.

In December 2023, Mountain Valley submitted an update on the status of the Original Certificated Project, indicating that it had entered into precedent agreements for a redesigned pipeline route. Mountain Valley is currently seeking to amend the MVP Southgate Project ("Amendment Project") by truncating the Original Certificated Project to approximately 31.3 miles, incorporating certain route deviations, increasing the diameter of the pipeline, removing the Lambert Compressor Station, and modifying the proposed interconnects. The Amendment Project facilities will be located in Pittsylvania County, Virginia, and Rockingham County, North Carolina. See Resource Report 1 for additional information on the Original Certificated Project and Amendment Project.

2.1.1 Environmental Resource Report Organization

Resource Report 2 includes descriptions and supporting information regarding groundwater resources, surface water resources, and wetlands in the Amendment Project area and the potential impacts of construction and operation of the Amendment Project. This report is prepared and organized according to the FERC (2017) *Guidance Manual for Environmental Report Preparation*. The information presented in Resource Report 2 has not changed from the FEIS issued for the Original Certificated Project on February 14, 2020, except where noted.

2.2 GROUNDWATER RESOURCES

2.2.1 Aquifers – Geology, Hydrology, Quality, and Uses

The major aquifer systems and dominant lithology encountered by the Amendment Project have not changed from those described in the FEIS between milepost ("MP") 0.0 to 31.3 (U.S. Environmental Protection Agency's ["USEPA"] 2015).

2.2.2 Major Aquifers - Geology and Hydrology

Characteristics of major aquifers crossed by the Amendment Project have not changed from those described in the FEIS.

2.2.3 Water Quality

The Amendment Project proposes a 100-foot-wide construction right-of-way, with a pipeline trench to be excavated to a depth of about 6 to 10 feet in most locations. At wetland and waterbody crossings, however, Mountain Valley has generally reduced the Amendment Project's construction right-of-way width to



75 feet. Like the Original Certificated Project described in the FEIS, the Amendment Project is not anticipated to have any impacts to groundwater resources or require additional mitigation measures to address these areas due to the surficial nature of the disturbance, the relatively short-term nature of the disturbance, and the depths of the aquifers which are typically much deeper than any proposed disturbance from the pipeline.

2.2.3.1 Water Use

The FEIS presented water use information per the United States ("U.S.") Geological Society ("USGS") 2015 Estimated Water Use in the United States Report, which is the most current federal dataset available (USGS 2015a). The uses of groundwater have not changed from the FEIS.

In 2015, total groundwater withdrawals in Virginia were 284 million gallons per day ("MGD") (USGS 2015b). State data suggest this number has decreased in recent years, with total reported groundwater withdrawals of 133 MGD in 2023. Approximately 60 MGD of that total came from public water supply withdrawals (Virginia Department of Environmental Quality ["VADEQ"] 2024a). Although in 2015, Pittsylvania County's groundwater withdrawals were 3.89 MGD (USGS 2015b), those numbers have likely decreased with the overall decrease in groundwater withdrawals in the state. In 2015, total groundwater withdrawals in North Carolina were 520 MGD, only 3.29 MGD of which was from Rockingham County (USGS 2015c). More current data were not available for North Carolina.

Approximately 125 million gallons of groundwater per day were withdrawn to supply the 19 percent of all Virginians who rely on self-supplied groundwater (private wells) for domestic supplies. Approximately 169 million gallons of groundwater per day were withdrawn to supply 35 percent of all North Carolinians who rely on self-supplied groundwater for domestic supplies (USGS 2015a, 2015b, 2015c). More than 50 percent of North Carolina's population receives its drinking water supplies from groundwater, including 25 percent of all drinking water from public water supplies (North Carolina Division of Water Resources ["NCDWR"] 2023; North Carolina Ground Water Association 2020).

2.2.3.2 Groundwater in Karst Terrain

Like the Original Certificated Project described in the FEIS, there is negligible potential for karst hazards to be present within 0.25 mile of the Amendment Project (see Resource Report 6).

2.2.4 Sole-Source Aquifers

Like the Original Certificated Project described in the FEIS, the Amendment Project would not cross any sole source aquifers or principal source aquifers (USGS 2000).

2.2.5 Water Supply Resources

2.2.5.1 Public Water Supply Wells and Springs

Information on public wells and springs located within one mile of the Amendment Project alignment was reviewed on the USEPA's Drinking Water Mapping Application to Protect Source Waters (USEPA 2024) and the USGS National Water Information System mapper (USGS 2024a), and the digital location information for public supplies was obtained from the VADEQ, Virginia Department of Energy ("VDE"), and the North Carolina Department of Environmental Quality ("NCDEQ").



Based on these data, no public water supply wells or springs are located within 150 feet of the Amendment Project construction work area (NCDEQ 2023; VADEQ 2023, 2024b; VDE 2024).

2.2.5.2 Private Water Resources (Wells)

Recent information on private wells and springs was obtained from the USGS National Water Information System, VDE, and NCDEQ. Agency data indicate no private water wells or springs are located within 150 feet of the Amendment Project construction areas (NCDEQ 2024b; USGS 2024a; VDE 2024). However, information obtained from 97 percent of the landowners during easement negotiations identified a total of 17 private water wells within 150 feet of the Amendment Project construction workspaces (Table 2.2-1).

The implementation of the mitigation measures described in the FEIS and the FERC (2013a; 2013b) *Upland Erosion Control, Revegetation, and Maintenance Plan* ("Plan") and *Wetland and Waterbody Construction and Mitigation Procedures* ("Procedures") will be utilized to minimize potential impacts as a result of the Amendment Project. Mountain Valley will also implement its project-specific Water Resources Identification and Testing Plan, which has been revised for the Amendment Project (Resource Report 1, Appendix 1-G).

Table 2.2-1							
Private We	Private Wells and Springs within 150 feet of the Amendment Project Construction Workspace a/						
State, County MP	Line List Number	Status (active, inactive, plugged, etc.)	Use (irrigation, monitoring, domestic, etc.)	Distance from Construction Workspace (feet) <u>b</u> /			
Pittsylvania, VA				<u> </u>			
4.58	VA-PI-030.000	Active	Domestic	0			
6.46	VA-PI-036.000	Active	Ground Water Testing	0			
6.47	VA-PI-036.000	Active	Ground Water Testing	0			
6.47	VA-PI-036.000	Active	Ground Water Testing	0			
6.49	VA-PI-036.000	Active	Ground Water Testing	5			
6.5	VA-PI-036.000	Active	Ground Water Testing	0			
6.53	VA-PI-036.000	Active	Ground Water Testing	0			
6.61	VA-PI-037.000	Active	Ground Water Testing	22			
6.61	VA-PI-037.000	Active	Ground Water Testing	127			
6.76	VA-PI-037.000	Active	Ground Water Testing	0			
6.6	VA-PI-037.000	Active	Ground Water Testing	0			
6.76	VA-PI-037.000	Active	Ground Water Testing	86			
6.6	VA-PI-037.000	Active	Ground Water Testing	0			
6.76	VA-PI-037.000	Active	Ground Water Testing	96			
15.25	Pittsylvania, VA	TBD	TBD	113			
19.99	VA-PI-140.000	Active	Domestic	12			
22.26	VA-PI-167.000	Active	Domestic	99			

<u>a/</u> No springs have been identified within 150 feet of the Amendment Project or the construction workspace as of February 2025.

TBD = to be determined.

b/ Wells with a distance of 0 feet from Amendment Project Construction Workspaces are located within the current construction workspace.

Note: Mountain Valley has obtained 97 percent of its easements along the Amendment Project route. The status, use, and location of these wells will be confirmed prior to construction. No wells have been identified within 150 feet of the construction workspace in North Carolina.



2.2.5.3 Springs and Swallets

The Amendment Project was reviewed for potential springs; however, available agency data generally have poor coverage and/or do not provide the exact location of springs. Based on the "Virginia Springs Database," one spring is recorded within Pittsylvania County, approximately 18 miles north of the Amendment Project workspace (VADEQ 2023). There are no published data on springs in North Carolina.

Mountain Valley augmented published data on wells and springs with information obtained from landowners during easement negotiations for the majority of the route (Table 2.2-1). No springs have been identified within the construction workspace. Data collected on the Original Certificated Route did not identify springs or swallets within 150 feet of the construction workspaces.

2.2.5.4 Wellhead or Source Water Protection Areas

Like the Original Certificated Project described in the FEIS, the Amendment Project will not cross source water protection areas.

Under the 1986 amendment to the Safe Drinking Water Act ("SDWA"), each state is required to develop and implement a wellhead protection program as defined in the FEIS. The SDWA was again amended in 1996 to require the development of a broader-based Source Water Assessment Program ("SWAP"), which includes the assessment of potential contamination to both groundwater and surface water through a watershed approach.

In 1999, the Virginia Department of Health – Office of Drinking Water ("VDH-ODW") developed a SWAP, and by 2003, all existing drinking water sources were assessed. The objective of the SWAP was to facilitate and promote the implementation of source water protection measures for both groundwater and surface water sources. To achieve this, VDH-ODW delineated a generalized assessment area for each drinking water source and inventoried potential sources of contamination. Through previous consultation with VDH-ODW, it was explained that assessment areas are not designated protection areas. The assessment area information is provided to local municipalities and used to make a susceptibility determination of the drinking water source in relation to the potential source of contaminants found in the assessment area (VDH-ODW 2024). The program is voluntary at the local level, and there are no requirements for reporting; therefore, an accurate database for the program does not exist, and publicly available information on established wellhead protection areas is not available (VADEQ 2024b; VDH-ODW 2024). However, the FEIS identified no wellhead protection areas in the Amendment Project area.

According to the North Carolina SWAP (North Carolina Department of Environment and Natural Resources 1999), wellhead protection can be broadly defined as a program that reduces the threat to the quality of groundwater used for drinking water by identifying and managing recharge areas to specific wells or wellfields. A wellhead protection area is defined as "the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are likely to move toward and reach such water well or wellfield." There are no NCDEQ Public Water Supply-designated wellhead protection areas in the Amendment Project area (NCDEQ 2023).

2.2.5.5 Potential Contaminated Groundwater

The Amendment Project's potential to encounter contaminated sediments or impaired waters has not changed from that described in the FEIS for the Original Certificated Project. USEPA-documented sites



with potentially contaminated groundwater within 0.5 mile of the Amendment Project are listed in Table 2.2-2.

As outlined in Resource Report 8, a recent database report was obtained from Environmental Data Resources, Inc ("EDR") to identify potential and actual sources of contamination to nearby groundwater resources along the Amendment Project route. Information provided by EDR includes a compilation of available federal, state, and local government databases with information regarding locations of current and historic contamination. Additional sites identified from the EDR review within 0.25 mile of the Amendment Project are provided in Appendix 2-D.

	Table 2.2-2					
	Documented Potential Contaminated Groundwater Sites within 0.5-mile of the Construction Right-of-Way					
MP Facility Direction in Distance from Construction right-Route of-way (feet) of-way (miles						
0.0	Mountain Valley Pipeline LLC South Electric Tap (Construction NPDES)	North-northeast	324	0.1		
6.6 Pittsylvania Co – Sanitary Landfill		Northwest	971	0.18		
27.7	27.7 Sam W Smith Incorporated North-northwest 1,345 0.25					
Source:	USEPA 2024					

Mountain Valley does not anticipate any potential concerns associated with hazardous materials during its construction and operation. If any hazardous materials are encountered during pipeline construction, Mountain Valley will implement measures as described in the FEIS.

2.2.6 Construction Impacts and Mitigation

Construction, operation, and maintenance of the Amendment Project are not anticipated to have significant or long-term impacts on groundwater resources, as concluded in the FEIS. Construction impacts from the Amendment Project are anticipated to be the same as those described in the FEIS. Impacts will be minimized or avoided by the implementation of the construction practices outlined in the FEIS and the FERC Plan and Procedures. Additionally, Mountain Valley will develop and implement a project-specific Erosion and Sediment Control ("E&SC") plan in accordance with applicable state requirements to limit overland flow and sediment runoff.

2.2.6.1 Aquifers and Groundwater Sources

Construction, operation, and maintenance of the Amendment Project are not anticipated to have impacts on aquifers and groundwater resources. Construction impacts from the Amendment Project are anticipated to be the same as those described in the FEIS.

Trench and Bore Pit Dewatering

Groundwater depth varies based on a number of factors, including site elevation and setting, weather, seasonality, and surficial geology. Accordingly, the depth to groundwater varies along the Amendment Project route based on these conditions. Shallow groundwater along the Amendment Project alignment would generally coincide with wetland areas (see Section 2.4) and locations near springs (see Section 2.2.5.3). The excavated trench for pipeline installation would be most likely to intercept shallow



groundwater in these locations. Like the Original Certificated Project described in the FEIS, it is not anticipated that groundwater will be encountered during trench excavation in most upland portions of the route. However, the trench will intersect the water table in some wetland and floodplain areas that are crossed; temporary trench dewatering is anticipated to be required in such areas. Dewatering methods, if necessary, and potential impacts of construction activities have not changed from the FEIS.

Private Wells and Springs

Private wells were identified within 150 feet of the construction work area (see Section 2.2.5.2). No springs were identified within 150 feet of the construction work area. Mountain Valley will implement mitigation measures described in the FEIS, the FERC Plan and Procedures, and the revised project-specific Water Resources Identification and Testing Plan (Resource Report 1, Appendix 1-G) to minimize potential impacts as a result of the Amendment Project.

Karst Areas

Mountain Valley evaluated karst topography areas and determined that, like the Original Certificated Project, there is negligible potential for karst hazards to be present within 0.25 mile of the Amendment Project pipeline. Construction E&SC measures will be strictly followed to limit the overland flow of water and sediment toward or into a stream, spring, or wellhead. Where blasting is required to advance pipeline construction, additional monitoring and safeguards for structures and water supplies will be specified in the General Blasting Plan (Resource Report 1, Appendix 1-G).

Public Water Supplies and Source Water Protection

There are no public water supplies or wellhead protection areas within the Amendment Project area.

2.2.6.2 Blasting Impacts on Water Supply Wells and Mitigation Measures

Although mechanical methods of removing bedrock are preferred, blasting will be conducted to excavate the pipeline trench in areas of shallow bedrock. Potential blasting impacts have not changed from the FEIS. Mountain Valley will implement the measures described in the FEIS to avoid, minimize, and mitigate potential impacts to water supply wells from blasting.

2.2.6.3 Contaminated Groundwater Impacts and Mitigation Measures

Although the probability of encountering contaminated groundwater resources during construction is expected to be low, should existing contaminated groundwater be encountered, it could pose health and safety concerns to construction workers and potentially elevate overall environmental risk through increased exposure. The Amendment Project's Environmental Inspectors will be trained to detect direct and indirect evidence of soil and/or groundwater contamination. If contaminated soil or groundwater is encountered during construction, Mountain Valley will follow the procedures described in the FEIS.

Mountain Valley will operate and maintain the pipeline and aboveground facilities in compliance with U.S. Department of Transportation ("USDOT") regulations provided at 49 Code of Federal Regulations ("CFR") Part 192, FERC regulations at 18 CFR Part 380.15, and maintenance provisions of the FERC Plan and Procedures. The permanent easement will predominantly be maintained with mechanized clearing equipment. Herbicide treatment will only be used to control invasive species present within upland areas in the permanent easement, as necessary.



2.3 SURFACE WATER RESOURCES

Surface water resources identified in the vicinity of the Amendment Project include rivers, streams, associated tributaries, ponds, lakes, and catchment basins. This section describes the surface water resources crossed by the Amendment Project and the proposed measures to mitigate potential adverse effects on those resources. To determine the surface water resources crossed by the Amendment Project, Mountain Valley relied on field-delineated data, watershed data from USGS, the National Hydrography Database ("NHD"), and the 303(d)/305(b) reports submitted by the states to the USEPA (NCDEQ 2022; USGS 2024b, 2024c; VDEQ 2022). Field delineations were conducted in 2024 within a 100- to 300-footwide survey corridor associated with the pipeline, access roads, additional temporary workspace ("ATWS"), contractor yards, and aboveground facility sites where land access was granted. Mountain Valley has completed field delineation of waterbodies along approximately 98 percent of the pipeline alignment where survey access was available.

2.3.1 Waterbody Crossings

2.3.1.1 Surface Water Basins

Like the Original Certificated Project, the Amendment Project is located within the USGS-designated 03-South Atlantic-Gulf Region (USGS 2024c). In Virginia, the Amendment Project will cross the Roanoke River Basin, three sub basins, and three watersheds (VADEQ 2024b). In North Carolina, the Amendment Project will also cross the Roanoke River Basin, one sub basin, and one watershed (NCDEQ 2024a). Table 2.3-1 identifies these major regions and their respective sub-basins by 8-digit hydrologic unit code ("HUC") and watershed by 10-digit HUC. Watersheds are shown on Figure 2-C-2 in Appendix 2-C.

Table 2.3-1							
Wate	Watersheds Crossed by the Pipeline of the Amendment Project						
Major Region	Major Region County, State Sub-basin Watershed						
(2-digit HUC)		(8-digit HUC)	(10-digit HUC)				
03 – South Atlantic-Gulf Region	Pittsylvania, VA	Banister River (03010105)	Cherrystone Creek-Banister River (0301010501)				
	Pittsylvania, VA	Upper Dan (03010103)	Sandy River-Dan River (0301010310)				
	Pittsylvania, VA Rockingham, NC	Upper Dan (03010103)	Cascade Creek-Dan River (0301010309)				
Source: VADEQ 2024b and N	NCDEQ 2024b						

2.3.1.2 Flood Zones

Mountain Valley has reviewed Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Mapping for areas crossed by the Amendment Project and recorded the location of 100-year flood zones (FEMA 2024). The 100-year flood zones crossed by the Amendment Project are listed in Table 2.3-2 and shown on Figure 2-C-3 in Appendix 2-C.



Table 2.3-2							
	FEMA 100-year Flood Zones Crossed by the Amendment Project						
State, County	Flood Zone a/	Entry MP	Exit MP	Length Crossed (feet)			
H-650 Pipeline							
Pittsylvania, VA	A	0.6	0.7	556			
	AE	5.16	5.55	2155			
	Α	8.85	8.89	266			
	Α	10.22	10.28	357			
	AE	13.75	13.81	342			
	Α	16.09	16.11	172			
	Α	23.64	23.64	65			
Rockingham, NC	AE	27.75	28.46	3762			
	AE	28.47	28.47	56			
	AE	28.58	28.72	770			
	AE	29.03	29.06	201			
	AE	30.26	30.27	22			

<u>a/</u> Flood Zone A – Areas subject to inundation by the 1-percent annual chance flood event determined using approximate methodologies. Flood Zone AE – Areas subject to inundation by the 1-percent annual chance flood event determined by detailed methods.

