Office of
Energy Projects

October 2025

Mountain Valley Pipeline, LLC **Docket No. CP25-60-000**

Mountain Valley Pipeline
Southgate Amendment Project

Environmental Assessment

Washington, DC 20426

Cooperating Agency:

U.S. Fish and Wildlife Service

NEPA Unique ID: EAXX-019-20-000-1751374027

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426
OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas Branch 3
Mountain Valley Pipeline, LLC
Mountain Valley Pipeline
Southgate Amendment Project
Docket No. CP25-60-000

TO THE INTERESTED PARTY:

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared an environmental assessment (EA) for the Mountain Valley Pipeline Southgate Amendment Project (Amendment Project), proposed by Mountain Valley Pipeline, LLC (Mountain Valley), in the above-referenced docket.[1] Mountain Valley proposes to amend the Commission's authorization for the Southgate Project (Docket No. CP19-14-000) and to construct and operate the amended project facilities in Pittsylvania County, Virginia and Rockingham County, North Carolina.

The EA assesses the potential environmental effects of the construction and operation of the Amendment Project in accordance with the requirements of the National Environmental Policy Act (NEPA). The FERC staff concludes that approval of the Amendment Project would not constitute a major federal action significantly affecting the quality of the human environment.

The U.S. Fish and Wildlife Service participated as a cooperating agency in the preparation of the EA. Cooperating agencies have jurisdiction by law or special expertise with respect to resources potentially affected by the proposal and participate in the NEPA analysis.

The Amendment Project includes the following modifications to the previously authorized project:

- the Lambert Compressor Station and Compressor Station Interconnect would not be constructed, and a portion of this site would be utilized for additional workspace and a temporary access road;
- pipeline right-of-way, additional temporary extra workspaces, and access roads from MP 31.3 to MP 75.1 have been removed and would not be constructed;
- four of the eight certificated mainline valves (MLVs) have been removed and would not be constructed;

[1] For tracking purposes under the National Environmental Policy Act, the unique identification number for documents relating to this environmental review is EAXX-019-20-000-1751374027.

- two new interconnects (meter stations) would be constructed (the Lambert Interconnect [including MLV-1 and a pig launcher at MP 0.0] and the Dan River Interconnect #2. Two interconnects, the T-15 Interconnect (now named the Dan River Interconnect #1) and LN 3600 Interconnect have not changed and would remain as certificated. One interconnect, the T-21 Haw River Interconnect, has been removed and would not be constructed;
- the pipeline's operating capacity would increase from 375,000 dekatherms per day (Dth/d) to 550,000 Dth/d;
- two of the four cathodic protection groundbeds would be removed and would not be constructed; and
- two new contractor yards (CY-36 and CY-37) would be utilized, seven contractor yards would be removed and would not be constructed/utilized, and the footprint of one certificated contractor yard (CY-05) would be reduced.

The Commission mailed a copy of the *Notice of Availability* to federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American tribes; potentially affected landowners and other interested individuals and groups; and newspapers and libraries in the Amendment Project area. The EA is only available in electronic format. It may be viewed and downloaded from the FERC's website (www.ferc.gov), on the natural gas environmental documents page (https://www.ferc.gov/industries-data/natural-gas/environment/environmental-documents). In addition, the EA may be accessed by using the eLibrary link on the FERC's website. Click on the eLibrary link (https://elibrary.ferc.gov/eLibrary/search), select "General Search" and enter the docket number in the "Docket Number" field, excluding the last three digits (i.e. CP25-60). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659.

The EA is not a decision document. It presents Commission staff's independent analysis of the environmental issues for the Commission to consider when addressing the merits of all issues in this proceeding. Any person wishing to comment on the EA may do so. Your comments should focus on the EA's disclosure and discussion of potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental effects. The more specific your comments, the more useful they will be. To ensure that the Commission has the opportunity to consider your comments prior to making its decision on this Amendment Project, it is important that we receive your comments in Washington, DC on or before 5:00 pm Eastern Time on **November 3, 2025**.

For your convenience, there are three methods you can use to file your comments to the Commission. The Commission encourages electronic filing of comments and has staff available to assist you at (866) 208-3676 or FercOnlineSupport@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

(1) You can file your comments electronically using the eComment feature on the Commission's website (www.ferc.gov) under the link to FERC Online. This is an easy method for submitting brief, text-only comments on a project;

(2) You can also file your comments electronically using the eFiling feature on the Commission's website (www.ferc.gov) under the link to FERC Online. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." You must select the type of filing you are making. If you are filing a comment on a particular project, please select "Comment on a Filing"; or

(3) You can file a paper copy of your comments by mailing them to the Commission. Be sure to reference the Amendment Project docket number (CP25-60-000) on your letter. Submissions sent via the U.S. Postal Service must be addressed to: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Debbie-Anne A. Reese, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852.

Filing environmental comments will not give you intervenor status, but you do not need intervenor status to have your comments considered. Only intervenors have the right to seek rehearing or judicial review of the Commission's decision. At this point in this proceeding, the timeframe for filing timely intervention requests has expired. Any person seeking to become a party to the proceeding must file a motion to intervene out-of-time pursuant to Rule 214(b)(3) and (d) of the Commission's Rules of Practice and Procedures (18 CFR 385.214(b)(3) and (d)) and show good cause why the time limitation should be waived. Motions to intervene are more fully described at https://www.ferc.gov/how-intervene.

Additional information about the Amendment Project is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website (www.ferc.gov) using the eLibrary link. The eLibrary link also provides access to the texts of all formal documents issued by the Commission, such as orders, notices, and rulemakings.

The Commission's Office of Public Participation (OPP) supports meaningful public engagement and participation in Commission proceedings. OPP can help members of the public, including landowners, community organizations, Tribal members and others, access publicly available information and navigate Commission processes. For public inquiries and assistance with making filings such as interventions, comments, or requests for rehearing, the public is encouraged to contact OPP at (202) 502-6595 or OPP@ferc.gov.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with notification of these filings, document summaries, and direct links to the documents. Go to https://www.ferc.gov/ferc-online/overview to register for eSubscription.

Commission Staff Page Limit and Deadline Certifications

I certify that Commission staff has considered the factors mandated by the National Environmental Policy Act (NEPA) and that this environmental document represents a good-faith effort to disclose the most important considerations required by NEPA within the statutory page limit (42 U.S.C. § 4336a(e)) and the statutory deadline (42 U.S.C. § 4336a(g)). This certification reflects staff's expert judgment that the analysis contained within this environmental document is an accurate representation of the potential environmental effects of the proposed action and the analysis is substantially complete. In staff's judgment, any considerations addressed briefly or left unaddressed would not meaningfully inform the assessment of environmental effects.

Gertrude Fernandez Johnson, Director
Division of Gas – Environment and Engineering

MOUNTAIN VALLEY PIPELINE SOUTHGATE AMENDMENT PROJECT
ENVIRONMENTAL ASSESSMENT

TABLE OF CONTENTS

LIST OF TABLES

APPENDICES

TECHNICAL ABBREVIATIONS AND ACRONYMS

Amendment Project	Mountain Valley Pipeline Southgate Amendment Project
AFM	acid-forming materials
APE	area of potential effects
ATWS	additional temporary workspaces
BA	Biological Assessment
BGEPA	Bald and Golden Eagle Protection Act
CAA	Clean Air Act
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
COE	U.S. Army Corps of Engineers
Commission	Federal Energy Regulatory Commission
CWA	Clean Water Act
CY	contractor yard
dB	decibels
dBA	decibels on the A-weighted scale
DNH	Division of Natural Heritage
Dth/d	dekatherms per day
DOT	U.S. Department of Transportation
EA	environmental assessment
ESA	Endangered Species Act
E&SC	Erosion and Sediment Control Plan
EO	Executive Order
FERC	Federal Energy Regulatory Commission
FEIS	final environmental impact statement
FHWA	Federal Highway Administration
GHG	greenhouse gases
HAP	hazardous air pollutant
HDD	horizontal directional drill
IBA	Important Bird Area
IR	inadvertent return
L_{dn}	day-night sound level
L_{eq}	equivalent sound level
MBTA	Migratory Bird Treaty Act
MP	milepost
Mountain Valley	Mountain Valley Pipeline, LLC
N_2O	nitrous oxide

NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NGA	National Gas Act
NHPA	National Historic Preservation Act
NLAA	not likely to adversely affect
NOA	Notice of Application and Establishing Intervention Deadline
NOS	Notice of Public Scoping
NO_x	oxides of nitrogen
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NCDEQ	North Carolina Department of Environmental Quality
NCDNCR	North Carolina Department of Natural and Cultural Resources
NCNHP	North Carolina Natural Heritage Program
NCOSA	North Carolina Office of State Archaeology
NCWRC	North Carolina Wildlife Resources Commission
NPDES	National Pollutant Discharge Elimination System
NSA	Noise Sensitive Area
OEP	Office of Energy Projects
Order	Order Issuing Certificates
PA	Programmatic Agreement
PEM	Palustrine Emergent
PFO	Palustrine Forested
Plan	*Upland Erosion Control, Revegetation, and Maintenance Plan*
$PM_{2.5}$	particles with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10}	particles with an aerodynamic diameter less than or equal to 10 microns
Procedures	*Wetlands and Waterbody Construction and Mitigation Procedures*
psig	pounds per square inch gauge
PSS	Palustrine Scrub-shrub
SSE	Southeast Supply Enhancement Project
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasures Plan and Unanticipated Discovery of Contamination Plan for Construction Activities in Virginia and North Carolina
SHPO	State Historic Preservation Office
SSURGO	Soil Survey Geographic Database
tpy	tons per year
Transco	Transcontinental Gas Pipe Line Company, LLC
U.S.C	U.S. Code
USEPA	U. S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VADEQ	Virginia Department of Environmental Quality

VADHR	Virginia Department of Historic Resources
VDCR	Virginia Department of Conservation and Recreation
VDE	Virginia Department of Energy
VDWR	Virginia Department of Wildlife Resources
VOC	volatile organic compounds

SECTION A – PROPOSED ACTION

1.0 Introduction

The staff of the Federal Energy Regulatory Commission (Commission or FERC) prepared this environmental assessment (EA) to assess the environmental impacts of the proposed Mountain Valley Pipeline Southgate Amendment Project (Amendment Project) in Pittsylvania County, Virginia and Rockingham County, North Carolina.

On November 6, 2018, Mountain Valley Pipeline, LLC (Mountain Valley) filed an application with the FERC for the Southgate Project in Docket No. CP19-14-000. On February 14, 2020, FERC issued a final Environmental Impact Statement (FEIS) that analyzed the Southgate Project.[1] The Commission issued an Order authorizing the Southgate Project on June 18, 2020 (2020 Order).[2] The Southgate Project was authorized to provide up to 375,000 dekatherms per day (Dth/d) per day of incremental firm transportation service. No construction has occurred to date on the Southgate Project.