There are two interconnects located within the FEMA 100-year flood zone in North Carolina, which will displace a total of approximately 1.2 acres of floodplain. The permanent impacts within the 100-year flood zone are provided in Table 2.3-3.

Table 2.3-3				
Permanent Impacts within the 100-year Flood Zone				
Facility Impact (acre)				
Dan River Interconnect #1 / MLV 4	0.68			
Dan River Interconnect #2	0.47			
Amendment Project Total 1.15				

Temporary access roads located within floodplains may have a temporary effect on flood storage but will be restored after construction unless requested to be maintained by the landowner or agency.

2.3.1.3 Pipeline Crossings

Mountain Valley 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"), NCDEQ, and/or VADEQ 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 (Environmental Laboratory 1987) and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region – Version 2.0 (USACE 2012). In North Carolina, waterbodies were examined in accordance with the North Carolina Division of Water Quality's ("NCDWQ") Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Version 4.11, and as outlined in the



Virginia Department of Conservation and Recreation ("VDCR") *Methodology for Identifying Perennial Streams* (NCDWQ 2010; VDCR 2020).

As of October 2024, Mountain Valley has completed field delineations of wetlands and waterbodies along approximately 98 percent of the pipeline alignment where survey access was available. To date, surveys have not been completed at one parcel (VA-PI-005.000 between MPs 1.0 and 1.15 in Pittsylvania County, Virginia) where access was not granted. In the area where survey access was not granted, a desktop analysis was completed to determine approximate resource boundaries, taking into account several components (aerial imagery, NHD data, and hydrological conditions from nearby delineated resources). No resources were identified through desktop analysis in this area.

Appendix 1-A in Resource Report 1 depicts waterbodies crossed by the Amendment Project on the detailed alignment sheets. Table 2.3-4 is a summary of waterbodies crossed by pipeline of the Amendment Project. Appendix 2-A lists waterbodies crossed or affected by the Amendment Project.

Table 2.3-4						
Summary of	Waterbodies Crossed by the Pipeline o	f the Amendment Project <u>a</u> /, <u>b</u> /				
Facility, State	Facility, State Flow Type Number of Waterbodies Crossed					
H-650 Pipeline	·					
Virginia	Ephemeral	25				
	Intermittent	39				
	Perennial	21				
	Virginia Subtotal	85				
North Carolina	Ephemeral	9				
	Intermittent	6				
	Perennial	3				
	North Carolina Total	18				
	Amendment Project Total	103				

<u>a/</u> Based on data from field delineation as of February 2025. Table only includes waterbodies that cross the centerline of the Amendment Project. A full list of waterbodies crossed by the Amendment Project is included in Appendix 2-A.

Table 2.3-5 is a summary of the number of the FERC classification of waterbodies crossed by the Amendment Project pipeline. The Amendment Project will cross one major waterbody: the Dan River (247 feet wide at MP 30.8) in Rockingham County, North Carolina. Mountain Valley proposes to cross the Dan River via horizontal directional drill ("HDD"). A site-specific HDD and waterbody plan for this waterbody is located in Resource Report 1, Appendix 1-C3.

b/ As of the date of this filing, certain waterbody characteristics and/or boundaries are in the process of field reverification in consultation with USACE. Any changes following field verification will be filed with FERC upon identification.



Table 2.3-5							
Summary of FERC Classification of Waterbody Crossings by the Pipeline of the Amendment Project <u>a</u> /							
State	State Minor b/ Intermediate c/ Major d/ Total						
Virginia	75	10	0	85			
North Carolina 16 1 1 18							
Total	Total 91 11 1 103						

a/ Based on data from field delineation as of February 2025. Table only includes waterbodies that cross the centerline of the Amendment Project. A full list of waterbodies crossed by the Amendment Project is included in Appendix 2-A.

2.3.1.4 Waterbody Crossing Methods

Mountain Valley is currently evaluating crossing methods for each feature crossing in order to determine the most appropriate crossing method and anticipates providing this information in a supplemental filing in Q1 2025. General construction methods at waterbody crossings have not changed from those described within the FEIS as they are applicable to the Amendment Project. Construction will be performed consistent with applicable regulatory approvals. Mountain Valley will follow FERC's Procedures and its project-specific E&SC plan to limit water quality and aquatic resource impacts during and following construction.

2.3.1.5 Sensitive Waterbodies

Several databases were re-reviewed for the Amendment Project to determine if sensitive waters, as described in the FEIS, are crossed by the Amendment Project. A summary of this review is provided in the sections below.

National or State Wild and Scenic Rivers

Mountain Valley reviewed rivers that are included on the National Rivers Inventory ("NRI") and those that may be designated as wild and scenic. No federally designated wild, scenic, or recreational waterbodies are crossed by the Amendment Project (National Park Service ["NPS"] 2022; National Wild and Scenic Rivers System 2024).

The segment of the Dan River crossed by the Amendment Project in North Carolina is not listed on the NRI as a Wild and Scenic River, but a 1982 study by the NPS found that it possesses "outstandingly remarkable" values of cultural, fish, geologic, historic, recreational, scenic, and wildlife (NPS 2022). Mountain Valley proposes to cross the Dan River via HDD as described and committed to in the FEIS to minimize any potential impacts to the river.

The VDCR administers the Virginia Scenic Rivers program to identify, designate, and help protect rivers and streams that possess outstanding scenic, recreational, historic, and natural characteristics of statewide significance for future generations. In addition to existing designated state scenic rivers, other river segments have been deemed qualified or worthy of further study. Although no designated segments are crossed by the Amendment Project, the VDCR (2022) lists one waterbody crossed by the Amendment

b/ FERC classified Minor Waterbodies – waterbodies less than or equal to 10 feet wide at the water's edge.

c/ FERC classified Intermediate Waterbodies – waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the water's edge.

d/ FERC classified Major Waterbodies – waterbodies greater than 100 feet wide at the water's edge.



Project, the Sandy River, as qualified for potential designation. Mountain Valley intends to cross the Sandy River with HDD.

Like the Original Certificated Project described in the FEIS, the Amendment Project will not cross any Natural, Scenic, or Recreational river areas as defined by North Carolina General Statutes (2015) 143B-135.152 and 143B-135.154 and administered by NCDWR (NCDEQ 2024b).

State-Designated Use and Exceptional Waters

State designation for waterbodies in Virginia and North Carolina are described in the FEIS. Like the Original Certificated Project described in the FEIS, the Amendment Project will not cross any Virginia-designated surface waters, designated trout waters, or VADEQ Exceptional State Waters (VADEQ 2024c; 2024d; Virginia Department of Wildlife Resources 2024). VADEQ's water quality standards for the Roanoke River basin are provided in 9 Virginia Administrative Code 25-260-450. Waterbodies that have been assessed by the state and are crossed by the Amendment Project have one or multiple of the following designated uses: aquatic life, public water supply, wildlife, fish consumption, and recreation, as included in Appendix 2-A.

The NCDWR assigns primary classifications to all surface waters in North Carolina (NCDWR 2024b). All waters must at least meet the standards for Class C (fishable/swimmable) waters. Supplemental classifications are sometimes added by NCDWR to the primary classifications to provide additional protection to waters with special uses or values (NCDEQ 2024c). Like the Original Certificated Project described in the FEIS, no classified trout waters in North Carolina or NCWRC Designated Public Mountain Trout Waters are crossed by or in relevant proximity to the Amendment Project (NCDEQ 2024c; NCWRC 2024).

The FERC Procedures require a construction window from June 1 through September 30 for all crossings of coldwater fisheries and a construction window from June 1 through November 30 for other fisheries (warmwater and warmwater/coolwater). Like the Original Certificated Project defined in the FEIS, all waterbody crossings for the Amendment Project are designated as warmwater fisheries (see Resource Report 3). The FERC Procedures state these construction windows may be modified by state agencies. The allowable construction windows for fisheries of special concern crossed by the Amendment Project are included in Resource Report 3.

Waters Containing Federally or State-listed Threatened or Endangered Species or Critical Habitat

Resource Report 3 provides details and species descriptions of threatened and endangered species identified as potentially occurring along the Amendment Project, including aquatic species and the waterbodies where these species potentially occur. Three federally listed aquatic species (James spinymussel [Parvaspina collina], Atlantic pigtoe [Fusconaia masoni], and Roanoke logperch [Percina rex]) and one aquatic species proposed for listing (green floater [Lasmigona subviridis]) could potentially occur within areas crossed by the Amendment Project (U.S. Fish and Wildlife Service ["USFWS"] 2024a).

The Amendment Project will cross the Dan River in North Carolina, which supports known populations of the federally proposed threatened green floater and federally endangered James spinymussel. A review of federal and state databases and coordination with USFWS and NCWRC (Agency Consultations [see Resource Report 1, Appendix 1-I) identified designated critical habitat for the federally threatened Atlantic pigtoe and proposed critical habitat for the green floater in the Dan River at the Amendment Project crossing (USFWS 2018, 2023, 2024b).



Based on initial coordination with the USFWS and a review of the Information for Planning and Consultation Online System database, James spinymussel has not been identified as potentially present within waterbodies crossed by the Amendment Project in Virginia, though may occur in relevant proximity to the Amendment Project area near the Dan River crossing in North Carolina. Mountain Valley is proposing to use the HDD method at this crossing to avoid direct instream impacts on listed species.

Although agency coordination is ongoing, preliminary review indicates 13 perennial streams in relevant proximity to the Amendment Project area with potential to support populations of Roanoke logperch, including Cherrystone Creek, White Oak Creek, the Sandy River, Trotter's Creek, an unnamed tributary to White Oak Creek, and several unnamed tributaries in Virginia and the Dan River, Cascade Creek, and Dry Creek in North Carolina.

Additional information for threatened and endangered species, including suitable habitat within the Amendment Project area, is presented in Section 3.5 of Resource Report 3.

Surface Water Protection Areas and Public Surface Water Supplies

The Amendment Project was reviewed for protected watersheds in North Carolina as described in the FEIS. No protected or critical watersheds are crossed by the Amendment Project (NCDEQ 2021). According to publicly available data, there are no public surface water supplies within 0.5 mile of the Amendment Project workspace in Virginia or North Carolina.

2.3.1.6 Contaminated Sediments and Impaired Waters

Mountain Valley reviewed the National Sediment Quality Survey for information regarding contaminated sediments at all waterbody crossings. None of the watersheds in the Amendment Project area are listed as containing areas of probable concern for sediment contamination (USEPA 2004).

Like the Original Certificated Project described in the FEIS, the Amendment Project will cross three waterbodies in Virginia designated as "Category 4a Impaired" (Little Cherrystone Creek, White Oak Creek (crossed twice), and Sandy Creek) due to *Escherichia coli* ("*E. coli*") (VADEQ 2022). Three watersheds crossed by the Amendment Project in Virginia (Dan River, Sandy Creek West Branch, and Sandy River South watersheds) are listed as impaired for *E. coli*) (VADEQ 2022). Crossings of 303(d) listed waterbodies will be performed using dry crossing or trenchless techniques and are unlikely to contribute to the impairment of streams for *E. coli* (see Appendix 2-A).

According to the NCDEQ 2022 Integrated Report, there are no designated impaired waterbodies crossed by the Amendment Project in North Carolina (NCDEQ 2022).

Table 2.3-6 provides a summary of impaired waterbodies crossed by the Amendment Project route. Crossing of impaired waters and minimization measures applied to these crossings by the Amendment Project would be the same as described in the FEIS. Mountain Valley will use best management practices, the FERC Plan and Procedures, and the project-specific E&SC plan to maintain stream conditions and minimize further impairment.



Table 2.3-6								
	Impaired Waterbodies Crossed by the Amendment Project							
State, County	Causes of Impairment							
Pittsylvania, VA	0.6	S-A006 / Little Cherrystone Creek	TBD	Recreation – Category 4a – pollutant-caused impairment – <i>E. coli</i>				
	5.3	S-A021 / White Oak Creek	TBD	Recreation – Category 4a – pollutant-caused impairment – <i>E. coli</i>				
	5.5	S-A023 / White Oak Creek	TBD	Recreation – Category 4a – pollutant-caused impairment – <i>E. coli</i>				
13.1 S-A045 / Sandy Creek TBD Recreation – Category 4a pollutant-caused impairm								
Source: VADEQ 2022 TBD = to be determined								

Mountain Valley conducted a federal and state database search report from EDR for the area within 0.25 mile of the Amendment Project. The results are provided in Appendix 2-D.

2.3.2 Hydrostatic Test Water

Hydrostatic testing of the H-650 pipeline would be conducted in accordance with the procedures described in the FEIS for the Original Certificated Project and in accordance with the USDOT Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety requirements identified in 49 CFR Part 192 prior to being placed in service.

The total volume of water used for hydrostatic testing is proposed to be approximately 3,300,000 gallons (see Table 2.3-7). Proposed withdrawal and discharge locations have not changed from the FEIS. Like the Original Certificated Project described in the FEIS, the construction spread would be broken down into smaller test sections and would transfer test water from one test section to the next to reduce the total amount of water needed for testing. Hydrostatic tests are anticipated to take place in 2027.

No chemicals will be added to the test water unless otherwise approved by FERC and applicable federal and/or state regulatory agencies. An exception would be that if a municipal water source with chlorinated water is used for testing, the addition of a dechlorinating agent may be required prior to discharge, depending on the discharge location.



	Table 2.3-7											
	Proposed Hydrostatic Test Water Use Summary											
Anticipated Construction Test Beginning Ending Length of Required Proposed Water Source Proposed Test						posed Test Water Discha	r Discharge Location					
Construction Year	Spread	Segment	MP	MP	Section (feet)	Water (gallons)	MP	Water Source	Watershed	MP	Watershed	Volume
2026	1	1	0.0	17.6	92,928	3,300,000	0	Dan River (Primary) /	N/A	31.3	Roanoke River Basin	3,300,000
(Test 2027)		2	17.6	31.3	72,336	2,600,000		Municipal (Secondary)				1
	Hydrostatic Test Water Total 3,3											

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2.3.3 HDD Water

The need and uses of HDD water for the Amendment Project have not changed from those described in the FEIS for the Original Certificated Project. Water usage associated with the Sandy River and Dan River HDDs is presented in Table 2.3-8.

Mountain Valley will consider the use of municipal water for its proposed HDDs, but this is generally not a favorable option as the municipal sources (hydrants) are not located within close proximity of the HDD locations. If necessary, additional potential sources for HDD water may include groundwater supply wells and/or approved surface waters. The use of municipal water to support an HDD would require an increase in heavy-load vehicles on local roads as well as a greater extent of ATWS to store tank batteries and water trucks. In an effort to reduce the increase in heavy load vehicles in the Amendment Project area and minimize workspace and land impacts associated with the HDDs, Mountain Valley determined that the most feasible HDD water sources are from either a locally drilled water well and/or approved surface waters. Typical HDD installation plans are shown in Appendix 1-C1. HDD Site-specific Plans are provided in Appendix 1-C3. Water containing mud, silt, drilling fluid, or other materials from equipment washing or other activities will not be allowed to enter wetlands and waterbodies. The bentonite used in the drilling process will be either disposed of at an approved disposal facility or recycled in an approved manner. Mountain Valley will use additives for HDDs that are certified for conformance with National Sanitation Foundation ("NSF")/American National Standards Institute Standard 60, which provides assurances that the product is safe for use in drinking water (NSF International 2018) as described in the FEIS. HDD fluid will be disposed of per the revised HDD Contingency Plan (Appendix 1-G).

Table 2.3-8									
	Estimated Water Usage for the Amendment Project HDDs								
State, HDD Name	State, HDD Name MP (Ending) Maximum Estimated Volume (gallons) Water Source								
	of the HDD	Hydrostatic Pre-Test Water	HDD Operations						
Virginia	•								
Sandy River HDD	18.5	140,000	1,150,000	Dan River (Primary) / Municipal (Secondary)					
North Carolina									
Dan River HDD	30.6	85,000	703,000	Dan River (Primary) / Municipal (Secondary)					

2.3.4 Dust Control

Measures to be implemented for dust control and/or water sources for dust control have not changed from those described in the FEIS. All applicable permits and/or approvals would be obtained prior to withdrawal.

2.3.5 Construction and Operation Impacts and Mitigation

Construction, operation, and maintenance of the Amendment Project are not anticipated to permanently affect surface water resources, as concluded in the FEIS. Construction impacts to surface water resources associated with the Amendment Project are anticipated to be the same as those described in the FEIS. Impacts will be minimized or avoided by the implementation of the construction practices outlined in the



FEIS and through the implementation of the FERC Plan and Procedures. Additionally, Mountain Valley will develop and implement a project-specific E&SC plan in accordance with applicable state requirements to prevent overland flow and sediment runoff. The construction method utilized at each waterbody crossing will vary with the characteristics of the specific waterbody and will be completed as described in the FEIS.

Mountain Valley will restore pipeline facility temporary workspaces, including the areas within FEMA flood zones, as closely as practicable to preconstruction contours. Restoration of preconstruction contours will preserve the existing flood storage capacity of the FEMA flood zones in temporary construction workspace. Approximately 1.2 acres of 100-year flood zone in North Carolina will be permanently altered as a result of the Amendment Project. Mountain Valley will obtain the necessary state and/or local permits required in Virginia and North Carolina.

The general placement of ATWS and vegetation clearing methods between waterbodies and the ATWS have not changed from the FEIS. ATWS within 50 feet of a waterbody and justification for each are listed in Appendix 2-F.

Crossings will be aligned as close to perpendicular to the axis of the waterbody channel as engineering and site-specific conditions allow. If the pipeline route parallels a waterbody, Mountain Valley will attempt to maintain at least 15 feet of undisturbed vegetation between the waterbody (and adjacent wetland, if present) and the construction workspace. There are 15 locations along the Amendment Project where maintaining 15 feet of undisturbed vegetation is not feasible (see Appendix 2-K). These locations and justifications are listed in Table 2.3-9.

	Table 2.3-9								
Construction Workspace Parallels Waterbody (or Associated Wetland) within 15 feet									
Resource ID	MP	Length of Route within 15 feet of Resource (feet)	Justification						
S-A072	0.4	47.29	Maintain collocation, minimizes direct impact to stream						
A-A073	0.4	201.9	Crossing location avoids sensitive resource site, minimizes impact to wetlands						
S-A027	7.3	42.64	Maintain collocation						
S-A023	8.3	20.63	Maintain collocation, minimize impacts to surrounding resources						
S-A033a	10.3	117.15	Maintain collocation, avoid cultural resources						
S-A036	11.4	68.63	Maintain collocation, avoid cultural resources						
S-A041	11.7	31.83	Maintain collocation, minimize impact to stream						
S-A040	11.7	95.67	Maintain collocation						
S-A051	16.1	73.52	Constructability, minimize further impact to stream						
S-B038	22.9	30.05	Maintain collocation, avoid islanding						
S-B025	24.4	127.14	Constructability, avoid Dominion Energy Center						
S-B023	24.5	68.5	Collocation						
S-B018	27.1	39.16	Maintain collocation; new features identified in 2024						
S-B016	29.1	41.66	Maintain collocation						
S-B010	29.8	148.98	Maintain collocation						

2.3.5.1 Impacts to Waterbodies from Crossings and Mitigation Measures

Construction, operation, and maintenance of the Amendment Project are not anticipated to permanently



affect surface water resources, as concluded in the FEIS. Mountain Valley is currently evaluating crossing methods for each feature crossing in order to determine the most appropriate crossing method in consideration of all potentially practicable methods to avoid or minimize waterbody impacts as required by the USACE. Mountain Valley anticipates providing this information in a supplemental filing in Q1 2025. General construction methods at waterbody crossings have not changed from those described within the FEIS as they are applicable to the Amendment Project. Construction will be performed consistent with applicable regulatory approvals. Mountain Valley will follow the FERC's Procedures and its project-specific E&SC plan to limit water quality and aquatic resource impacts during and following construction.

2.3.5.2 Impacts to Waterbodies from Potential Releases of Fuels, Lubricants, and Coolants, and Mitigation Measures

The potential for accidental releases of fuels, lubricants, and coolants could adversely affect aquatic species and contaminate public water supplies that rely on surface water intakes located downstream of waterbody crossings. To reduce impacts to waterbodies from the potential release of fuels, lubricants, and coolants, Mountain Valley will implement the same minimization measures as described in the FEIS.

Mountain Valley will also implement its project-specific Spill Prevention, Control and Countermeasure ("SPCC") Plan and Unanticipated Discovery of Contamination Plan for implementation before and during construction (Resource Report 1, Appendix 1-G).

2.3.5.3 Impacts to Waterbodies from Turbidity and Sediment Runoff and Mitigation Measures

Pipeline construction across waterbodies and disturbance within the construction footprint for other facilities could result in increased potential for turbidity and sediment runoff from the construction right-of-way. Potential sedimentation impacts from instream construction activities will be mitigated by adhering to the FERC Procedures, as well as minimization measures required by the USACE, NCDEQ, and VADEQ through their respective permitting and approval authorities.

Potential sedimentation impacts from construction activities adjacent to waterbodies will be mitigated primarily through the installation and maintenance of erosion and sediment controls in accordance with site-specific plans. Proposed temporary and permanent erosion control practices have not materially changed from the FEIS. However, as referenced in the FEIS, Mountain Valley has continued to engage in an iterative process reviewing and improving the efficacy of those practices based on experience gained during the construction and restoration of the Mainline Project. Improvements include, for example, revising existing design specifications for underperforming controls to improve their function and reliability, developing new specifications to manage previously unanticipated conditions, and adopting more robust internal inspection and oversight procedures. The project-specific E&SC plan for the Amendment Project will incorporate these improvements.

Mountain Valley is preparing a sedimentation analysis using the modeling methodology developed for the Mainline Project. The methodology was previously evaluated by several federal and state agencies, and it has proven effective at identifying relative magnitudes of sedimentation impacts. The analysis is being prepared in coordination with the site-specific E&SC plans so that the plans can be incorporated into the model and the model can be used to refine the plans.



2.3.5.4 Impacts to Waterbodies from Hydrostatic Testing Discharges and Mitigation Measures

Potential exists for scour, erosion, and sediment transport to adjacent waterbodies from hydrostatic testing discharges. To mitigate these potential impacts, Mountain Valley will implement the minimization measures as described within the FEIS. Typical drawings provided in the project-specific E&SC plan include a typical hydrostatic test dewatering structure, and the actual discharge methodology will be confirmed based on field conditions.

2.3.5.5 Impacts to Waterbodies from Rock Blasting and Mitigation Measures

Temporary impacts from blasting of rock to excavate the pipeline trench in an open-cut crossing of a flowing waterbody are described in the FEIS. Mountain Valley is currently completing a geotechnical investigation to evaluate and confirm the feasibility of crossing methods. The results of this investigation will be provided to FERC in a supplemental filing in Q1 2025. Table 2.3-10 identifies waterbodies that will be crossed in areas where existing data show potential for bedrock to be encountered within the trench depth (i.e., shallow bedrock) and where blasting could be required to excavate the trench.

Table 2.3-10 Waterbodies Crossed by the Pipeline in Areas of Shallow Bedrock a/									
									State/County MP Waterbody Name Flow Type
Virginia									
Pittsylvania	23.1	S-B039 – Tributary to Trotters Creek	Ephemeral						
	24.6	Ephemeral							
	25.0 S-B056 – Tributary to Dan River		Ephemeral						
	25.6	S-B053 – Tributary to Dan River	Ephemeral						
North Carolina									
	No area	s of shallow bedrock crossed in North Carolina							
		elineated as of February 2025 crossed by the pipelin countered less than 60 feet from the ground surface							

To avoid potential impacts, mitigation measures to be implemented by the Amendment Project have not changed from the FEIS.

2.3.5.6 Waterbodies in Potential Karst Areas

Working under or through streams in karst areas could provide direct conduits for rapid surface water flow into subsurface karst features and potentially impact subsurface karst features and the stream. Karst terrain is not anticipated to be encountered during the construction of the Amendment Project, as concluded in the FEIS.

2.4 WETLAND RESOURCES

Wetlands, as defined by the USACE and USEPA, are defined in the FEIS. FERC defines wetlands as any area that is not in actively cultivated or rotated cropland and that satisfies the requirements of the current federal methodology for identifying and delineating wetlands. Wetlands generally include swamps, marshes, bogs, and similar areas.



2.4.1 Wetland Delineation Methodology

Mountain Valley conducted wetland delineations in accordance with the 1987 USACE Wetlands Delineation Manual (Environmental Laboratory 1987) and the Eastern Mountains and Piedmont Regional Supplement (USACE 2012). Wetland data discussed in this section of Resource Report 2 are based on field delineations where survey access has been granted and detailed desktop analysis taking into account several components (aerial imagery, National Wetlands Inventory ["NWI"] data [USFWS 2024c]), and hydrological conditions from nearby delineated resources) where survey access has not been granted. As of February 2025, Mountain Valley has completed field delineation of wetlands along approximately 98 percent of the pipeline alignment where survey access was available in 2024 (see Section 2.3.1.3 for a list of areas that have not been re-surveyed as of this Amendment filing). Appendix 2-B lists the wetland crossings for both approximated and survey field data. Appendix 2-F provides wetland delineation reports (one for each state), and Appendix 2-G depicts NWI mapping along the Amendment Project. Mountain Valley attempted to minimize the number and extent of wetland crossings to the extent practicable while maintaining a safe, constructible alignment. Table 2.4-1 is a summary of wetlands crossed by the Amendment Project. Wetland boundaries are depicted on the alignment sheets located in Appendix 1-A of Resource Report 1.

Table 2.4-1								
Summary of Wetlands Crossed by the Amendment Project a/								
State /	Wetland Type	Length of Pipeline	Acres Impacted b/					
County		Crossing (feet)	Construction	Operation				
Virginia								
Pittsylvania	PEM	4,582.08	6.28	0.67				
	PFO	3,631.43	5.72	2.18 0.17 0.00				
	PSS	891.20	0.91					
	PUB	0.00	<0.01					
	Virginia Total	9,104.71	12.91	3.02				
North Carolina	a							
Rockingham	PEM	1,438.10	2.03	0.20				
	PFO	1,763.20	2.96	1.17				
PSS		171.47	0.38	0.04				
No	rth Carolina Total	3,372.77	5.37	1.41				
Amenda	Amendment Project Total 12,477.49 18.28 4.43							

<u>a/</u> As of the date of this filing, certain wetland characteristics and/or boundaries are in the process of field re-verification in consultation with USACE. Any changes following field verification will be filed with FERC upon identification.

Note: PEM = palustrine emergent; PSS = palustrine scrub/shrub; PFO = palustrine forested; PUB = palustrine unconsolidated bottom.

b/ Construction impacts are temporary and permanent impacts associated with all areas within the construction workspace limits. Operation impacts are impacts associated with vegetation maintenance (10 feet in PEM and PSS wetlands and 30 feet in PFO wetlands). Sums may not equal the total of addends due to rounding.



2.4.2 Types of Wetlands

Wetland classes located in the Amendment Project are consistent with those described in the FEIS and consist of palustrine emergent ("PEM"), palustrine scrub/shrub ("PSS"), palustrine forested ("PFO"), and palustrine unconsolidated bottom ("PUB").

VDCR maintains the Virginia Wetlands Catalog ("Catalog"), an inventory of wetlands and potential wetlands with prioritization summaries for conservation and restoration purposes by parcel, subwatershed, and wetland boundaries. The Catalog developed a wetlands and associated features GIS layer by combining wetlands, potential wetlands, floodplains, and streams from the NWI, NHD, the Digital Flood Insurance Rate Map Database, and the Soil Survey Geographic Database. The Catalog then uses information for ranking wetlands for either conservation or restoration purposes. Information used to produce the rankings includes plant and animal biodiversity, significant natural communities, natural corridors, impaired waters, drinking sources, degraded watersheds, etc. Rankings range from the lowest rank (1 – General) to the highest rank (5 – Outstanding). The Catalog can be used to prioritize wetlands, parcels, and subwatersheds for conservation or restoration purposes, to inform project-design processes to make them more efficient, to assess the impacts of proposed projects, and to identify possible mitigation sites (VDCR 2024).

According to publicly available data regarding the conservation ranking of wetlands, the majority of the Amendment Project crosses areas of the lowest two rankings (1 – General and 2 – Moderate). A small area surrounding Trotters Creek with a ranking of "3 – High" is within the Amendment Project area. Similar to the conservation ranking of wetlands, the majority of the restoration ranking of wetlands within the Amendment Project are the lowest two rankings (1 – General and 2 – Moderate). There are approximately three crossings of "3 – High" ranking restoration wetlands along the Amendment Project (VDCR 2024).

In North Carolina, the NCDEQ designates certain wetlands of exceptional state or national ecological significance, and these wetlands require additional protection. These unique wetlands have been documented as essential habitat for the conservation of state or federal-listed threatened or endangered species. The Amendment Project does not cross any North Carolina-designated unique wetlands, as there are none in Rockingham County (NCDWR 2024a).

2.4.3 Wetland Crossing Methods

Mountain Valley is currently evaluating crossing methods for each feature crossing in order to determine the most feasible crossing method while considering all potentially practicable methods to avoid or minimize wetland impacts in accordance with the USACE's requirements. Mountain Valley will provide this information in a supplemental filing. The available construction methods at wetland crossings have not changed from those described in the FEIS. Restoration and monitoring of wetland crossings have not changed from the FEIS and will be conducted in accordance with the FERC Plan and Procedures and other applicable regulatory requirements to ensure successful wetland revegetation.

2.4.4 Construction and Operation Impacts and Mitigation

Construction impacts to wetland resources associated with the Amendment Project are anticipated to be the same as those described in the FEIS. Impacts will be minimized or avoided by the implementation of the construction practices outlined in the FEIS and the FERC Plan and Procedures. Additionally, Mountain Valley will develop and implement a project-specific E&SC plan in accordance with applicable state requirements as described in the FEIS.



Although the majority of the wetland impacts will be temporary, there will be 4.43 acres of permanent wetland impacts associated with vegetation maintenance in the right-of-way during operation of the Amendment Project (see Table 2.4-1). Mountain Valley will initiate consultation with applicable state and/or federal agencies regarding mitigation measures for permanent wetland impacts. Potential temporary and permanent construction impacts have not changed from those identified in the FEIS.

Operation of construction equipment through wetlands will be conducted in accordance with the FEIS. Topsoil segregation techniques will be used in unsaturated wetlands to preserve the seed bank and facilitate successful restoration. Wetland crossing methods are described in the FEIS and will be determined based on site-specific conditions.

Wetland soils (hydric soils) are susceptible to compaction with the operation of construction equipment over wet soils, thereby reducing the porosity and moisture-holding capacity of the soils and interfering with the hydrology of the wetland. Impacts and mitigation related to soil compaction have not changed from the FEIS.

Outside of wetland areas, the width of the permanent right-of-way will be maintained in accordance with the FERC Plan and as described in the FEIS.

2.4.4.1 General Wetland Impact Minimization Measures

General wetland impact minimization measures have not changed from the FEIS.

2.4.4.2 Impacts to Forested Wetlands and Mitigation Measures

As required by the FERC Procedures and as defined in the FEIS, Mountain Valley will maintain no more than a 10-foot-wide strip centered over the pipeline in an herbaceous state and will only remove woody vegetation within a 30-foot-wide strip centered over the pipeline.

2.4.4.3 Impacts to Adjacent Wetlands from Hydrological Profile Changes and Mitigation Measures

Hydrological profile changes from construction activities could adversely affect undisturbed wetlands adjacent to the construction right-of-way. To avoid these impacts, preconstruction wetland conditions, including contours in the construction right-of-way will be restored to the extent possible. Hydric soils are susceptible to compaction and rutting depending on the saturation levels. Potential impacts and mitigation related to soil compaction have not changed from the FEIS.

Mountain Valley will follow the FERC Procedures requiring the use of trench breakers or installation of trench plugs in areas of shallow groundwater and on slopes, as described in the FEIS.

2.4.4.4 Impacts to Adjacent Wetlands from Accidental Spills and Mitigation Measures

Mountain Valley will implement its project-specific SPCC Plan and Unanticipated Discovery of Contamination Plan during construction to minimize accidental spills that could adversely affect wetlands.

2.4.4.5 Alternative Measures to the FERC Procedures

Certain locations on the Amendment Project will require ATWS to be located within 50 feet of wetlands due to crossing techniques or other constraints.



A list of ATWS located within 50 feet of wetlands and justification is included in Appendix 2-E. Mountain Valley is specifically requesting alternative measures to the FERC Procedures for these areas associated with the Amendment Project.



2.5 REFERENCES

- Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Federal Emergency Management Agency. 2024. Flood Map Service Center. Available at: http://msc.fema.gov/portal. Accessed July 2024.
- Federal Energy Regulatory Commission. 2013a. Wetland and Waterbody Construction and Mitigation Procedures. May 2013.
- Federal Energy Regulatory Commission. 2013b. Upland Erosion Control, Revegetation and Maintenance Plan. May 2013.
- Federal Energy Regulatory Commission. 2017. Guidance Manual for Environmental Report Preparation. February 2017.
- National Park Service. 2022. Nationwide Rivers Inventory. Available at: https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm. Accessed July 2024.
- National Wild and Scenic Rivers System. 2024. Explore Designated Rivers. Available at: http://www.rivers.gov/map.php. Accessed July 2024.
- North Carolina Department of Environment and Natural Resources, Division of Environmental Health. 1999. Source Water Assessment Program Plan. Available at: https://files.nc.gov/ncdeg/Water%20Resources/files/swap/FullText.pdf. Accessed August 2024.
- North Carolina Division of Environmental Quality. 2021. NC Surface Water Supply Watersheds. NC OneMap. Available at: https://www.nconemap.gov/datasets/ncdenr::nc-surface-water-supply-watersheds/about. Accessed August 2024.
- North Carolina Department of Environmental Quality. 2022. Integrated Report 303(d) 305(b). Available at: https://deq.nc.gov/about/divisions/water-resources/planning/modeling-assessment/water-quality-data-assessment/integrated-report-files. Accessed November 2024.
- North Carolina Department of Environmental Quality. 2023. Public Water Supply Water Sources. NC OneMap. Available at: https://www.nconemap.gov/datasets/nconemap::public-water-supply-water-sources/about. Accessed August 2024.
- North Carolina Department of Environmental Quality. 2024a. Digital information regarding watersheds. Available at: http://data-ncdenr.opendata.arcgis.com/. Accessed August 2024.
- North Carolina Department of Environmental Quality. 2024b. Water Resources Classifications. Available at: https://www.deq.nc.gov/about/divisions/water-resources/water-planning/classification-standards/classifications. Accessed August 2024.
- North Carolina Department of Environmental Quality. 2024c. NC Surface Water Classifications. Available at: https://experience.arcgis.com/experience/7073e9122ab74588b8c48ded34c3df55/. Accessed November 2024.



- North Carolina Division of Water Quality. 2010. Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Version 4.11. Effective September 1, 2010. Available at: https://files.nc.gov/ncdeq/Water%20Quality/Surface%20Water%20Protection/401/Policies_Guides_Manuals/StreamID_v_4point11_Final_sept_01_2010.pdf. Accessed November 2024.
- North Carolina Division of Water Resources. 2023. Monitoring Well Network 2023 Annual Report. Groundwater Management Branch. November 2023. Available at: https://www.ncwater.org/Publications/gwms/annual/fy2022-23 network ann report.pdf. Accessed November 2024.
- North Carolina Division of Water Resources. 2024a. Unique Wetlands: Developing Policy Guidelines and Locating Unique Wetlands. Available at: https://www.ncwetlands.org/project/unique-wetlands/ developing-policy-guidelines-and-locating-unique-wetlands/. Accessed August 2024.
- North Carolina Division of Water Resources. 2024b. Water Classifications for the Roanoke River Basin. Available at: https://deq.nc.gov/river-basin-classification-schedule. Accessed November 2024.
- North Carolina General Statutes. 2015. Section 143B-135.
- North Carolina Ground Water Association. 2020. Groundwater Use in North Carolina. Available at: https://www.ngwa.org/docs/default-source/default-document-library/states/nc.pdf. Accessed November 2024.
- North Carolina Wildlife Resources Commission. 2024. North Carolina Fishing Areas & Trout Waters. Available at: https://ncpaws.org/ncwrcmaps/FishingAreas. Accessed July 2024.
- NSF International. 2018. NSF/ANSI 60. Available at: http://www.nsf.org/services/by-industry/water-water-water-treatment-chemicals/nsf-ansi-standard-60. Accessed July 2024.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0, ed. J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Environmental Protection Agency. 2004. The Incident and Severity of Sediment Contamination in Surface Waters of the United States. National Sediment Quality Survey Second Edition. Available at: https://www.epa.gov/nscep. Accessed August 2024.
- U.S. Environmental Protection Agency. 2015. Designated Sole Source Aquifers. Available at: https://www.epa.gov/dwssa. Accessed July 2024.
- U.S. Environmental Protection Agency. 2024. Drinking Water Mapping Application to Protect Source Waters. Available at: https://geopub.epa.gov/dwwidgetapp/. Accessed November 2024.
- U.S. Fish and Wildlife Service. 2018. Endangered and Threatened Wildlife and Plants; Threatened Species Status with Section 4(d) Rule and Critical Habitat Designation for Atlantic Pigtoe. Available at: https://www.gpo.gov/fdsys/pkg/FR-2018-10-11/pdf/2018-21798.pdf. Accessed August 2024.