On February 3, 2025, Mountain Valley filed an application in Docket No. CP25-60-000, pursuant to Section 7(c) of the Natural Gas Act (NGA) and Part 157 of the Commission's regulations, for the proposed Amendment Project.[3] Mountain Valley seeks to obtain a Certificate of Public Convenience and Necessity (Certificate) to make adjustments to the previously authorized Southgate Project (certificated Project). Mountain Valley seeks to construct and operate a 30-inch-diameter natural gas pipeline totaling 31.3 miles with an operating capacity of 550,000 Dth/d, four interconnects (meter stations), four mainline valves (MLVs), and two cathodic protection groundbeds.

We[4] prepared this EA in compliance with the requirements of the National Environmental Policy Act (NEPA)[5] and the Commission's implementing regulations under 18 Code of Federal Regulations (CFR) 380. The FERC is the lead federal agency for authorizing interstate natural gas transmission facilities under the NGA, and the lead federal agency for preparation of this EA. The U.S. Fish and Wildlife Service (USFWS) is a federal cooperating agency who assisted us in preparing this EA because they have jurisdiction by law or special expertise with respect to environmental effects associated with the Amendment Project.

---

1 *Final Environmental Impact Statement for the Southgate Project* under CP19-14-000 et al., issued February 14, 2020 (FERC eLibrary accession number 20200214-3010).

2 For ease of reference, this EA considers the approved "Southgate Project" to represent the currently approved iteration of the Project authorized by the Commission's June 18, 2020 *Order Issuing Certificate* as relates to Docket No. CP-19-14-000. On September 17, 2020, the Commission issued its *Order Addressing Arguments Raised on Rehearing and Stay*, which sustained the June 18, 2020 Order and dismissed the requests for stay (CP19-14-001). On December 19, 2023 the Commission issued its *Order Granting Extension of Time Request*, granting Mountain Valley Pipeline, LLC a three-year extension to construct the Southgate Project (CP19-14-002).

3 Mountain Valley February 3, 2025 Application. FERC Accession Number 20250203-5192.

4 "We," "us," and "our" refer to the environmental staff of the FERC's Office of Energy Projects.

5 National Environmental Policy Act of 1969, amended (Pub. L. 91-190. 42 U.S. Code §§ 4321–4347, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, Pub. L. 97-258, §4(b), September 13, 1982, Pub. L. 118-5, June 3, 2023, Pub. L. 119-21, July 4, 2025).

The assessment of environmental effects is an integral part of the Commission's decision-making process to determine whether to authorize Mountain Valley's proposal. Our principal purposes in preparing this EA are to: (1) identify and assess potential effects on the natural and human environment that could result from implementation of the proposed action; (2) identify and recommend reasonable alternatives and specific mitigation measures; and (3) facilitate public involvement.

In this EA, we address the Amendment and incorporate by reference the FEIS. All avoidance, minimization, and mitigation measures, and conditions identified in the FEIS and approved in the 2020 Order would continue to be applicable, unless otherwise indicated in this EA, for the proposed Amendment Project.

2.0 Purpose and Need

On December 29, 2023, Mountain Valley notified the Commission that it had entered into new precedent agreements with Duke Energy Carolinas, LLC and the Public Service Company of North Carolina, d/b/a Enbridge Gas North Carolina for a modified Southgate Project. As a result, Mountain Valley further refined the Amendment Project (as described in section 1.0 above) and re-engaged with stakeholders and permitting agencies.

Mountain Valley states the purpose of the Amendment Project is to transport natural gas from an interconnect with the Mountain Valley Pipeline mainline (FERC Docket No. CP16-10-000) in Pittsylvania County, Virginia to an interconnection with East Tennessee Natural Gas Transmission, LLC system in North Carolina, and to two new delivery points in Rockingham County, North Carolina in order to meet the requirements of its shippers.

Under section 7(c) of the NGA, the Commission determines whether interstate natural gas transportation facilities are in the public convenience and necessity and, if so, grants a Certificate to construct and operate them. The Commission bases its decisions on both economic issues, including need, and environmental impacts.

We received several comments that natural gas from the Amendment Project would be used for export. According to Mountain Valley, the Amendment Project was not designed to provide natural gas to a liquefied natural gas export terminal. In addition, the Amendment Project would be located more than 185 miles from the nearest port and even further from the nearest liquefied natural gas export terminal.

3.0 Public Review and Comment

Commission Staff issued two notices soliciting public comment during the NEPA process for the Amendment Project. On February 18, 2025, the Commission issued a *Notice of Application and Establishing Intervention Deadline* (NOA). The NOA established a 21-day comment and intervention period and requested comments on specific concerns about the Amendment Project or issues that should be considered during the preparation of the EA.

On May 22, 2025, the Commission issued a *Notice of Scoping Period Requesting Comments on Environmental Issues for the Proposed Mountain Valley Pipeline Southgate*

Amendment Project, and Notice of Public Scoping Session (NOS).[6] The NOS established a 30-day comment period to assist with the identification of the scope of issues to address in the EA.

We held two public scoping sessions during the NOS comment period in Chatham, Virginia and Wentworth, North Carolina, respectively. The scoping sessions provided interested parties with an opportunity to provide oral comments on the scope of issues to be addressed in this EA. A total of 23 individuals provided oral comments at the scoping sessions. A transcript of each comment session is part of the FERC's public record for the Amendment Project.[7]

In response to the NOA and NOS, the Commission received approximately 192 filings from elected officials, state agencies, city governments, individuals, environmental non-profit groups, and companies. We also received 51 form letters from individuals and organizations. In addition, 4 parties filed large compilations[8], totaling 25,281 pages, of comments and/or signatories, some of which contained form letters.