- U.S. Fish and Wildlife Service. 2023. Endangered and Threatened Wildlife and Plants; Threatened Species Status with Section 4(d) Rule for Green Floater and Designation of Critical Habitat. Available at https://www.fws.gov/sites/default/files/federal_register_document/2023-15143.pdf. Accessed August 2024.
- U.S. Fish and Wildlife Service. 2024a. Information for Planning and Consultation Online System. Available at https://ecos.fws.gov/ipac/. Accessed June 2024.
- U.S. Fish and Wildlife Service. 2024b. Active Critical Habitat Report. Available at: https://ecos.fws.gov/ecp/report/table/critical-habitat.html. Accessed July 2024.
- U.S. Fish and Wildlife Service. 2024c. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Available at: http://www.fws.gov/wetlands/. Accessed July 2024.
- U.S. Geological Survey. 2000. Ground Water Atlas of the United States: Segment 7- Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia. HA 730-L. Available at: https://pubs.usgs.gov/publication/ha730H. Accessed July 2024.
- U.S. Geological Survey. 2015a. Estimated Use of Water in the United States in 2015. USGS Circular 1441. Available at: https://pubs.usgs.gov/circ/1441/circ1441.pdf. Accessed August 2024.
- U.S. Geological Survey. 2015b. Water Use Data for Virginia (Pittsylvania County, 2015). National Water Information System. Available at: https://waterdata.usgs.gov/va/nwis/water_use/. Accessed November 2024.
- U.S. Geological Survey. 2015c. Water Use Data for North Carolina (Rockingham County, 2015). National Water Information System. Available at: https://waterdata.usgs.gov/nc/nwis/water_use/. Accessed November 2024.
- U.S. Geological Survey. 2024a. National Water Information System: Mapper. Available at: https://maps.waterdata.usgs.gov/mapper/index.html. Accessed August 2024.
- U.S. Geological Survey. 2024b. National Hydrography Dataset. Available at: http://nhd.usgs.gov/data.html. Accessed July 2024.
- U.S. Geological Survey. 2024c. Watershed Boundary Dataset. Available at: https://www.usgs.gov/national-hydrography/watershed-boundary-dataset. Accessed July 2024.
- Virginia Department of Conservation and Recreation. 2020. Virginia Soil and Water Conservation Board Guidance Document on the Methodology for Identifying Perennial Streams. Available at: https://townhall.virginia.gov/L/GetFile.cfm?File=C:\TownHall\docroot\GuidanceDocs\199\GDoc_DCR 6947 v1.pdf. Accessed June 2024.
- Virginia Department of Conservation and Recreation. 2022. Virginia Outdoors Plan Mapper. Available at: https://www.dcr.virginia.gov/recreational-planning/vopmapper. Accessed July 2024.
- Virginia Department of Conservation and Recreation. 2024. Virginia Wetlands Catalog. Available at: http://www.dcr.virginia.gov/natural-heritage/wetlandscat. Accessed August 2024.



- Virginia Department of Energy. 2024. VA Water Wells MapServer. Available at: https://energy.virginia.gov/gis/rest/services/DGMR/VA_Water_Wells/MapServer. Accessed August 2024.
- Virginia Department of Environmental Quality. 2022. Final 2022 305(b)/303(d) Water Quality Assessment Integrated Report. Available at: https://www.deq.virginia.gov/our-programs/water/water-quality/assessments/integrated-report. Accessed November 2024.
- Virginia Department of Environmental Quality. 2023. Virginia Springs Database 2023. Available at: https://geohub-vadeq.hub.arcgis.com/datasets/fb163586abec4e079ab293823e3bd15e/about. Accessed August 2024.
- Virginia Department of Environmental Quality. 2024a. Virginia Annual Water Resources Report Status of Virginia's Water Resources & Management Activities (2023). October 2024. Available at: https://rga.lis.virginia.gov/Published/2024/RD512/PDF. Accessed November 2024.
- Virginia Department of Environmental Quality. 2024b. Environmental Data Mapper. Available at: https://apps.deq.virginia.gov/EDM/. Accessed October 2024.
- Virginia Department of Environmental Quality. 2024c. Exceptional State Waters (Tier III). Available at: https://www.deq.virginia.gov/our-programs/water/water-quality/standards/exceptional-state-waters-tier-iii. Accessed July 2024.
- Virginia Department of Environmental Quality. 2024d. Virginia Water Quality Standards dataset [9VAC-25-260]. Available at: https://geohub-vadeq.hub.arcgis.com/datasets/e248a73e04b2458f9711ddc2ffc0857e_181/about. Accessed November 2024.
- Virginia Department of Health Office of Drinking Water. 2024. Website for Source Water Protection Information. Available at: http://www.vdh.virginia.gov/drinking-water/source-water-programs/source-water-protection-program/. Accessed August 2024.
- Virginia Department of Wildlife Resources. 2024. Trout Fishing Guide. Available at: https://dwr.virginia.gov/fishing/trout/. Accessed July 2024.



MVP Southgate Amendment Project

Docket No. CP25-XX-000

Resource Report 2

Appendix 2-A

Waterbodies Crossed by the Amendment Project



				Appendix 2-A					
Waterbodies Crossed by the Amendment Project									
Facility / County, State / Waterbody ID <u>a</u> /	Approx. MP <u>b</u> /	Waterbody Name	Flow Type c/	Crossing Width (feet) d/	FERC Class <u>e</u> /	Fishery Classification <u>f</u> /	State Water Quality Classification g/	Crossing Method h/	
H-650 Pipeline	<u> </u>							<u>.</u>	
Pittsylvania, VA									
S-A005	0.1	Trib. to Little Cherrystone Creek	Intermittent	12.54	Minor	WWH	Class III	TBD	
S-A006	0.4	Trib. to Cherrystone Creek	Ephemeral	2.81	Minor	WWH	Class III	TBD	
S-A004	0.7	Little Cherrystone Creek	Perennial	19.93	Intermediate	WWH	Class III	TBD	
S-A002	0.8	Trib. to Little Cherrystone Creek	Intermittent	5.97	Minor	WWH	Class III	TBD	
S-A003	0.8	Trib. to Little Cherrystone Creek	Intermittent	3.01	Minor	WWH	Class III	TBD	
S-A013	1.3	Trib. to Cherrystone Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only	
S-A012	1.4	Trib. to Cherrystone Creek	Intermittent	3.90	Minor	WWH	Class III	TBD	
S-A010	1.6	Trib. to Cherrystone Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only	
S-A009	1.7	Trib. to Cherrystone Creek	Intermittent	6.12	Minor	WWH	Class III	TBD	
S-A008	2.0	Cherrystone Creek	Perennial	28.03	Intermediate	WWH	Class III	TBD	
S-A018	3.5	Trib. to White Oak Creek	Intermittent	3.59	Minor	WWH	Class III	TBD	
S-A019	3.9	Trib. to White Oak Creek	Intermittent	12.82	Minor	WWH	Class III	TBD	
S-A015	4.3	Trib. to White Oak Creek	Ephemeral	5.13	Minor	WWH	Class III	TBD	
S-A017	4.4	Trib. to White Oak Creek	Intermittent	4.97	Minor	WWH	Class III	TBD	
S-B060	5.2	Trib. to White Oak Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only	
S-A020	5.3	Banister River	Perennial	46.19	Intermediate	WWH	Class III	TBD	
S-A021	5.3	Trib. to White Oak Creek	Perennial	29.63	Intermediate	WWH	Class III	TBD	
S-A022	5.4	White Oak Creek	Perennial	21.39	Intermediate	WWH	Class III	TBD	
S-A066	6.4	Trib. to White Oak Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only	
S-A067	6.5	Trib. to White Oak Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only	
S-A028	7.0	Trib. to White Oak Creek	Ephemeral	8.18	Minor	WWH	Class III	TBD	
S-A026	7.3	Trib. to White Oak Creek	Perennial	5.34	Minor	WWH	Class III	TBD	
S-A027	7.3	Trib. to White Oak Creek	Intermittent	3.28	Minor	WWH	Class III	TBD	
S-A025	7.9	Trib. to White Oak Creek	Intermittent	4.63	Minor	WWH	Class III	TBD	
S-A023	8.3	Trib. to White Oak Creek	Intermittent	0.00	Minor	WWH	Class III	Workspace only	
S-A024	8.3	Trib. to White Oak Creek	Intermittent	10.53	Minor	WWH	Class III	TBD	
S-A001	8.9	Trib. to White Oak Creek	Intermittent	9.60	Minor	WWH	Class III	TBD	
S-A029	8.9	Trib. to White Oak Creek	Perennial	15.43	Intermediate	WWH	Class III	TBD	

Appendix 2-A-1 February 2025



				Appendix 2-A				
			Waterbodies Cro	ssed by the Amend	ment Project			
Facility / County, State / Waterbody ID <u>a</u> /	Approx. MP <u>b</u> /	Waterbody Name	Flow Type <u>c</u> /	Crossing Width (feet) d/	FERC Class <u>e</u> /	Fishery Classification <u>f</u> /	State Water Quality Classification g/	Crossing Method <u>h</u> /
S-A030	9.2	Trib. to White Oak Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only
S-A031	9.4	Trib. to White Oak Creek	Perennial	0.00	Minor	WWH	Class III	Workspace only
S-A032	10.2	Trib. to White Oak Creek	Intermittent	2.32	Minor	WWH	Class III	TBD
S-A033a	10.3	Trib. to White Oak Creek	Perennial	9.86	Minor	WWH	Class III	TBD
S-A034	10.4	Trib. to White Oak Creek	Intermittent	3.51	Minor	WWH	Class III	TBD
S-A036	11.4	Trib. to Sandy Creek	Intermittent	35.27	Minor	WWH	Class III	TBD
S-A037	11.4	Trib. to Sandy Creek	Intermittent	0.00	Minor	WWH	Class III	Workspace only
S-A038	11.4	Trib. to Sandy Creek	Ephemeral	1.75	Minor	WWH	Class III	TBD
S-A039	11.5	Trib. to Sandy Creek	Ephemeral	2.99	Minor	WWH	Class III	TBD
S-A039-Braid1	11.5	Trib. to Sandy Creek	Ephemeral	2.72	Minor	WWH	Class III	TBD
S-A040	11.7	Trib. to Sandy Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only
S-A041	11.7	Trib. to Sandy Creek	Intermittent	0.00	Minor	WWH	Class III	Workspace only
S-A042	11.7	Trib. to Sandy Creek	Perennial	16.08	Minor	WWH	Class III	TBD
S-A043	12.0	Trib. to Sandy Creek	Intermittent	3.29	Minor	WWH	Class III	TBD
S-A044	12.2	Trib. to Sandy Creek	Perennial	9.27	Minor	WWH	Class III	TBD
S-A045	13.1	Sandy Creek	Perennial	20.22	Intermediate	WWH	Class III	HDD
S-A046	13.8	Trib. to Sandy Creek	Perennial	18.84	Minor	WWH	Class III	TBD
S-A049	14.7	Trib. to Sandy Creek	Perennial	7.99	Intermediate	WWH	Class III	TBD
S-A048	15.1	Trib. to Sandy Creek	Intermittent	4.24	Minor	WWH	Class III	TBD
S-A070	15.6	Trib. to Lower Sandy River	Intermittent	3.74	Minor	WWH	Class III	TBD
S-A051	16.1	Trib. to Silver Creek	Perennial	13.45	Intermediate	WWH	Class III	TBD
S-A050	16.3	Trib. to Lower Sandy River	Intermittent	2.66	Minor	WWH	Class III	TBD
S-A052	16.4	Trib. to Lower Sandy River	Intermittent	26.62	Minor	WWH	Class III	TBD
S-A054	16.6	Trib. to Lower Sandy River	Intermittent	2.85	Minor	WWH	Class III	TBD
S-A055	16.6	Trib. to Lower Sandy River	Intermittent	2.44	Minor	WWH	Class III	TBD
S-A056	16.9	Trib. to Lower Sandy River	Ephemeral	0.00	Minor	WWH	Class III	Workspace only
S-A057	17.2	Trib. to Lower Sandy River	Intermittent	5.69	Minor	WWH	Class III	TBD
S-A058	17.4	Trib. to Lower Sandy River	Intermittent	8.06	Minor	WWH	Class III	TBD
S-A071	17.7	Trib. to Lower Sandy River	Perennial	17.24	Minor	WWH	Class III	TBD
S-A063A	18.2	Lower Sandy River	Perennial	83.96	Intermediate	WWH	Class III	TBD

Appendix 2-A-2 February 2025



Appendix 2-A											
Waterbodies Crossed by the Amendment Project											
Facility / County, State / Waterbody ID <u>a</u> /	Approx. MP <u>b</u> /	Waterbody Name	Flow Type c/	Crossing Width (feet) d/	FERC Class <u>e</u> /	Fishery Classification <u>f</u> /	State Water Quality Classification g/	Crossing Method <u>h</u> /			
S-A059	18.4	Trib. to Lower Sandy River	Intermittent	2.90	Minor	WWH	Class III	TBD			
S-B059	19.9	Trib. to Lower Sandy River	Ephemeral	0.00	Minor	WWH	Class III	Workspace only			
S-B046	20.1	Trib. to Lower Sandy River	Intermittent	15.56	Minor	WWH	Class III	TBD			
S-B045	20.8	Trib. to Trotters Creek	Intermittent	5.88	Minor	WWH	Class III; PWS	TBD			
S-B044a	21.0	Trib. to Trotters Creek	Perennial	3.13	Minor	WWH	Class III; PWS	TBD			
S-B043	21.4	Trib. to Trotters Creek	Perennial	9.16	Minor	WWH	Class III; PWS	TBD			
S-B041	21.6	Trib. to Trotters Creek	Intermittent	1.40	Minor	WWH	Class III; PWS	TBD			
S-B042	21.7	Trib. to Trotters Creek	Perennial	3.34	Minor	WWH	Class III	TBD			
S-B040	22.4	Trib. to Trotters Creek	Ephemeral	15.02	Minor	WWH	Class III	TBD			
S-B032	22.5	Trib. to Trotters Creek	Intermittent	1.88	Minor	WWH	Class III; PWS	TBD			
S-B033	22.6	Trib. to Trotters Creek	Intermittent	3.59	Minor	WWH	Class III	TBD			
S-B038	22.9	Trib. to Trotters Creek	Intermittent	0.00	Minor	WWH	Class III	Workspace only			
S-B039	23.1	Trib. to Trotters Creek	Ephemeral	3.43	Minor	WWH	Class III	TBD			
S-B029	23.6	Trib. to Trotters Creek	Perennial	14.33	Minor	WWH	Class III; PWS	TBD			
S-B061	23.6	Trib. to White Oak Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only			
S-B030	24.0	Trib. to Trotters Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only			
S-B031	24.0	Trib. to Trotters Creek	Ephemeral	0.00	Minor	WWH	Class III; PWS	Workspace only			
S-B024	24.4	Trib. to Trotters Creek	Intermittent	6.23	Minor	WWH	Class III	TBD			
S-B023	24.5	Trib. to Trotters Creek	Ephemeral	0.00	Minor	WWH	Class III; PWS	Workspace only			
S-B022	24.6	Trib. to Trotters Creek	Ephemeral	1.44	Minor	WWH	Class III	TBD			
S-B056	25.0	Trib. to Trotters Creek	Ephemeral	2.30	Minor	WWH	Class III	TBD			
S-B054	25.5	Trib. to Trotters Creek	Intermittent	3.92	Minor	WWH	Class III; PWS	TBD			
S-B053	25.6	Trib. to Trotters Creek	Ephemeral	2.66	Minor	WWH	Class III; PWS	TBD			
S-B052	25.8	Trib. to Trotters Creek	Intermittent	8.33	Minor	WWH	Class III	TBD			
S-B051	26.4	Trib. to Trotters Creek	Intermittent	8.09	Minor	WWH	Class III; PWS	TBD			
S-B020	26.5	Trib. to Trotters Creek	Intermittent	4.18	Minor	WWH	Class III; PWS	TBD			
Rockingham, NC	•		•			•	•	•			
S-B018	27.1	Trib. to Cascade Creek	Ephemeral	0.00	Minor	WWH	Class C	Workspace only			
S-B019	27.1	Trib. to Cascade Creek	Ephemeral	0.00	Minor	WWH	Class C	Workspace only			
S-B036	28.0	Trib. to Cascade Creek	Intermittent	10.17	Minor	WWH	Class C	TBD			