Several commenters requested the application and scoping comment periods be extended. We have reviewed all comment letters submitted prior to issuance of this EA, regardless of whether comments were received timely. All substantive environmental comments that were received with sufficient time to review and include have been addressed in this EA.

Several commenters requested the Commission prepare a Supplemental Environmental Impact Statement for the Amendment Project. In section D below, we note that impacts from the proposed Amendment Project would result in a finding of no significant impact. Therefore, assessment of the Amendment Project in an EA is sufficient.

The pertinent[9] comments received in response to the NOA and NOS are summarized in table 1 below and are further addressed, as applicable, in the relevant sections of this EA. Other comments received that are outside the scope of our NEPA analysis are not addressed further in this EA because they are not specific to environmental resources that may be affected by the actions requested in Mountain Valley's amendment application. Such topics may be addressed, as appropriate, in the Commission Order for this proceeding. Listed below are examples of these comments:

- address the need for the Mountain Valley Southgate Project and associated amendments and express opposition to fossil fuels in favor of renewable energy; and
- request that the Commission not issue a Certificate for the Amendment Project due to incidents and state agency violations issued for the Mountain Valley Pipeline mainline (CP16-10-000).

---

6 Published in the Federal Register (FR) on May 29, 2025; 90 FR 22719.

7 FERC Accession Number 20250703-4000.

8 FERC Accession Numbers 20250312-5240, 20250312-5033, 20250620-5399, 20250701-5160.

9 As stated previously, the purposes for preparing this EA are to identify and assess potential effects on the natural and human environment and identify and recommend reasonable alternatives and specific mitigation measures, as necessary, to avoid or minimize project-related environmental impacts. Comments that inform this analysis are considered pertinent.

Table 1 Issues Identified from Agency and Public Comments	
Issue	**EA Section Addressing Issue**
Air quality, greenhouse gases, climate change (including fugitive emissions)	section B.7 Air Quality
Aquatic resources (including sedimentation impacts)	section B.4 Fisheries and Aquatic Resources
Cultural resources (including adherence to Section 106 of the National Historic Preservation Act [NHPA])	section B.5 Cultural Resources
Geology (including karst; blasting)	section B.1 Geology
Noise	section B.8 Noise
Safety	section B.10 Reliability and Safety
Soils (including sedimentation)	section B.2 Soils
Surface water, groundwater, and wetlands (including water quality and sedimentation)	section B.3 Water Resources
Vegetation and wildlife	section B.4 Fisheries, Vegetation, and Wildlife
Threatened and endangered species	section B.4.4 Special Status and Protected Species

4.0 Proposed Actions

We have categorized the changes/modifications from the previously certificated Project (Docket No. CP19-14-000) into four categories: 1) previously certificated items that would no longer be constructed; 2) effects associated with additional/new footprint outside of the previously certificated footprint; 3) changes in construction methods, procedures, and/or mitigation measures; and 4) additional effects on resources within the previously certificated workspace as a result of updated surveys and/or publicly available information.

4.1 Previously Certificated Items No Longer Proposed

Mountain Valley would no longer construct the following certificated facilities[10]:

- the Lambert Compressor Station and Compressor Station Interconnect (milepost [MP] 0.0);
- pipeline right-of-way, additional temporary extra workspaces, and access roads from MP 31.3 to MP 75.2;
- the 0.5-mile H-605 pipeline;
- 24-hour construction at the interconnects (Lambert Compressor Station/Interconnect, LN 3600 Interconnect, T-15 Dan River Interconnect, and T-21 Haw River Interconnect);
- the T-21 Haw River Interconnect;
- mainline valves (MLVs) 5 (MP 42.2), 6 (MP 55.1), 7 (MP 68.7), and 8 (MP 73.2);

[10] Mileposts referred to in this section correspond to mileposts as listed in the FEIS. The entire Amendment Project was re-mileposted and therefore mileposting will not match between the FEIS and this EA.

- cathodic protection groundbeds 3 (MP 44.9) and 4 (MP 60.2);
- contractor yards CY-03 (16.8 acres), CY-22 (23.1 acres), CY-19 (36.2 acres), CY-25 (24.9 acres), CY-08 (11.5 acres), CY-26A (11.8 acres), and CY-26B (10.3 acres);
- 25 additional temporary workspaces that would have been located within MP 0 and MP 31.3;
- 17 access road that would have been located within MP 0 and MP 31.3; and
- approximately 10.6 acres of impact at contractor yard CY-05.[11]

As these items would no longer be constructed, they are not discussed further in this EA, except as they relate to the no-action alternative as discussed in section C. Table 2 identifies the reduction in effects due to the Amendment. Emission reductions are discussed in section B.7.