Appendix 2-A-3 February 2025



				Appendix 2-A						
Waterbodies Crossed by the Amendment Project										
Facility / County, State / Waterbody ID <u>a</u> /	Approx. MP <u>b</u> /	Waterbody Name	Flow Type <u>c</u> /	Crossing Width (feet) d/	FERC Class <u>e</u> /	Fishery Classification <u>f</u> /	State Water Quality Classification g/	Crossing Method <u>h</u> /		
S-B034	28.2	Cascade Creek	Perennial	81.07	Intermediate	WWH	Class C	TBD		
S-B035	28.2	Dry Creek	Perennial	33.68	Minor	WWH	Class C	TBD		
S-B016	29.1	Trib. to Dan River	Ephemeral	0.00	Minor	WWH	Class C	Workspace only		
S-B015	29.1	Trib. to Dan River	Intermittent	5.19	Minor	WWH	Class C	TBD		
S-B014	29.1	Trib. to Dan River	Ephemeral	0.00	Minor	WWH	Class C	Workspace only		
S-B015a	29.1	Trib. to Dan River	Ephemeral	0.00	Minor	WWH	Class C	Workspace only		
S-B017	29.3	Trib. to Dan River	Ephemeral	2.31	Minor	WWH	Class C	TBD		
S-B011	29.5	Trib. to Dan River	Intermittent	4.80	Minor	WWH	Class C	TBD		
S-B010	29.8	Trib. to Dan River	Ephemeral	0.00	Minor	WWH	Class C	Workspace only		
S-B009	30.0	Trib. to Dan River	Ephemeral	3.51	Minor	WWH	Class C	TBD		
S-B008	30.3	Trib. to Dan River	Intermittent	6.44	Minor	WWH	Class C	TBD		
S-B005	30.8	Dan River	Perennial	204.79	Major	WWH	Class C	HDD		
S-B004	30.9	Trib. to Dan River	Ephemeral	6.57	Minor	WWH	Class C	HDD		
S-B003	31.0	Trib. to Dan River	Intermittent	7.04	Minor	WWH	Class C	TBD		
S-B002	31.1	Trib. to Dan River	Intermittent	3.46	Minor	WWH	Class C	TBD		
Temporary Access Roads	;		I							
Pittsylvania, VA										
S-A007-TA-PI-005	2.5	Trib. to Cherrystone Creek	Intermittent	0.00	Minor	WWH	Class III	Workspace only		
S-A069- TA-PI-018	7.2	Trib. to White Oak Creek	Intermittent	0.00	Minor	WWH	Class III	Workspace only		
S-A047-TA-PI-035	14.7	Trib. to Sandy Creek	Perennial	8.80	Minor	WWH	Class III	Bridge		
S-A053-TA-PI-043	17.5	Trib. to Lower Sandy River	Intermittent	1.55	Minor	WWH	Class III	Bridge		
S-A065-TA-PI-043	17.6	Trib. to Lower Sandy River	Ephemeral	0.00	Minor	WWH	Class III	Workspace only		
S-B026-TA-PI-061	23.1	Trib. to Trotters Creek	Intermittent	2.07	Minor	WWH	Class III; PWS	Bridge		
S-B027-TA-PI-061	23.1	Trib. to Trotters Creek	Intermittent	0.00	Minor	WWH	Class III; PWS	Workspace only		
S-B028-TA-PI-061	23.1	Trib. to Trotters Creek	Ephemeral	5.50	Minor	WWH	Class III	Bridge		
S-B058-TA-PI-067	25.7	Trib. to Trotters Creek	Ephemeral	0.00	Minor	WWH	Class III	Workspace only		
Rockingham, NC										
S-B013-TA-RO-076	29.0	Trib. to Dan River	Intermittent	0.00	Minor	WWH	Class C	Workspace only		
S-B014- TA-RO-076	29.1	Trib. to Dan River	Ephemeral	0.00	Minor	WWH	Class C	Workspace only		
S-B007-TA-RO-080	30.5	Trib. to Town Creek	Intermittent	0.00	Minor	WWH	Class C	Workspace only		

Appendix 2-A-4 February 2025



	Appendix 2-A									
Waterbodies Crossed by the Amendment Project										
Facility / County, State / Waterbody ID <u>a</u> /										
S-B006-TA-RO-080A	30.9	Trib. to Town Creek	Intermittent	0.00	Minor	WWH	Class C	Workspace only		
S-B002-TA-RO-083	31.1	Trib. to Town Creek	Intermittent	3.33	Minor	WWH	Class C	Bridge		

- a/ Data are based on waterbody field delineations completed through February 2025 where access has been obtained, NHD, and desktop analysis of approximated resources. "S" indicates stream, "WB" indicates pond, "AS" indicates approximate stream or pond.
- b/ MP is closest milepost to waterbody.
- c/ Perennial: flowing throughout the year for all or most years. Intermittent: flowing water during certain times of the year. Ephemeral: flowing water only during short periods of the year in response to precipitation. For delineated waterbodies, flow type in North Carolina was determined using the NCDWQ Stream Identification Form Version 4.11, and flow type in Virginia has been field estimated. For approximated waterbodies, flow type was estimated based on aerial imagery unless the approximated stream is directly associated with a delineated waterbody in which the approximated waterbody was assigned the same flow type as the associated delineated waterbody.
- d/ Crossing width is the intersection of the waterbody and the centerline of the pipeline or an access road (i.e., the approximate length of the pipeline centerline or access road from streambank to streambank). If the crossing width is "0", the waterbody is not crossed by the centerline.
- e/ FERC Classification from FERC Procedures. Minor (<10 feet); Intermediate (>10 <100 feet); Major (>100 feet).
- f/ WWH Warm Water Habitat.
- g/ Reference dataset for Virginia Water Quality Standards for all free-flowing, freshwater streams, rivers and flowpaths within the Virginia state boundary per 9VAC-25-260 (VADEQ 2024d). North Carolina Surface Water Quality Classifications per North Carolina Surface Water Quality 15A NCAC 02B (NCDEQ 2024c; NCDWR 2024b).
 - In Virginia, III = Nontidal Waters (Coastal and Piedmont Zones), PWS = Public Water Supply
 - In North Carolina, C = Aquatic Life, Secondary Contact Recreation, Fresh Water
- h/ Mountain Valley is currently evaluating crossing methods for each feature crossing in order to determine the most appropriate crossing method. TBD = to be determined.
- Note: As of the date of this filing, certain waterbody characteristics and/or boundaries are in the process of field re-verification. Any changes following field verification will be filed with FERC upon identification.

Appendix 2-A-5 February 2025



Docket No. CP25-XX-000

Resource Report 2

Appendix 2-B

Wetlands Crossed by the Amendment Project



Appendix 2-B Wetlands Crossed by the Amendment Project								
H-650 Pipeline		-						
Pittsylvania, VA								
W-A004	PEM	0.2	14.13	0.04	<0.00	TBD		
W-A006	PFO	0.4	54.59	0.09	0.04	TBD		
W-A003a	PFO	0.6	294.68	0.38	0.19	TBD		
W-A003b	PEM	0.6	19.59	0.12	<0.00	TBD		
W-A001	PEM	0.9	118.82	0.22	0.03	TBD		
W-A016	PEM	1.2	16.90	0.05	<0.00	TBD		
W-A014	PEM	1.3	19.46	0.07	<0.00	TBD		
W-A079	PEM	1.4	0.00	0.00	0.00	Workspace only		
W-A013c	PFO	1.7	71.64	0.07	0.04	TBD		
W-A013b	PSS	1.8	618.37	0.53	0.14	TBD		
W-A013d	PFO	1.8	0.00	0.22	0.03	Workspace only		
W-A012	PSS	1.9	0.00	0.01	0.00	Workspace only		
W-A013a	PEM	1.9	379.08	1.02	0.09	TBD		
W-A011	PEM	2	34.31	0.04	0.01	TBD		
W-A010b	PFO	2.1	765.71	1.19	0.55	TBD		
W-A010a	PEM	2.3	1260.16	2.29	0.29	TBD		
W-A010c	PSS	2.3	0.00	0.04	0.00	Workspace only		
W-A009	PEM	2.5	35.47	0.04	0.01	TBD		
W-A050	PEM	2.5	0.00	0.01	0.00	Workspace only		
W-A053	PEM	2.5	0.00	0.00	0.00	Workspace only		
W-A019	PFO	3.9	42.87	0.07	0.03	TBD		
W-A072	PFO	4.3	9.67	0.00	<0.00	TBD		
W-A075	PEM	4.3	0.00	0.00	0.00	Workspace only		
W-A073a	PEM	5.2	206.18	0.43	0.05	TBD		
W-A073b	PFO	5.2	196.16	0.27	0.12	TBD		
W-A020	PFO	5.3	32.73	0.04	0.02	TBD		
W-A021	PFO	5.3	102.14	0.19	0.07	TBD		
W-A023	PFO	5.4	83.94	0.13	0.05	TBD		



	Appendix 2-B								
	Wetlands Crossed by the Amendment Project								
Facility / County, State / Wetland ID <u>a</u> /	Wetland Type <u>b</u> /	Approx. MP	Crossing Length (feet) <u>c</u> /	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) <u>e</u> /	Construction Crossing Method <u>f</u> /			
W-A022	PFO	5.5	516.24	1.07	0.35	TBD			
W-A068	PEM	6	13.94	0.02	<0.00	TBD			
W-A032	PEM	6.9	0.00	0.01	0.00	Workspace only			
W-A069	PFO	6.9	0.00	0.01	0.00	Workspace only			
W-A070a	PEM	6.9	0.00	0.02	0.00	Workspace only			
W-A070b	PEM	6.9	0.00	0.01	0.00	Workspace only			
W-A070c	PFO	6.9	73.53	0.10	0.04	TBD			
W-A027	PEM	7.3	0.00	0.01	0.00	Workspace only			
W-A026	PEM	7.9	0.00	0.01	0.00	Workspace only			
W-A025	PEM	8.3	9.84	0.02	<0.00	TBD			
W-A017	PEM	8.7	116.39	0.18	0.03	TBD			
W-A028	PFO	8.9	46.52	0.10	0.04	TBD			
W-A029a	PEM	8.9	25.92	0.07	0.01	TBD			
W-A029b	PFO	8.9	105.88	0.17	0.07	TBD			
W-A030a	PEM	9.4	7.71	0.10	<0.00	TBD			
W-A030b	PSS	9.4	47.61	0.07	0.01	TBD			
W-A031	PFO	10.2	85.63	0.20	0.07	TBD			
W-A033	PFO	10.3	44.90	0.08	0.03	TBD			
W-A034	PFO	10.4	5.17	0.03	0.01	TBD			
W-A035	PSS	10.4	15.13	0.01	<0.00	TBD			
W-A036	PSS	11.4	0.00	0.03	0.00	Workspace only			
W-A037	PEM	11.7	0.00	0.00	0.00	Workspace only			
W-A038	PSS	11.7	0.00	0.02	0.00	Workspace only			
W-A039	PFO	12	42.57	0.06	0.03	TBD			
W-A040	PEM	12	0.00	0.02	0.00	Workspace only			
W-A041	PFO	13.1	12.12	0.02	0.01	TBD			
W-A042	PEM	13.1	0.00	0.00	0.00	Workspace only			
W-A043	PEM	13.1	0.00	0.00	0.00	Workspace only			
W-A044	PFO	13.8	56.79	0.13	0.04	TBD			
W-A045	PFO	13.8	53.86	0.08	0.03	TBD			



Appendix 2-B									
	Wetlands Crossed by the Amendment Project								
Facility / County, State / Wetland ID <u>a</u> /	Wetland Type <u>b</u> /	Approx. MP	Crossing Length (feet) <u>c</u> /	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method <u>f</u> /			
W-A049a	PFO	14.7	83.59	0.11	0.05	TBD			
W-A049b	PEM	14.7	0.00	0.02	0.00	Workspace only			
W-A048	PEM	15.1	3.21	0.01	<0.00	TBD			
W-A076	PEM	16.1	0.00	0.00	0.00	Workspace only			
W-A051	PEM	16.6	30.67	0.03	0.01	TBD			
W-A052a	PSS	17.1	0.00	0.01	0.00	Workspace only			
W-A052c	PFO	17.1	0.00	0.01	0.00	Workspace only			
W-A054	PEM	17.2	55.09	0.10	0.01	TBD			
W-A071a	PEM	18.4	0.00	0.00	0.00	Workspace only			
W-A071b	PSS	18.4	0.00	0.01	0.00	Workspace only			
W-A063	PEM	18.8	0.00	0.00	0.00	Workspace only			
W-A064	PFO	19.1	51.08	0.08	0.03	TBD			
W-A065	PEM	19.3	10.88	0.01	<0.00	TBD			
W-A066	PEM	19.3	0.00	0.00	0.00	Workspace only			
W-A067	PEM	19.3	48.32	0.02	0.01	TBD			
W-B044	PEM	19.9	0.00	0.00	0.00	Workspace only			
W-B043	PFO	20.1	0.00	0.01	0.00	Workspace only			
W-B042	PEM	20.8	37.80	0.12	0.01	TBD			
W-B040	PEM	21	0.00	0.00	0.00	Workspace only			
W-B041	PSS	21	13.36	0.02	<0.00	TBD			
W-B039a	PEM	21.4	0.00	0.04	0.00	Workspace only			
W-B039b	PFO	21.4	88.07	0.13	0.06	TBD			
W-B038a	PEM	21.6	38.92	0.08	0.01	TBD			
W-B038b	PFO	21.6	8.17	0.01	0.01	TBD			
W-B038b	PFO	21.7	8.17	0.09	0.01	TBD			
W-B038c	PEM	21.7	0.00	0.09	0.00	Workspace only			
W-B037b	PFO	22.2	0.00	0.00	0.00	Workspace only			
OW-B004	PUB	22.3	0.00	0.0034	0.00	Workspace only			
W-B036a	PFO	22.4	7.31	0.02	0.01	TBD			
W-B036b	PEM	22.4	10.99	0.08	<0.00	TBD			



Appendix 2-B Wetlands Crossed by the Amendment Project								
W-B023	PFO	22.5	29.39	0.04	0.02	TBD		
W-B024	PEM	22.6	0.00	0.01	0.00	Workspace only		
W-B035	PFO	22.9	0.00	0.00	0.00	Workspace only		
W-B022	PFO	24	47.24	0.06	0.03	TBD		
W-B049	PFO	24.6	26.96	0.04	0.02	TBD		
W-B020	PSS	24.7	69.28	0.12	0.02	TBD		
W-B019	PEM	24.9	52.57	0.11	0.01	TBD		
W-B050	PEM	25	0.00	0.00	0.00	Workspace only		
W-B017	PEM	25.3	282.09	0.58	0.07	TBD		
W-B015	PFO	25.8	4.36	0.01	0.00	TBD		
W-B014	PFO	26.5	27.90	0.05	0.02	TBD		
W-B013a	PEM	26.7	0.00	0.02	0.00	Workspace only		
W-B013b	PFO	26.7	125.50	0.14	0.08	TBD		
	Virginia Pi	peline Subtotal	6,817.25	12.47	3.02			
Rockingham, NC	-							
W-B013b	PFO	26.8	0.00	0.00	0.00	Workspace only		
W-B012	PEM	26.9	46.09	0.06	0.01	TBD		
W-B011	PEM	27.1	25.28	0.03	0.01	TBD		
W-B032	PEM	27.4	64.70	0.11	0.01	TBD		
W-B029	PEM	27.7	0.00	0.04	0.00	Workspace only		
W-B031a	PEM	27.8	263.56	0.37	0.06	TBD		
W-B031b	PSS	27.8	139.33	0.27	0.03	TBD		
W-B028	PEM	27.9	432.40	0.79	0.1	TBD		
W-B027	PFO	28	38.23	0.05	0.02	TBD		
W-B027a	PEM	28	0.00	0.00	0.00	Workspace only		
W-B056a	PSS	28	32.14	0.05	0.01	TBD		
W-B053	PEM	28.2	0.00	0.01	0.00	Workspace only		
W-B010	PEM	28.8	46.14	0.04	0.01	TBD		
W-B009a	PFO	29	104.37	0.16	0.08	TBD		
W-B009b	PEM	29	27.81	0.03	0.01	TBD		



	Appendix 2-B								
		Wetla	nds Crossed by th	e Amendment Project					
Facility / County, State / Wetland ID <u>a</u> /	Wetland Type <u>b</u> /	Approx. MP	Crossing Length (feet) <u>c</u> /	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method <u>f</u> /			
W-B008	PEM	29.3	16.53	0.01	<0.00	TBD			
W-B052a	PFO	29.8	19.41	0.04	0.01	TBD			
W-B052b	PEM	29.8	0.00	0.01	0.00	Workspace only			
W-B005	PFO	30.4	1025.86	1.79	0.71	TBD			
W-B003	PFO	31	57.76	<0.00	0.00	TBD			
W-B004	PEM	31	0.00	0.02	0.00	Workspace only			
W-B004a	PSS	31	0.00	0.06	0.00	Workspace only			
W-B051	PFO	31	15.31	<0.00	0.00	TBD			
W-B056	PEM	31	5.52	0.04	<0.00	TBD			
W-B055	PEM	31.1	0.00	0.00	0.00	Workspace only			
W-B001	PEM	31.2	0.00	0.41	0.00	Workspace only			
W-B002	PFO	31.3	501.76	0.92	0.34	TBD			
North Carolina Pipeline Subtotal 2862.20 5.31 1.41									
Amend	ment Project Pi	peline Subtotal	9,679.45	17.77	4.43				
Aboveground Facilities									
Pittsylvania, VA									
		No	wetlands within ab	oveground facilities					
Rockingham, NC									
		No	wetlands within ab	oveground facilities					
Temporary Access Roads									
Pittsylvania, VA									
W-A005-TA-PI-001A	PEM	0.4	87.70	0.03	0.00	Workspace only			
W-A013a-TA-PI-004	PEM	1.9	1,095.42	0.00	0.00	Workspace only			
W-A007-TA-PI-005	PEM	2.5	107.72	0.07	0.00	Workspace only			
W-A008-TA-PI-005	PEM	2.5	11.61	0.01	0.00	Workspace only			
W-A024-TA-PI-011	PSS	5.5	127.46	0.05	0.00	Workspace only			
W-A046-TA-PI-035	PEM	14.7	12.96	0.00	0.00	Workspace only			
W-A047-TA-PI-035	PEM	14.7	46.31	0.01	0.00	Workspace only			
W-A018-TA-PI-043	PEM	17.5	11.85	0.00	0.00	Workspace only			
W-A062-TA-PI-043	PEM	17.5	276.73	0.04	0.00	Workspace only			



			Append	ix 2-B		
		Wetla	nds Crossed by th	e Amendment Project		
Facility / County, State / Wetland ID <u>a</u> /	Wetland Type <u>b</u> /	Approx. MP	Crossing Length (feet) <u>c</u> /	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method <u>f</u>
W-A061-TA-PI-043	PEM	17.6	83.36	0.02	0.00	Workspace only
W-B021-TA-PI-061	PFO	23.1	47.94	0.03	0.00	Workspace only
W-B016-TA-PI-067	PFO	25.7	378.41	0.20	0.00	Workspace only
Virginia Ten	nporary Access	Road Subtotal	2,287.47	0.44	0.00	
Rockingham, NC						
W-B010-TA-RO-077	PEM	28.8	306.56	0.01	0.00	Workspace only
W-B002-TA-RO-083	PFO	31.3	88.06	0.00	0.00	Workspace only
W-B055-TA-RO-083	PEM	31.1	0.49	0.04	0.00	Workspace only
North Carolina Ten	nporary Access	Road Subtotal	395.11	0.05	0.00	-
Ten	nporary Access	Road Subtotal	2,682.58	0.50	0.00	
Permanent Access Roads						
Pittsylvania, VA						
·		No	wetlands along perr	manent access roads		
Rockingham, NC			-			
W-B034-PA-RO-000	PEM	29.4	115.46	0.01	0.01	TBD
	Permanent Acc	ess Road Total	115.46	0.01	0.01	
Contractor Yards						
Pittsylvania, VA						
OW-A001	PUB	0	0.00	0.10	0.00	Workspace only
OW-A002	PUB	0	0.00	0.11	0.00	Workspace only
OW-A003	PUB	0	0.00	0.77	0.00	Workspace only
Vir	ginia Contracto	Yard Subtotal	0.00	0.99	0.00	· · · · · · · · · · · · · · · · · · ·
Rockingham, NC	-		1		ı	
· · · · · · · · · · · · · · · · · · ·			No wetlands within	contractor yards		
	Contracto	Yard Subtotal	0.00	0.99	0.00	
	A a al a	nt Project Total	12,447.49	18.26	4.43	

 <u>a/</u> Data are based on wetland field delineations completed through February 2025.
 <u>b/</u> Wetland Classifications PEM = palustrine emergent wetland, PSS = palustrine scrub-shrub wetland, PFO = palustrine forested wetland, PUB = palustrine, unconsolidated bottom.



construction.