Table 2
Comparison of Effects for the Amendment Project and the Certificated Project

Resource	Certificated Project	Amendment Project
Pipeline Length (miles)	75.1 [a]	31.3 [a]
Land required for construction (acres)	1,465.9 [b]	580.9 [a]
Land required for operations (acres)	450.0 [b]	195.2 [a]
Waterbody Crossings (number)	277 [c]	88 [d]
Wetland Crossings (acres)	25.5 [e]	22.4 [d]
Acreage of Forest Affected	617.4 [f]	243.4 [g]
Residences within 50 feet of workspaces (number)	70 [h]	16 [a]

[a] Mountain Valley, August 8, 2025, supplemental filing Table 3-1 of Attachment G-4, FERC Accession Number 20250808-5160.
[b] FEIS for the Southgate Project page 2-8. FERC Accession Number 20200214-3010.
[c] FEIS for the Southgate Project page 4-36. FERC Accession Number 20200214-3010.
[d] Mountain Valley September 3, 2025 Attachment 2. FERC Accession Number 202050903-5011.
[e] FEIS for the Southgate Project page 4-55. FERC Accession Number 20200214-3010.
[f] FEIS for the Southgate Project page 4-114. FERC Accession Number 20200214-3010.
[g] Mountain Valley September 3, 2025 Attachment 4. FERC Accession Number 20250903-5011.
[h] FEIS for the Southgate Project page 4-119. FERC Accession Number 20200214-3010.

4.2 New Footprint and Facilities

The pipeline diameter would increase from 16-inch and 24-inch diameter natural gas pipelines to a single 30-inch diameter natural gas pipeline.[12] According to Mountain Valley,[13] the trench depth required for a 30-inch diameter pipeline would not be different than the trench depth certificated for the 16-inch and 24-inch diameter pipelines.

---

11 Mountain Valley September 3, 2025 Environmental Information Request Response at 11 and Appendix 1-F in Attachment 4. FERC Accession Number 20250903-5011.

12 Mountain Valley February 3, 2025 Application Resource Report 1 at 1-2. FERC Accession Number 20250203-5192.

13 Mountain Valley March 26, 2025 at 12. FERC Accession Number 20250326-5176.

The pipeline's operating capacity would increase from 375,000 dekatherms per day (Dth/d) to 550,000 Dth/d. Mountain Valley is not requesting to change the maximum allowable operating pressure (MAOP) of the Amendment pipeline (1,440 pounds per square inch gauge [psig]).[14] Additional discussion regarding Mountain Valley's proposed increased operating pressure can be found in section B.10.

The Lambert Interconnect (including MLV-1 and a pig launcher at MP 0.0) and the Dan River Interconnect #2 (MP 31.3) are new interconnects (meter stations) for the Amendment Project; both would be located within certificated workspace.[15] The T-15 Interconnect (meter station) was renamed the Dan River Interconnect #1 (including MLV-4 and a pig receiver at MP 31.3). Interconnect LN 3600 (meter station) has not changed and would remain as certificated (at MP 28.9).

Changes associated with the Amendment Project would result in 28.1 acres of disturbance outside of certificated workspaces between MP 0 and MP 31.3 for construction of the pipeline and 15.6 acres for additional temporary workspaces (ATWS) during construction. Changes associated with the Amendment Project outside of certificated workspaces between MP 0 and MP 31.3 would impact 15.8 acres for operations. Mountain Valley would utilize 2 additional contractor yards (CY-36 and CY-37 totaling 11.8 acres)[16] and 10 new/modified temporary access roads (totaling 3.8 acres) outside of certificated Project footprint.[17] As discussed above, Mountain Valley would use a smaller area of certificated contractor yard CY-05 (7.7 acres[18] as opposed to the 18.3 acres previously certificated). Mountain Valley would utilize contractor yard CY-01 as previously certificated.

Mountain Valley modified 39 certificated ATWSs and added 7 new ATWSs (for a total of 24.8 acres) for the Amendment Project (modified ATWSs include those within certificated workspaces and those outside of certificated workspaces).[19]

Mountain Valley modified 20 temporary and permanent access roads approved for use for the certificated Project for use on the Amendment Project. Mountain Valley added 5 new temporary access roads (totaling 4.2 acres) for the Amendment Project (TA-PI-001A, TA-RO-077A, TA-RO-077, TA-RO-080A, and TA-RO-083A).[20]

Mountain Valley adjusted 77 locations along the Amendment Project route which resulted in workspace type (i.e., temporary versus permanent) changes. At 32 locations (totaling 6.4 acres), the workspaces changed from temporary impacts for the certificated Project to proposed permanent effects for the Amendment Project. Workspace changes from temporary to

---

14 Mountain Valley February 3, 2025 Application at 7. FERC Accession Number 20250203-5192.

15 An interconnect is a receipt or delivery point with connecting piping and a meter station.

16 Mountain Valley August 8, 2025 Table 1.3-1 of Attachment G-1. FERC Accession Number 20250808-5160.

17 Mountain Valley September 3, 2025 Appendix 1-F Attachment 3. FERC Accession Number 20250903-5011.

18 Mountain Valley August 8, 2025 Table 1.3-4 of Attachment G-1. FERC Accession Number 20250808-5160.

19 Mountain Valley September 3, 2025 Table 1-D of Attachment 4. FERC Accession Number 20250903-5011.

20 Mountain Valley September 3, 2025 Table 1-F of Attachment 4. FERC Accession Number 20250903-5011.

permanent would affect 1.3 acres of agriculture lands, 0.3 acre of commercial/industrial lands, 0.3 acre of upland forest/woodland (deciduous), 0.8 acre of upland forest/woodland (evergreen), 2.0 acres of upland forest/woodland (mixed), 1.6 acres of upland open land, and 0.2 acre of wetlands.[21] At 45 locations (totaling 4.1 acres) the workspaces changed from permanent effects for the certificated Project to temporary effects for the Amendment Project.[22]

Mountain Valley adopted six route deviations into the Amendment Project (totaling 3.1 miles). Centerline shifts generally range from 25 feet to about 1,410 feet, for engineering and environmental reasons. In addition, Mountain Valley incorporated four alignment shifts due to continued discussions with the Transcontinental Gas Pipe Line Company, LLC (Transco) for the Eden Loop portion of the Southeast Supply Enhancement (SSE) Project (CP25-10). These alignment shifts (centerline and workspaces) range from 25 to 45 feet.[23]

Construction of the Amendment Project would affect approximately 59.3 acres of land that is not within the previously certificated footprint, and operation of the Amendment Project would affect approximately 15.8 acres of land that is not within the previously certificated footprint. This would include the alignment modifications for the pipeline facilities, aboveground facilities, ATWS, contractor yards, and new or improved access roads.[24]

4.3 Construction Method and Mitigation Changes

4.3.1 Construction Method/Mitigation Measure Changes

Waterbody and wetland boundaries have changed since the FEIS as reflected in updated surveys conducted by Mountain Valley for the entire Amendment Project route. In addition, Mountain Valley has re-evaluated the proposed crossing methods for all waterbody and wetland crossings. Mountain Valley is requesting authorization to change the crossing method for the Sandy River (and a tributary to the Sandy River) from dry-ditch crossing method to a horizontal directional drill (HDD). Mountain Valley would utilize the same crossings methods for waterbodies and wetlands that were previously discussed in section 2.4.2 of the FEIS. Additional information regarding these waterbodies and wetlands can be found in sections B.3.2 and B.3.3 of this EA.

As part of the Amendment Project, Mountain Valley provided updated typical right-of-way configurations.[25] The construction right-of-way width would remain as certificated except at one wetland as discussed in section B.3.3.2.

---

21 Mountain Valley September 3, 2025 Table B. FERC Accession Number 20250903-5011.

22 Mountain Valley August 8, 2025 Table 2-7. FERC Accession Number 20250808-5160. Mountain Valley September 3, 2025 Table 2-7. FERC Accession Number 20250903-5011.

23 Mountain Valley July 30, 202 at Data Response at 2. FERC Accession Number 20250730-5135.

24 Mountain Valley August 8, 20205 Table 1.3-1 of Attachment G-1. FERC Accession Number 20250808-5160.

25 Mountain Valley February 3, 2025 Resource Report 1, Appendix 1-C1. FERC Accession Number 20250203-5192. Mountain Valley July 15, 2025 Attachment 1-3. FERC Accession Number 20250715-5108.

4.3.2 24-Hour Construction

As part of its Amendment Project application, Mountain Valley requests that the Commission allow 24-hour activities at the Sandy River due to a change from a dry-ditch crossing to an HDD crossing.

Mountain Valley received authorization from the Commission (as discussed in section 4.11.2.3 of the FEIS) for 24-hour construction at the interconnects associated with the certificated Project. However, Mountain Valley is no longer proposing 24-hour construction at the interconnects for the Amendment Project.

Mountain Valley also received authorization from the Commission (as discussed in section 4.11.2.3 of the FEIS) for 24-hour construction at the Dan River HDD and at 4 railroad crossings (MP 5.3, MP 25.0, MP 39.7, and MP 69.8). The railroad crossings at MP 39.7 and 69.8 have been removed from the Amendment Project. Due to re-mile posting of the Amendment Project, the certificated railroad crossings at MP 5.3 and MP 25.0 are now at MPs 5.6 and 25.7, respectively. Mountain Valley provided updated noise analyses for the Dan River HDD due to a route change at this location and at the two railroad crossings to reflect current conditions. In addition, Mountain Valley has identified 18 conventional bore locations that would require 24-hour construction. The noise surveys are discussed in section B.8 of this EA.

4.3.3 Mitigation Plans

Mountain Valley developed updated plans since the FEIS describing how they would construct and maintain the Amendment Project (see table A-1 of appendix A). These plans also include measures to avoid and minimize environmental effects. We have reviewed the updated plans and find them acceptable.

Mountain Valley also developed two entirely new mitigation plans, its *Acid Forming Materials (AFM) Contingency Plan* and its *Migratory Bird Conservation Plan* (MBCP). We have reviewed these plans and find them acceptable (see sections B.1 and B.4.4, respectively).

As discussed in section 2.4 of the FEIS, Mountain Valley requested, and we approved, modifications to certain requirements of our *Upland Erosion Control, Revegetation and Maintenance Plan* (FERC Plan); herein referred to as Mountain Valley's Plan and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures); herein referred to as Mountain Valley's Procedures (see table A-1 of appendix A). Mountain Valley revised its Plan and Procedures for the Amendment Project. Specifically, Mountain Valley is no longer requesting a modification to the spacing of temporary slope breakers or an adjustment to the mowing timing restrictions to protect migratory birds. Mountain Valley has not requested any additional modifications to the Plan for the Amendment Project. Modifications to Mountain Valley's Procedures are discussed in section B.3.3.

4.4 Updated Surveys/Data Within the Certificated Workspace

In April 2024, Mountain Valley began contacting landowners to request permission to conduct updated civil and environmental surveys for the Amendment Project. Mountain Valley has completed waterbody and wetland surveys for all parcels except one (VA-PI-005.000

between MPs 1.0 and 1.5) where access was not granted. Mountain Valley has surveyed all parcels (100 percent) for cultural resources.[26]

Section B of this EA identifies where updated survey/data within the certificated workspace resulted in additional effects on resources not considered in the FEIS.