Appendix 2-B								
		Wetla	nds Crossed by th	e Amendment Project				
Facility / County, State / Wetland ID <u>a</u> /	Wetland Type <u>b</u> /	Approx. MP	Crossing Length (feet) <u>c</u> /	Total Construction Impacts (acres) d/	Total Operation Vegetation Impacts (acres) e/	Construction Crossing Method <u>f</u> /		
c/ Crossing length is measured at the intersection of the wetland and centerline of the pipeline or center of the access road. Crossing length of "0" indicates the wetland is not crossed by the centerline of the pipeline but is located within the construction workspace. Sums may not equal the total of addends due to rounding.								
d/ Total construction impacts include all wetland impacts (PEM, PFO, PSS, PUB) associated with the construction workspace. Wetland impacts of "0.0" indicate the impact is less than 0.1 acre, but the impact is included in project totals. Sums may not equal the total of addends due to rounding. e/ Total operation vegetation impacts include PEM, PSS, and PFO impacts for vegetation maintenance. Operational vegetation impacts for PEM and PSS								
wetlands include a 10-foot-wide vegetation maintenance corridor; operational vegetation maintenance impacts for PFO wetlands include a 30-foot-wide vegetation maintenance corridor (i.e., a 10-foot-wide cleared corridor and selective removal of trees within 15 feet of the pipeline). Wetland impacts of "0.0" indicate the impact is less than 0.1 acre, but the impact is included in project totals. Minor discrepancies in totals are due to rounding. f/ TBD = to be determined. Mountain Valley is currently evaluating crossing methods for each feature crossing in order to determine the most appropriate								
crossing method and will pro	vide this informa	ation in a supplem	nental filing. Genera	al construction methods	at wetland crossings have not cleed consistent with applicable re	hanged from those		

"Workspace Only" indicates that the wetland is not crossed by the pipeline but is located within the construction workspace.

Note: As of the date of this filing, certain wetland characteristics and/or boundaries are in the process of field re-verification in consultation with USACE. Any changes following field verification will be filed with FERC upon identification.

Mountain Valley will follow FERC's Procedures and its project-specific E&SC plan to limit water quality and aquatic resource impacts during and following



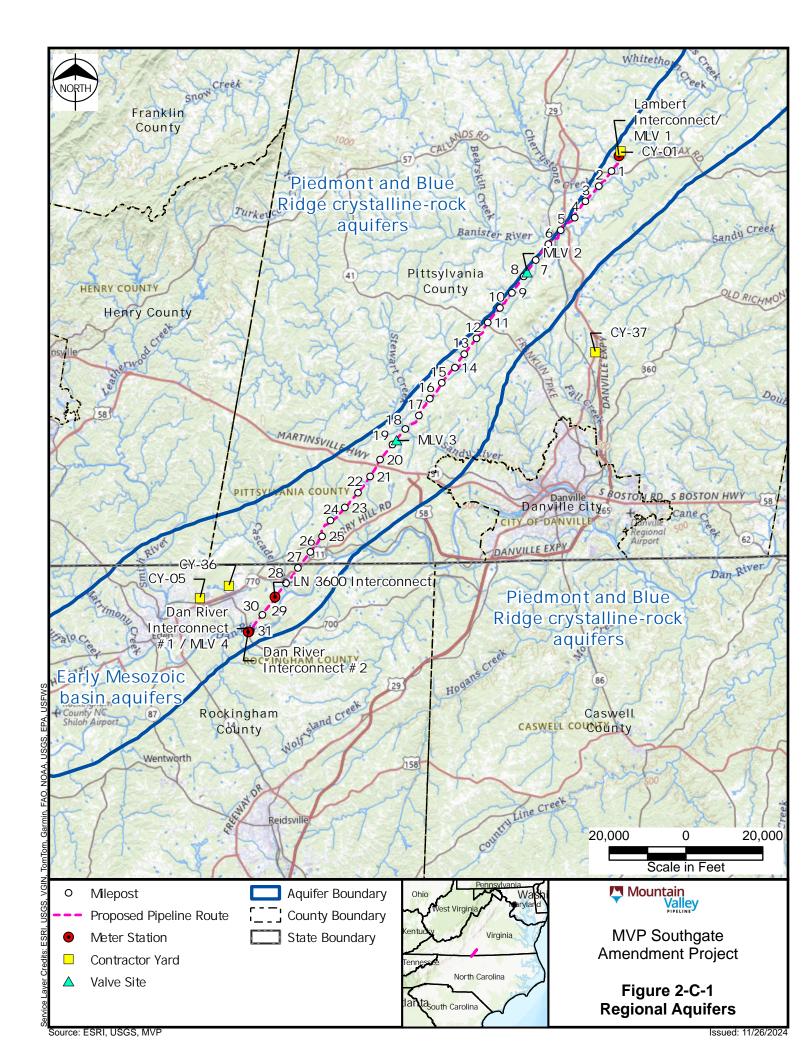
Docket No. CP25-XX-000

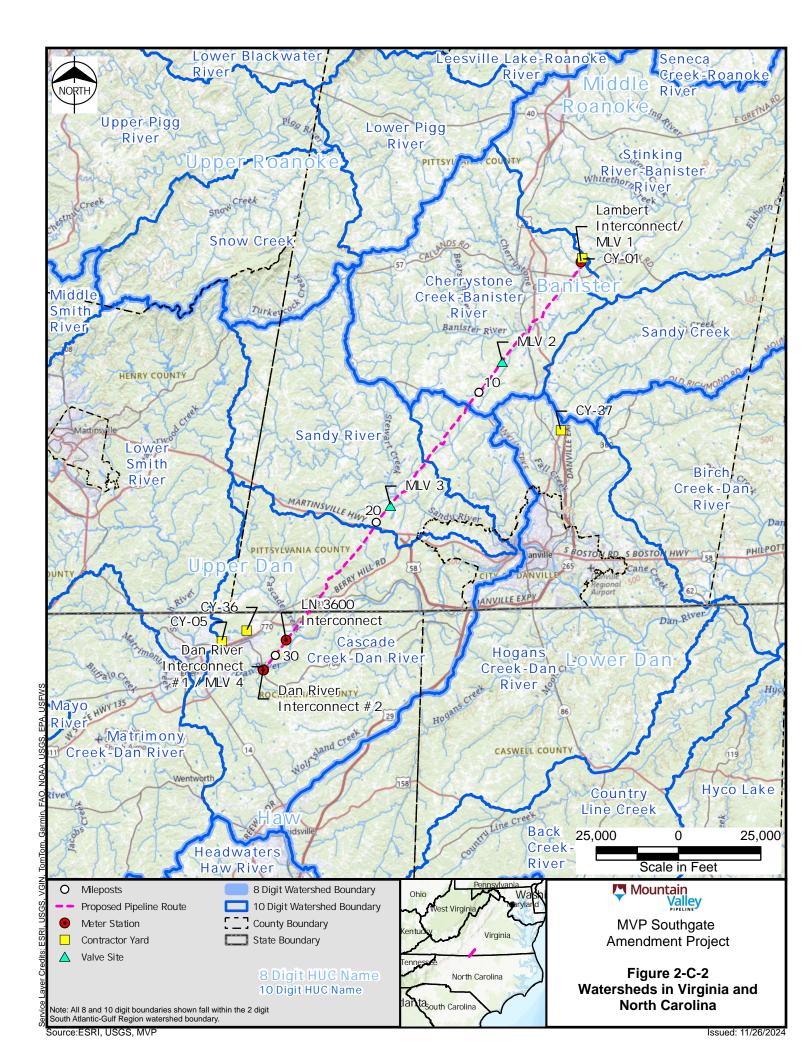
Resource Report 2

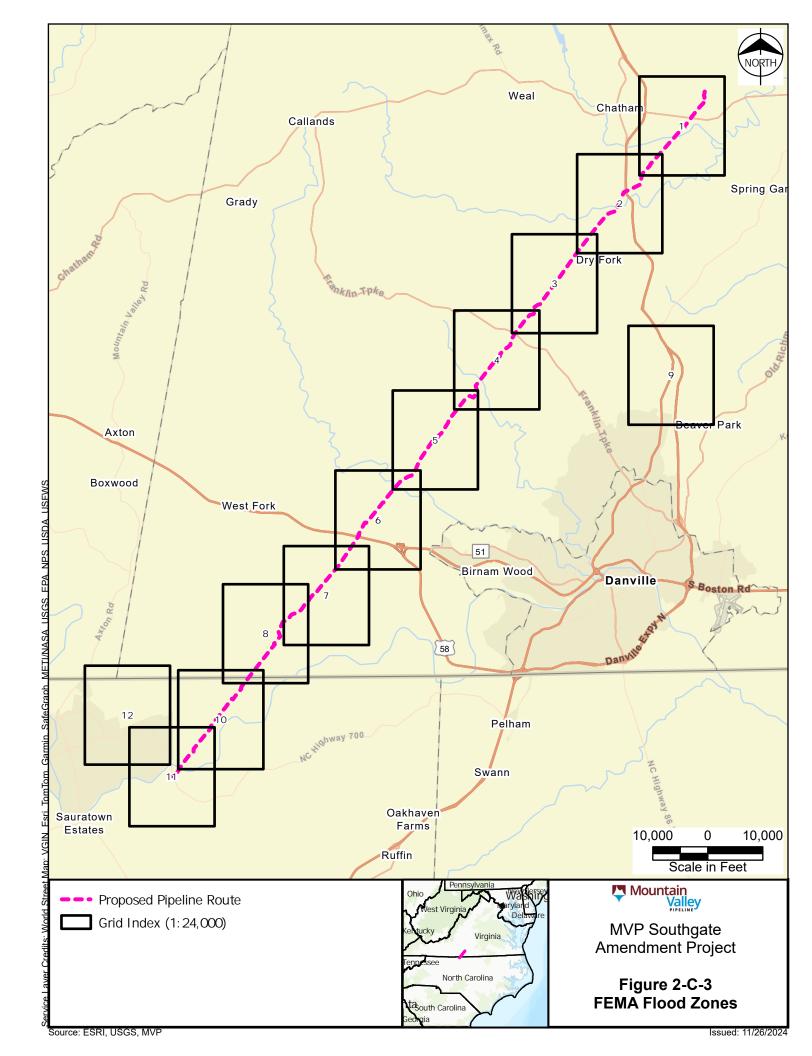
Appendix 2-C

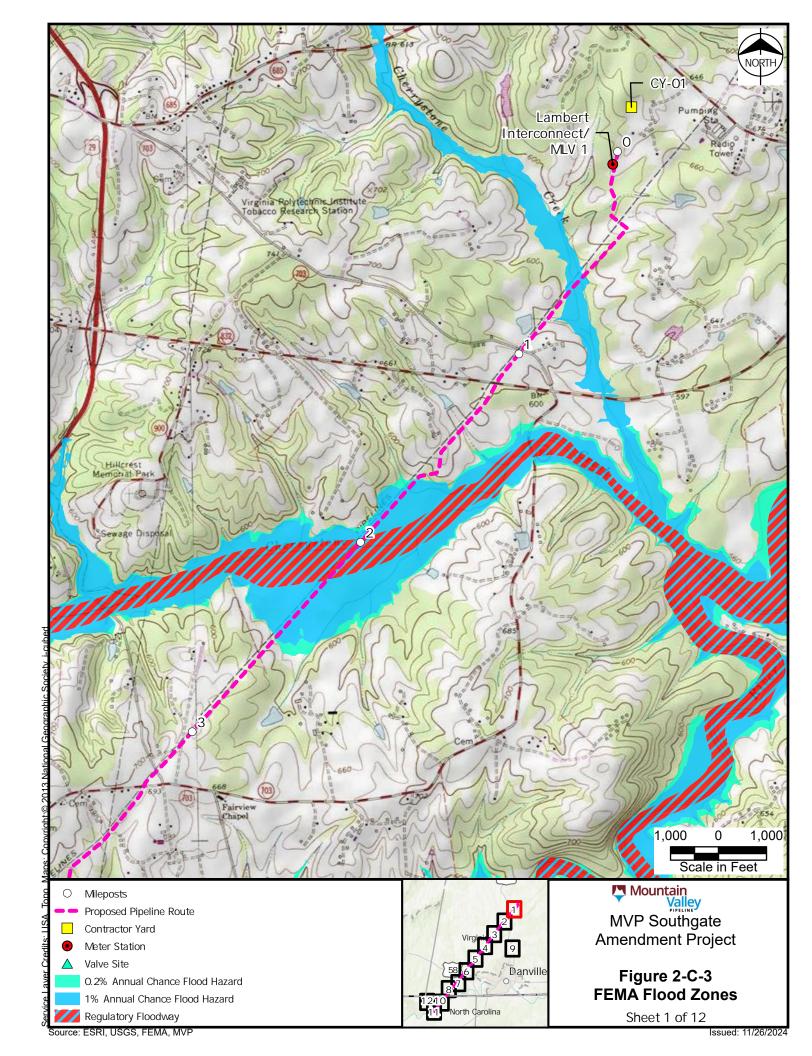
Figures

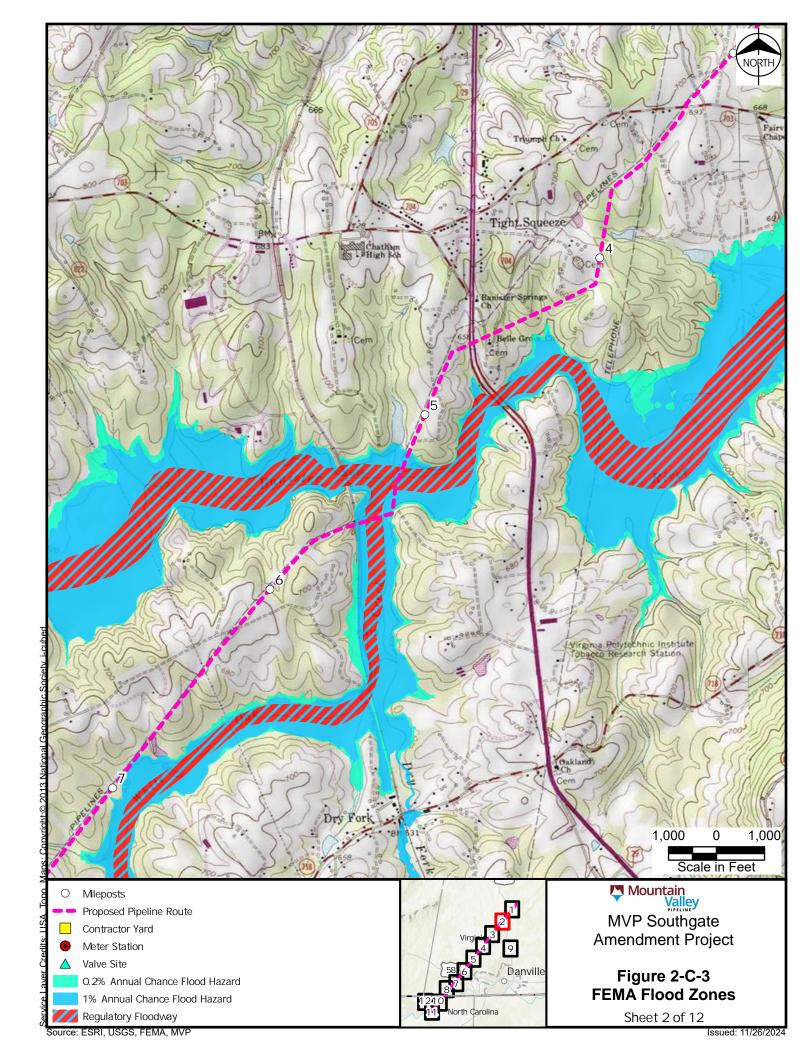
Figure 2-C-1	Regional Aquifers along the Amendment Project
Figure 2-C-2	Watersheds in Virginia and North Carolina Crossed by the Amendment Project
Figure 2-C-3	FEMA Flood Zones Crossed by the Amendment Project

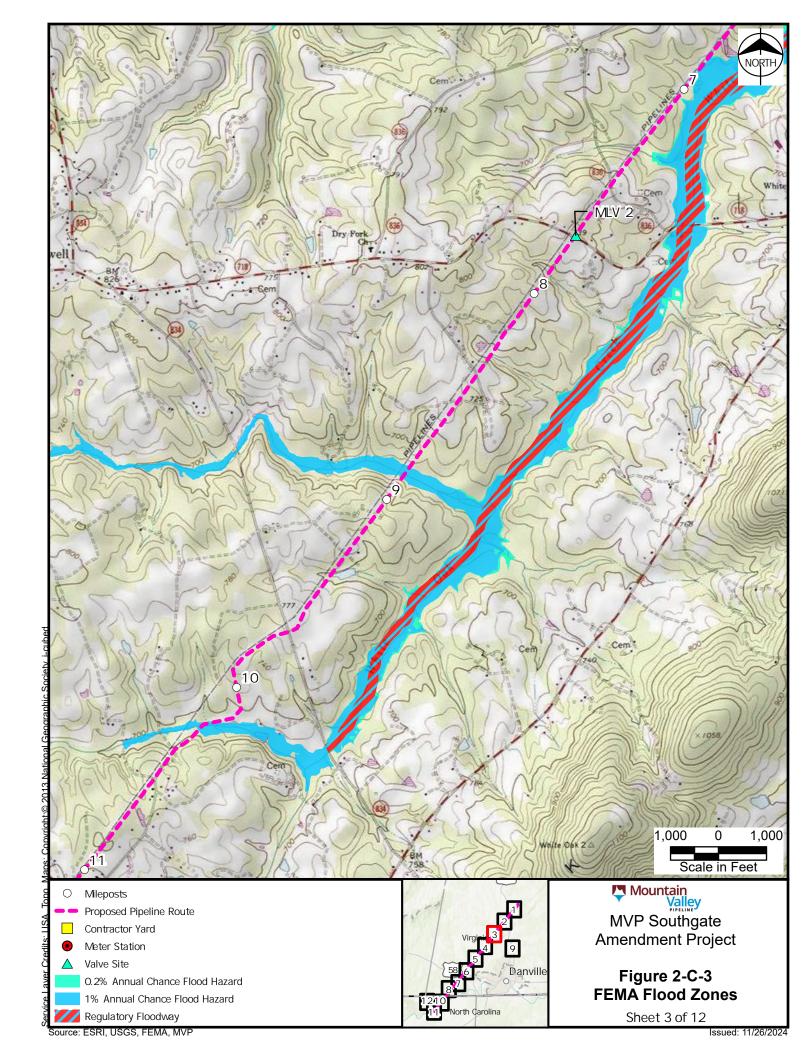


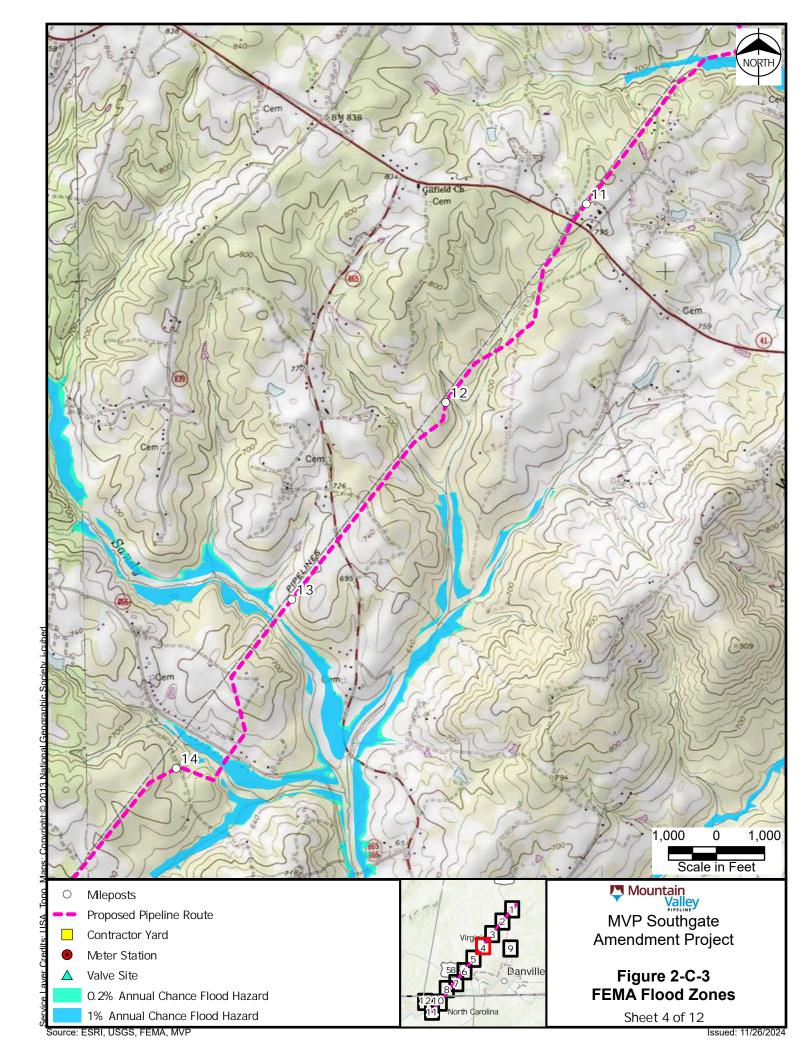


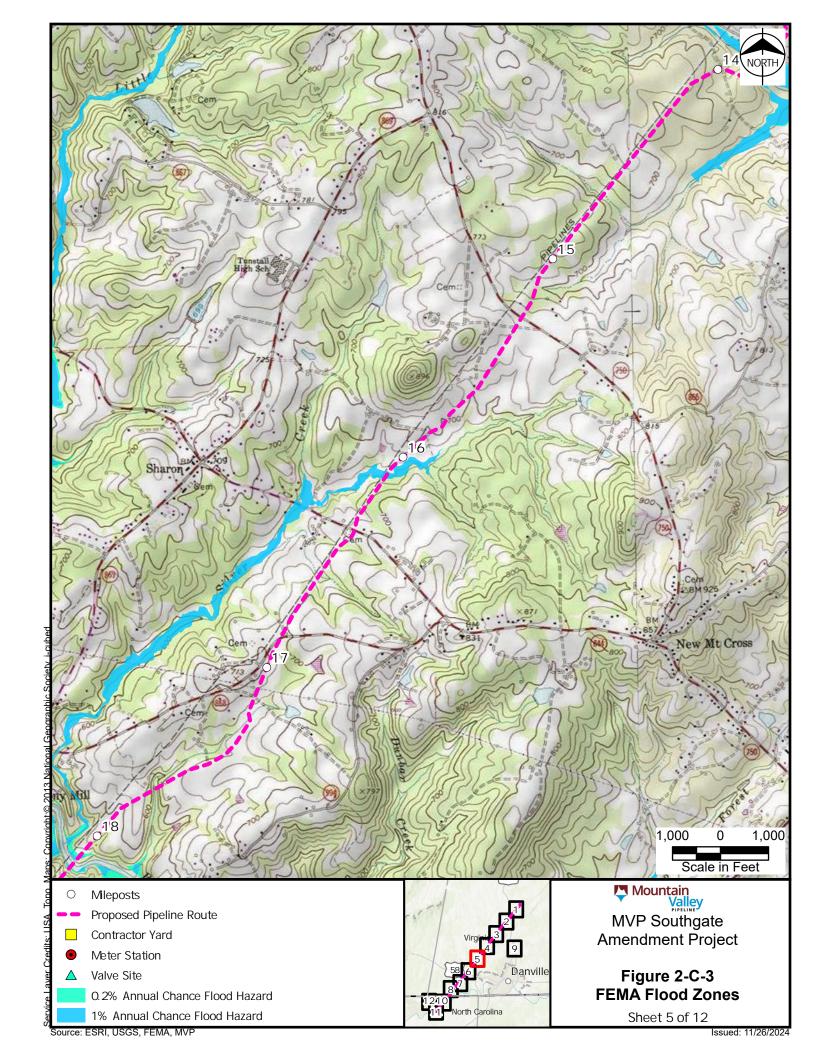


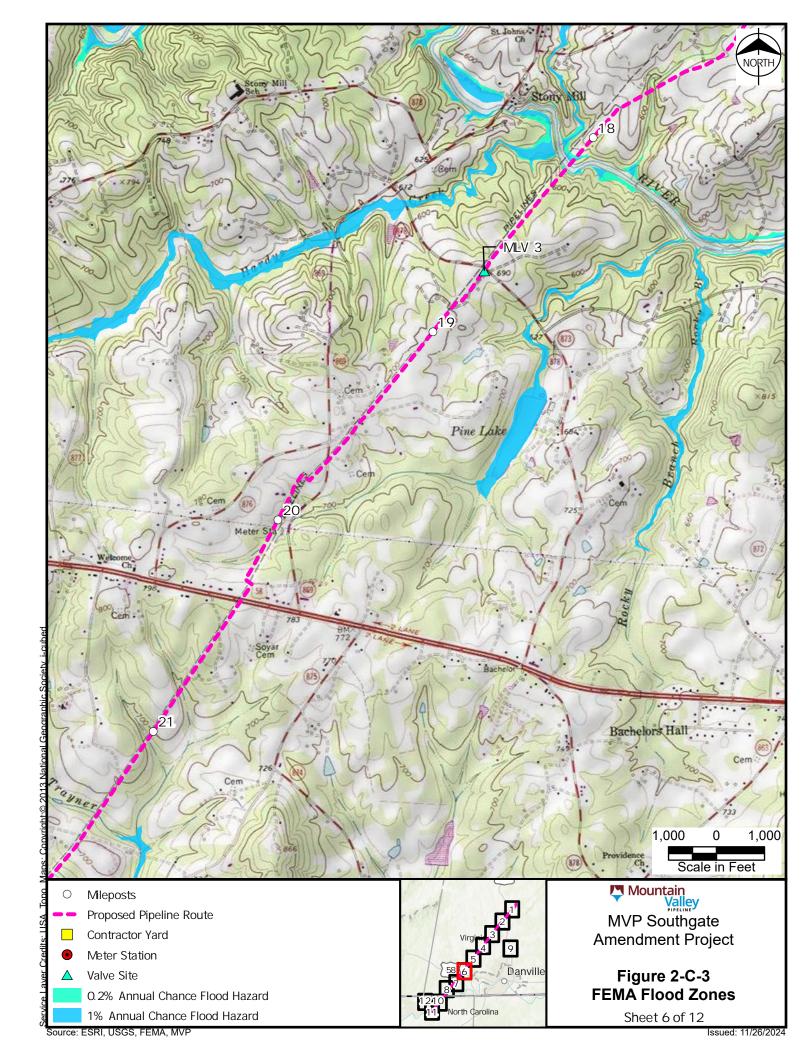


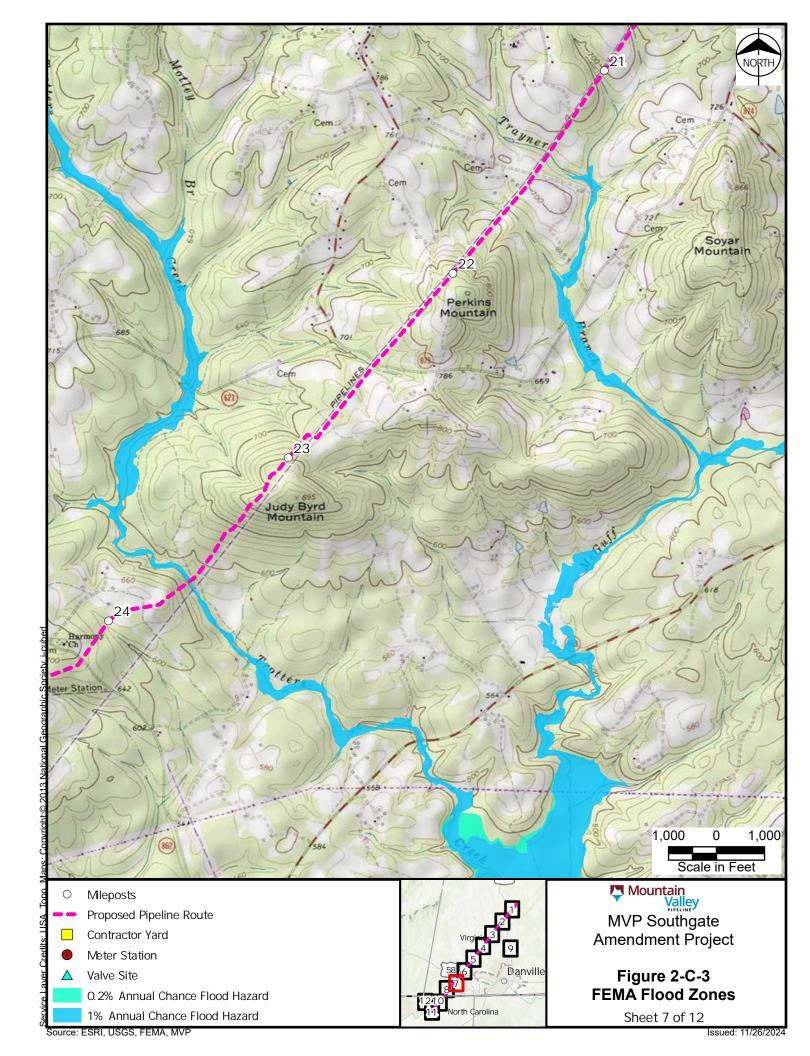


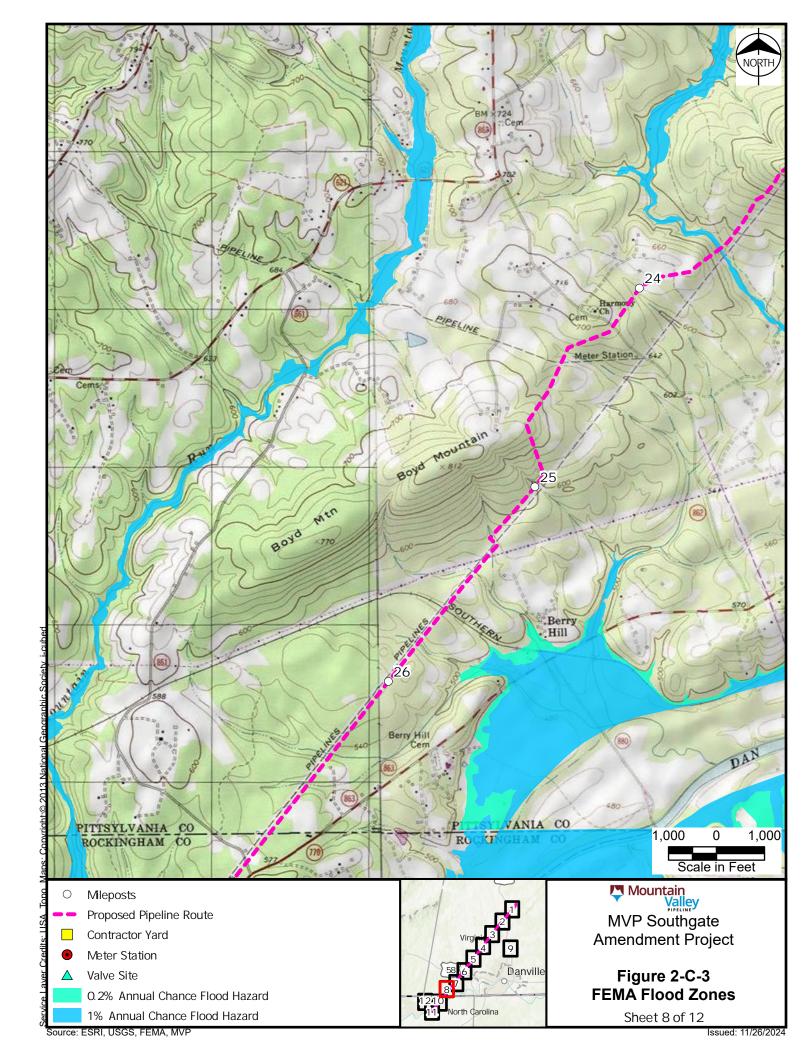


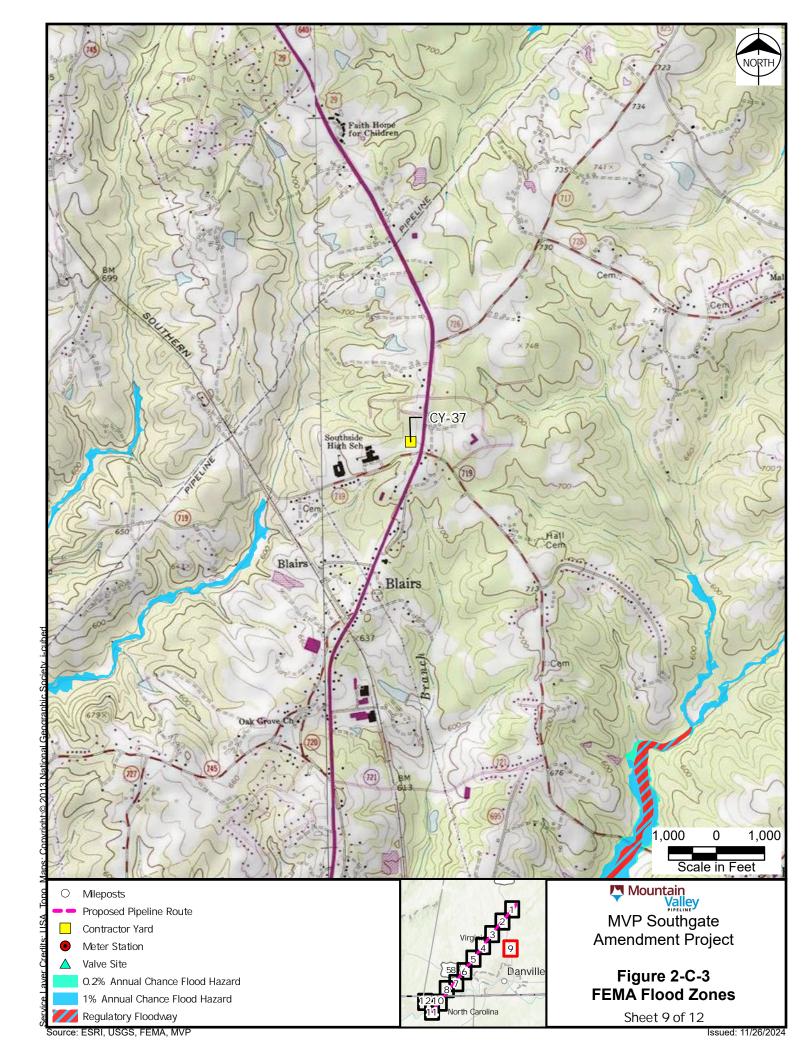


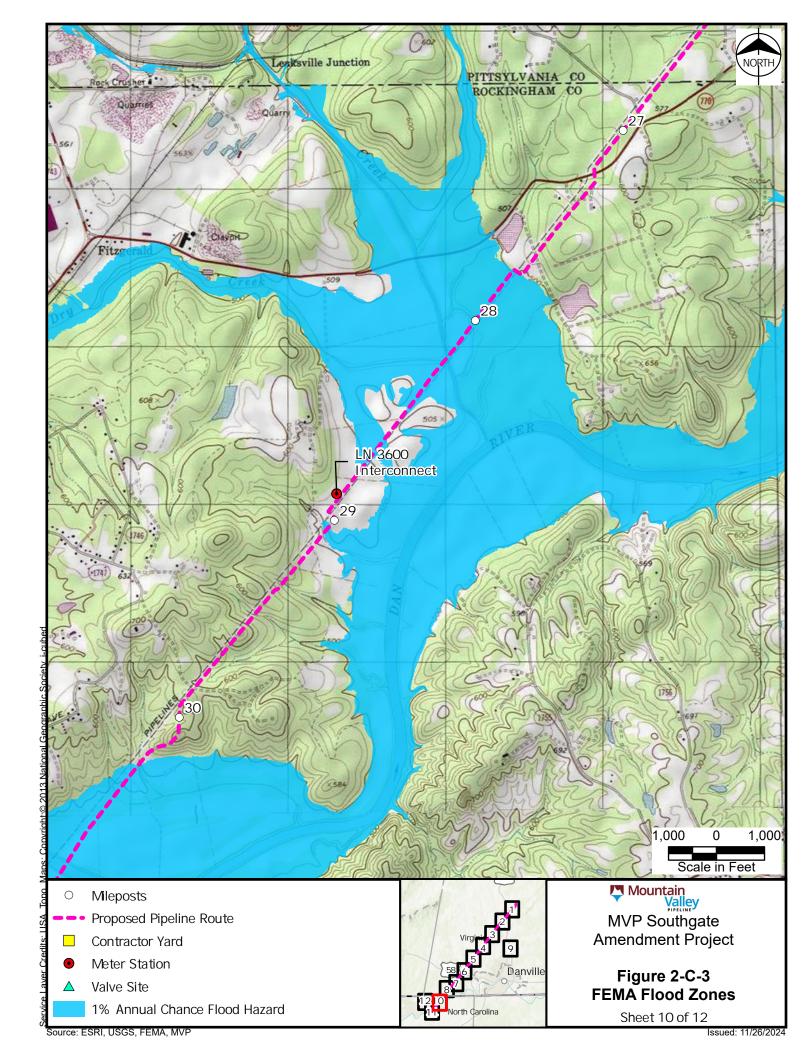


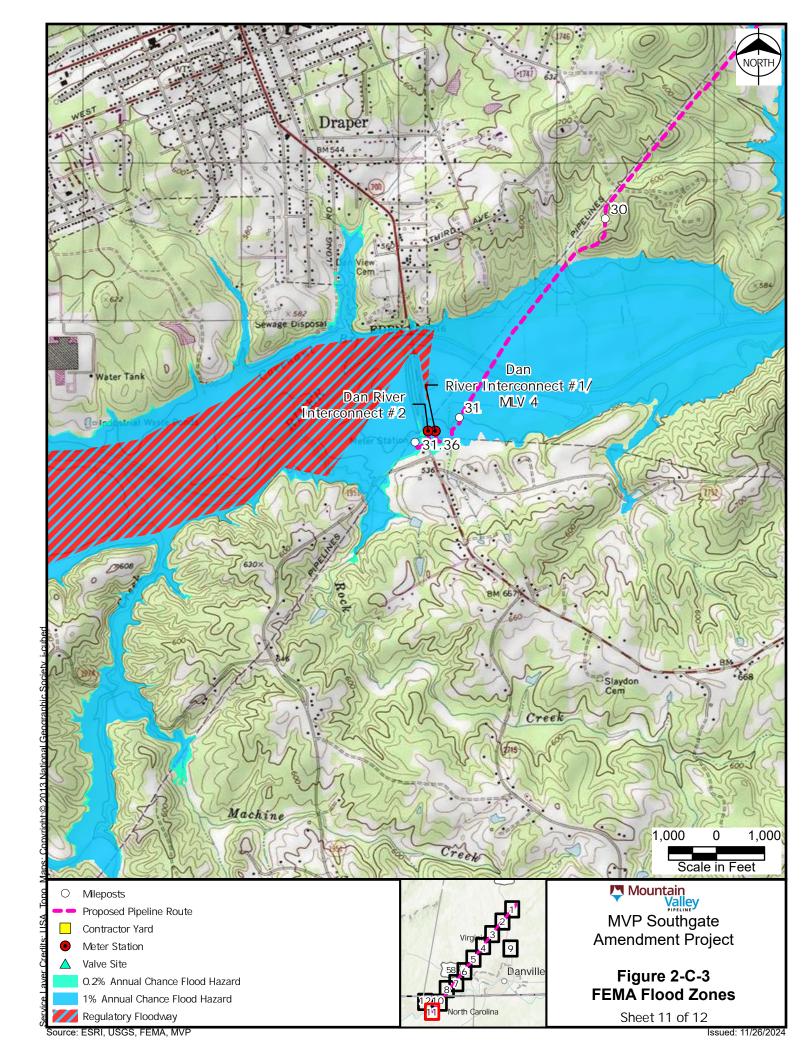


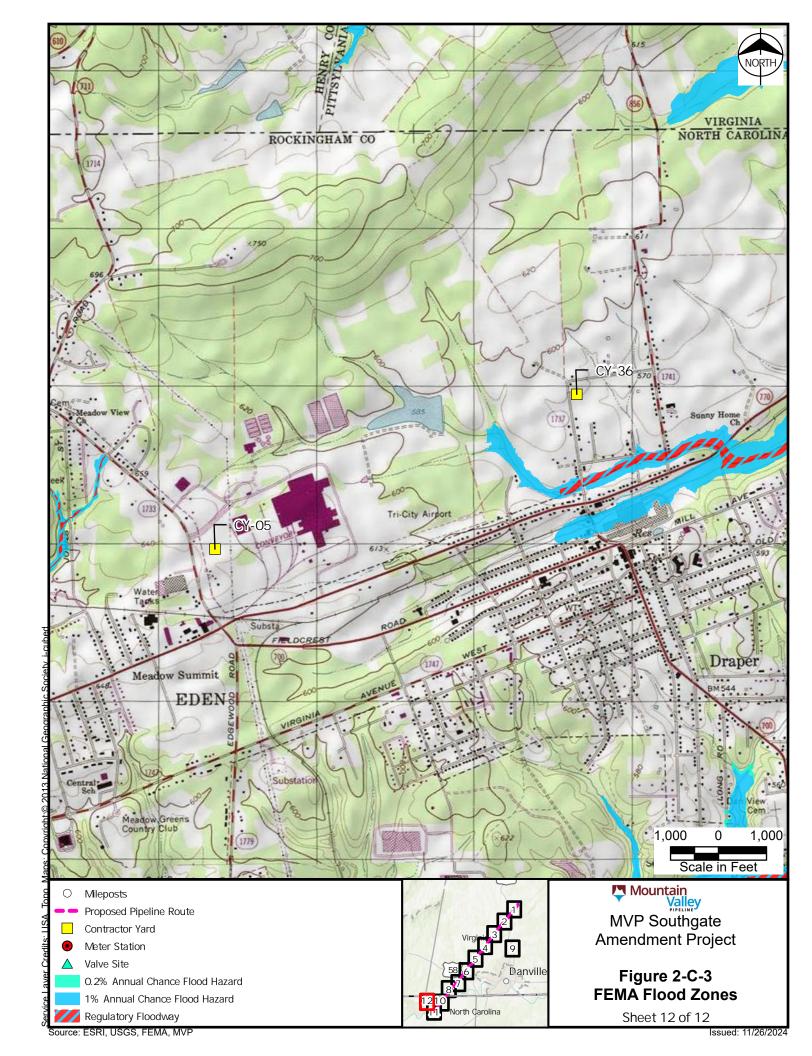














Docket No. CP25-XX-000

Resource Report 2

Appendix 2-D

Identified Sites of Potential Contamination Concern within 0.25-mile of the Amendment Project Workspace



			Арр	endix 2-D							
	Identified Sites of Potential Contamination Concern within 0.25-mile of the Amendment Project										
MP	Site Name / Address	Distance from Project (feet) / Direction	Databases <u>a</u> /	Status and Contamination Issues	Comments						
2.6	Raymond Batterman Residence 556 Batterman Road Chatham, VA 24531	1,315 (SE)	VA LUST, VA RGA LUST, LTANKS	Closed	VA LUST: There was a confirmed release of heating oil in 2011 from a UST. The status of the spill is closed. No further information was given. VA RGA LUST: Two listings for this address for 2011 and 2012; no further information given. The site is located downgradient of the Amendment Project.						
6.6	Pittsylvania County Sanitary Landfill, 382 Rainbow Lane Dry Fork, VA	971 (NW)	FINANCIAL ASSURANCE, SWF/LF, UST, LTANKS, SPILLS, ENF, PFAS ECHO	Active Landfill; violations. USTs have been removed. Note that PFAS investigations and confirmation of contamination has not occurred at this site. At this time, it is unknown if PFAS contamination is present at the site.	Pipeline crossing is adjacent to an existing corridor and downgradient from known landfill area. LF FINANCIAL ASSURANCE: This listing indicates that the landfill closure includes corrective action. The most recent compliance letter was issued in January 2024 for special waste trenches. SWF/LF: This listing contains the permits for landfill trenches to be dug and then closed. UST: This listing indicates that two 3,000-gallon diesel USTs were installed in 1974, and one 9,000-gallon diesel UST was installed in 1985. The three tanks have the status of being removed from the ground. The site was not listed as a leaking UST site. LTANKS: This listing indicates the site had unregulated ASTs. The status is listed as closed in 2022. No additional information is provided regarding the ASTs. Case status is listed as "closed." SPILLS: A spill was reported in July 2024 for an "unauthorized discharge of pollutants" to the Banister River. The spill is under investigation. A "sump stopped working during a rain event, and leachate escaped the lined area and flowed across the road to stormwater pond 5" and eventually discharged to the Banister River. Other spills listed by EDR were identified as closed. ENF: NOVs were issued to the landfill in 2005 for the pre-88 closed area; however, no additional information was provided regarding the NOVs. An NOV was also issued in June 2008 for the active sanitary landfill. No additional information was provided regarding the NOV; however, compliance was achieved in July 2008.						



	Appendix 2-D									
	Identified Sites of Potential Contamination Concern within 0.25-mile of the Amendment Project									
MP	Site Name / Address	Distance from Project (feet) / Direction	Databases <u>a</u> /	Status and Contamination Issues	Comments					
					PFAS ECHO: The landfill is listed in the PFAS ECHO database. No Clean Air Act or Clean Water Act violations were identified. Note that PFAS investigations and confirmation of contamination has not occurred at this site. At this time, it is unknown if PFAS contamination is present at the site. This site is an active sanitary landfill. It currently accepts sanitary waste from Pittsylvania County. This site does not treat, store, or dispose of hazardous waste. This site does not handle PCBs or radioactive materials.					
10.6	Emerson Road Farm, Inc. 333 Emerson Road Dry Fork, VA	385 (SE)	AST, UST	AST is Active. USTs are listed as "permanently out of use" or "removed from ground." No closure information provided; however, the site is downgradient.	AST: There is one active 2,000-gallon diesel AST listed for the site. Its status is "currently in use." The tank was installed in 1991. The site was not listed in the leaking AST database. UST: There is one 1,000-gallon gasoline UST that was installed in 1961, and its status is "PERM OUT OF USE." There is one 1,000-gallon gasoline UST that was installed in 1971. Its status is "PERM OUT OF USE." There is one 1,000-gallon gasoline UST installed in 1978. Its status is "PERM OUT OF USE." There is one 3,000-gallon diesel UST installed in 1980. Its status is "REM FROM GRID." There is an additional listing for a UST installed in 1982, but there is no information regarding the status of the UST or what it stored. No UST closure information was available. The site was not listed in the leaking UST database. The site is downgradient of the Amendment Project.					
11.1	Annette Parrish Residence, 8240 Franklin Turnpike Dry Fork, VA	1,391 (NW)	LUST REG SC; TANKS	Facility status is listed as closed.	LUST REG SC: There was a confirmed release in 2012. The status of the spill is listed as "case closed" in January 2013 according to EDR. The site is upgradient of the Amendment Project. TANKS: EDR lists an "exempt UST"; however, the size, contents, and status of the UST are not provided.					
15.3	Richard Rust Residence,	304 (SE)	LUST REG SC	Facility status is listed as closed.	LUST REG SC: There was a confirmed release in 2011. The status of the spill is listed as "case closed" in March					



	Appendix 2-D									
	Identified Sites of Potential Contamination Concern within 0.25-mile of the Amendment Project									
MP	Site Name / Address	Distance from Project (feet) / Direction	Databases <u>a</u> /	Status and Contamination Issues	Comments					
	5498 Whitmell School Road Dry Fork, VA				2012 according to EDR. The site is downgradient of the Amendment Project.					
17.1	Stowe David Residence 920 Silver Creek Road Danville, VA	612 (W)	LUST REG WC; LTANKS	Facility status is listed as closed.	LUST REG WC: A release was reported in 2013. The status of the release is listed as "case closed" in March 2013 according to EDR. No further information was provided. The site is upgradient of the Amendment Project. LTANKS: Database listing shows similar data as the LUST REG SC database listing.					