5.0 Construction Procedures

The Amendment Project facilities would be designed, constructed, tested, operated, and maintained to conform with applicable regulations, including U.S. Department of Transportation (DOT) regulations at 49 CFR Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards," and Commission regulations at 18 CFR Section 380.15, "Siting and Maintenance Requirements." In addition, Mountain Valley would follow its plans as discussed above in section A.4.3.3.

Conventional pipeline construction techniques, as discussed in section 2.4 of the FEIS, would be utilized. The proposed pipeline would be collocated adjacent to or slightly overlapping existing infrastructure for approximately 20 miles, or 64 percent of the overall Amendment Project distance.[27]

Construction is estimated to begin in the fourth quarter of 2026 (if all necessary approvals and clearances have been obtained) with initial clearing activities. Pipeline construction would begin in early 2027 and continue to a target in-service date of mid-2028. The construction workforce would reach a peak of 400 people with approximately four new employment positions during operation of the Amendment Project.[28]

Construction activities would generally occur six days a week from 7:00 am to 7:00 pm or daylight hours, except where the pipeline would be installed via HDD (Sandy River and Dan River crossings), at MP 5.6 and MP 25.7 railroad crossings, and at conventional bore crossing locations. Construction activities could continue beyond 7:00 pm or occur on Sundays, including activities which require 24-hour operations such as dewatering (trench, conventional bore pits, and HDD pits), hydrostatic testing, pig runs, and tie-in welds.

6.0 Permit Approvals and Regulatory Consultations

Mountain Valley contacted agencies that may have regulatory approval or interest in the Amendment Project, and would obtain all necessary permits and approvals relating to the Amendment Project prior to the start of construction (table 3). Mountain Valley would be responsible for obtaining all permits and approvals required to construct and operate the Amendment Project, regardless of whether or not they appear in this table.

---

[26] Mountain Valley July 15, 2025 Data Response at 20. FERC Accession Number 20250715-5108.

[27] Mountain Valley February 3, 2025 Application Resource Report 1 at 1-7. FERC Accession Number 20250203-5192.

[28] Mountain Valley February 3, 2025 Application Resource Report 1 at 1-16. FERC Accession Number 20250203-5192.

Table 3 Anticipated Permits and Approvals			
Agency	**Permit/Approval/Consultation [a]**	**(Anticipated) Submittal/ Initiation Date**	**(Anticipated) Permit Receipt/ Completion Date**
Federal			
Federal Energy Regulatory Commission	Natural Gas Act, Section 7; Amendment Certificate for construction and operation of interstate natural gas pipeline	February 2025	Pending
U.S. Army Corps of Engineers Norfolk District Wilmington District	Individual Section 404 Permit for impacts on waters of the U.S., including wetlands	April 2025	(March 2026)
U.S. Fish and Wildlife Service Virginia and North Carolina	Consultation under Section 7 of the Endangered Species Act for potential impacts on federally protected species. Consultation regarding impacts on migratory birds and eagles	May 2025	(March 2026)
Virginia			
Virginia Department of Historic Resources (VADHR), Division of Review and Compliance	Consultation and clearance regarding potential impacts on pre-historic and historic resources eligible for listing on the National Register of Historic Places (NRHP)	August 2024	March 2025
Virginia Department of Environmental Quality (VADEQ), Water Division	Individual Section 401 Water Quality Certification and Water Protection Permit	March 2025	(December 2025)
VADEQ, Water Division	Standards and Specifications for the discharge of construction stormwater	June 2025	August 2025
Virginia Department of Conservation and Recreation, Division of Natural Heritage	Consultation for state-threatened and endangered plant and insect species and other state-designated “Natural Heritage” resources	July 2024	March 2025
Virginia Department of Wildlife Resources, Wildlife and Environmental Services Division	Consultation for state-threatened and endangered animal and aquatic species	July 2024	August 2025
Virginia Department of Transportation (VDOT)	Road bonds and crossing permits	TBD Prior to Construction	TBD Prior to Construction
North Carolina			
North Carolina Department of Environmental Quality (NCDEQ), Division of Water Resources	Individual Section 401 Water Quality Certification, Isolated/non-404 wetlands and water permit, and Buffer authorization	March 2025	(December 2025)
NCDEQ, Division of Energy, Mineral and Land Resources	General Permit NCG010000 to discharge stormwater under the National Pollutant Discharge Elimination System (NPDES) for Construction Activities	June 2025	(December 2025)
NCDEQ, Natural Heritage Program	Consultation for state-threatened and endangered species	July 2024	March 2025

Table 3 Anticipated Permits and Approvals			
Agency	**Permit/Approval/Consultation [a]**	**(Anticipated) Submittal/ Initiation Date**	**(Anticipated) Permit Receipt/ Completion Date**
North Carolina Wildlife Resources Commission	Consultation for state-threatened and endangered species	December 2024	February 2025
North Carolina Historic Preservation Office (NC HPO)	Consultation and clearance regarding potential impacts on pre-historic and historic resources eligible for listing on the NRHP	August 2024	February 2025
North Carolina Department of Transportation (NCDOT)	Road bonds and crossing permits	TBD Prior to Construction	TBD Prior to Construction
[a] Consultations will occur continuously throughout the development of the Amendment Project. Source: Mountain Valley, September 3, 2025, Environmental Information Request Response at 16, FERC Accession Number 20250903-5011.			