18.7	Valve Site (Transcontinental Gas Pipe Line Company, LLC) 2007 Pine Lake Road Danville, VA	448 (NW)	RCRA SQG; RCRA Non-Generator	EDR identified no evaluations and no violations.	RCRA SQG: The site was listed as SQG for 2016. Waste codes listed for the site include ignitable waste (D001), lead (D008), and benzene (D018). No violations or evaluations were found for the site. The site is upgradient to the Amendment Project. RCRA Non-Generator: The site was listed as a Nongenerator for 2017. Waste codes listed include lead (D008). No violations or evaluations were found for the site.					
18.7	Fred Evans Residence 2073 Pine Lake Road Danville, VA	602 (NW)	LUST REG SC; LTANKS	Facility status is listed as closed.	LUST REG SC: A release was reported in 2013. The status of the release is listed as "case closed" in June 2013 according to EDR. No further information was given. The site is upgradient of the Amendment Project. LTANKS: Database listing shows similar data as the LUST REG SC database listing.					
20.3	Henry Chambers Residence 9768 Martinsville Hwy Danville, VA	1,242 (W)	LTANKS	Facility status is listed as closed.	LTANKS: According to EDR, there is one exempt heating oil UST identified for the site. No additional information regarding the tank size or status. According to EDR, the case was closed in May 2015. No additional information was provided. The site is upgradient of the Amendment Project.					
22.4	Gravely Raymond Residence 3109 Horseshoe Road Danville, VA	1,304 (NW)	LTANKS	Facility status is listed as closed.	LTANKS: According to EDR, there is one exempt heating oil UST identified for the site. No additional information regarding the tank size or status is provided. According to EDR, the case was closed in November 2016. No					



			Арро	endix 2-D						
	Identified Sites of Potential Contamination Concern within 0.25-mile of the Amendment Project									
MP	Site Name / Address	Distance from Project (feet) / Direction	Databases <u>a</u> /	Status and Contamination Issues	Comments					
					additional information was provided. The site is upgradient of the Amendment Project.					
27	Cascade	1,167 (NW)	MINES	Open. No violations identified.	MINES: The site is identified as a producer of bloating material (non-metallic). The owner is listed as Solite Corp. No additional information was provided. The site is upgradient of the Amendment Project.					
27.2	Alltech Eden 11761 Hwy 770E Eden, NC	279 (SW)	FINDS; Fuels Program	Open. No violations identified.	FINDS: The EPA Facility Detail Report identified an Office of Transportation and Air Quality Fuels Registration for the site. Fuels Program: The site is identified as a "renewable fuel producer" and is an ethanol producer. The site is upgradient of the Amendment Project.					

<u>a</u>/

AST = Aboveground Storage Tank database containing registered Underground Storage Tanks

ECHO = Enforcement & Compliance History Information

EDR = Environmental Data Resources, Inc.

ENF = Enforcement

FINDS = Facility Index System

LUST = Leaking Underground Storage Tank

LF FINANCIAL ASSURANCE = All facilities that treat, store or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean-up, closure, and post-closure care of their facilities.

LTANKS = VA Leaking Petroleum Storage Tanks

LUST REG = Regulated LUST

MINES = Mineral Resources Data System

MP = Milepost

NA = Not Applicable

NC = North Carolina

NOV = Notice of Violation

NPDES = National Pollution Discharge Elimination System

NW = Northwest

PFAS ECHO = Facilities in Industries that May Be Handling Per- and polyfluoroalkyl substances Listing

RCRA – SQG = Small Quantity Generator

RCRA NonGen = RCRA sites not generating hazardous waste

RCRA NonGen/NLR = RCRA database of sites, non-generators do not presently generate hazardous waste

SC = South Central Region

SE = Southeast



	Appendix 2-D									
	Identified Sites of Potential Contamination Concern within 0.25-mile of the Amendment Project									
MP	MP Site Name / Address Distance from Project (feet) / Direction Databases a/ Status and Comments Issues									
SW = S	outhwest									
SPILLS	= Database containing red	ords of spill incidents	}							
SWF / L	SWF / LF = Solid Waste Facility / Landfill									
UST = L	JST = Underground Storage Tank									
VA = Vi	VA = Virginia									
W = We	est									
WC = W	/est Central Region									



Docket No. CP25-XX-000

Resource Report 2

Appendix 2-E

Additional Temporary Workspace within 50 feet of Wetlands and Waterbodies



				Α	ppendix 2-E		
		A	dditional Tempo	rary Workspace	within 50 feet of W	etlands and Waterbodies	
County, State ATWS ID	MP	Within 50 feet of a Wetland	Within 50 feet of a Waterbody	Feature ID	Distance from Resource Area (feet) <u>a</u> /	Justification	Variance Required (Y/N)
Pittsylvania,	VA						
1000A	0		×	OW-A003	34.7	This is an open water stormwater detention basin located within a proposed contractor yard. No impacts to this feature are anticipated	Υ
1052	5.5	×		W-A022	0	This is an open water stormwater detention basin located within a proposed contractor yard. No impacts to this feature are anticipated	Υ
1096	11.4		×	S-A038	0	ATWS situated in this location to support conventional bore and associated equipment.	Υ
Rockingham	n, NC						
1213	27.7	×		W-B029	33.5	ATWS situated in this location to support conventional bore and associated equipment.	Y
1213A	27.7	×		W-B031b	20.6	ATWS situated in this location to support conventional bore and associated equipment.	Υ
1213A	27.7	×		W-B031a	7.5	ATWS situated in this location to support conventional bore and associated equipment.	Y
1213A	27.7	×		W-B031b	7.5	ATWS situated in this location to support conventional bore and associated equipment.	Y
1232	29.1		×	S-B014	0	ATWS situated in this location to support HDD and associated equipment.	Y
1232	29.1		×	S-B014	0	ATWS situated in this location to support conventional bore and associated equipment.	Y
1251B	31.0	×		W-B004a	0	ATWS situated in this location to support HDD and associated equipment	Y
1251B	31.0	×		W-B004	0.0	ATWS situated in this location to support HDD and associated equipment// hydrostatic testing equipment.	Y
1251A	31.1	×		W-B002	0	ATWS situated in this location to support HDD and associated equipment// hydrostatic testing equipment.	Y
1249A	31.3	×		W-B002	36.0	ATWS situated in this location to support construction of aboveground facilities	Y



	Appendix 2-E Additional Temporary Workspace within 50 feet of Wetlands and Waterbodies									
County, State ATWS ID	MP	Within 50 feet of a Wetland	Within 50 feet of a Waterbody	Feature ID	Distance from Resource Area (feet) <u>a</u> /	Justification	Variance Required (Y/N)			
1249	31.2	×		W-B001	0	ATWS situated in this location to support construction of aboveground facilities	Y			
1253	31.3	×		W-B002	43.2	ATWS situated in this location to support	Y			
1252	31.3	×		W-B002	0	conventional bore and associated equipment.	Y			
a/ Distance	from resou	rce area of 0 feet	indicates the we	tland or waterbod	y is located within the	ATWS.				