7.0 Non-Jurisdictional Facilities

Section 2.2 of the FEIS provides a description of non-jurisdictional facilities. As stated in the FEIS, the non-jurisdictional facilities associated with the Amendment Project would include aboveground and underground powerlines and telecommunications from existing nearby power poles to the interconnects (meter stations), MLVs, and cathodic protection groundbeds. As discussed above, the Lambert Interconnect (and MLV-1) and the Dan River Interconnect #2 would be the only new facilities associated with the Amendment Project that would require non-jurisdictional facilities. These facilities would require up to 471 linear feet of electric service (120/240, single phase 3 wire, 200 amp).[29] Both facilities would be constructed within certificated workspace.

Cumulative effects associated with these non-jurisdictional facilities are addressed in section B.11.

[29] Mountain Valley September 3, 2025 Environmental Information Request Response Attachment 4 at 3. FERC Accession Number 20250903-5011.

SECTION B – ENVIRONMENTAL ANALYSIS

We incorporate by reference the environmental analyses contained in the FEIS in Docket No. CP19-14-000. The Amendment Project would continue to be designed, operated, and maintained in accordance with the DOT pipeline safety regulations (49 CFR 192) and all applicable permits, as identified in the FEIS.

1.0 Geology

The geologic setting, surficial geology, bedrock geology, and effects on mineral and paleontological resources would remain as described in sections 4.1.1, 4.1.2, 4.1.3, and 4.1.4.8 of the FEIS; however, due to scope changes, the Amendment Project would not be within 0.25 mile of the East Alamance Quarry. Impacts on the Amendment Project from seismicity (including active faults and soil liquefaction) would remain as described in the FEIS at sections 4.1.4.1, 4.1.4.2, and 4.1.4.3; effects of and impacts on the Amendment Project from other geologic hazards (i.e., landslides, land subsidence, shallow bedrock/blasting, and flood) would also remain as described in the FEIS except as detailed below. No additional effects related to uranium and paleontological resources, beyond what was discussed in the FEIS (in sections 4.1.4.8 and 4.1.3, respectively), would be expected for the Amendment Project.

1.1 New Footprint

1.1.1 Surficial and Bedrock Geology

About 5.7 miles of the H-650 pipeline would be outside of the certificated area. Surficial materials and bedrock underlying the Amendment Project, outside of the certificated Project footprint, would generally be the same as those that were discussed in section 4.1 of the FEIS and consist of residual surficial materials formed from the weathering of underlying sedimentary and metamorphic bedrock.[30] Table A-2 (appendix A) identifies by milepost the bedrock formations that would be crossed by the Amendment Project outside of the certificated Project footprint.

The Amendment Project footprint includes two areas of shallow bedrock outside of the certificated Project area, between MP 22.63 and MP 22.69 and between MP 25.22 and MP 25.52. Blasting may be necessary for construction at these two locations.[31] However, blasting would only be employed after all other reasonable means of excavation have been considered. Methods and mitigation measures that Mountain Valley would utilize in areas of blasting remain as described in the FEIS at section 4.1.4 and as outlined in its *General Blasting Plan*.

---

30 Mountain Valley August 8, 2025 Table 6.2-2 of Attachment G-1. FERC Accession Number 20250808-5160.

31 Mountain Valley August 8, 2025 Table 6-B-2 of Attachment G-1. FERC Accession Number 20250808-5160.

1.1.2 Geologic Hazards

Landslides

Mountain Valley identified areas with slopes greater than 30 percent and crossing distances greater than 20 feet as susceptible to landslides and identified two such areas outside of the originally certificated Project footprint that would be crossed by the Amendment Project. The first area is 545.3 feet in length between MP 24.81 and 24.91 and the second area is 266.4 feet in length between MP 25.00 and 25.04.[32] Mountain Valley would adhere to the measures outlined in the FEIS (see section 4.1.4) to minimize the potential for landslides to occur and mitigate effects, including following its *Landslide Mitigation Report* (discussed further below), employing temporary sediment barriers to prevent movement of sediment, diverting water to vegetated areas, and installing post-construction stormwater controls and permanent slope breakers as needed.

Karst

Karst features include sinkholes, caves, springs, and disappearing streams related to the dissolution of soluble rock such as limestone, dolomite, and gypsum. Mountain Valley did not identify new karst areas during 2024/2025 surveys. However, the boundaries of two karst areas previously discussed in the FEIS, changed due to changes made to the originally certificated Project footprint (table 4). Mountain Valley would implement the same measures, such as employing a karst specialist to conduct field investigations of karst features, as outlined in the FEIS (section 4.1.4) for these karst areas.

Table 4
Potential Karst Crossed by the Amendment Project Outside the Certificated Project Footprint

Start MP	End MP	Crossing Length (miles)	Rock Type	Construction Method
0.03	1.00	3,696	Conglomerate (covered by terrace deposits)	Open-cut and bore (road crossings)
14.95	15.70	3,960	Conglomerate	Open-cut and bore (road crossings)

[a] Sources: Heinika et al., 1983; Marr, 1984; Price et al., 1980
Mountain Valley, August 8, 2025, supplemental filing Table 6.5-1of Attachment G-1, FERC Accession Number 20250808-5160.

1.2 Construction Method/Mitigation Measure Changes

1.2.1 HDD Contingency Plan

Mountain Valley filed an amended *HDD Contingency Plan* for the Amendment Project to reflect route changes and waterbody crossing distances associated with the Amendment

[32] Mountain Valley August 8, 2025 Table 6-C-1 of Attachment G-1. FERC Accession Number 20250808-5160.

Project.[33] The procedures within the plan did not materially change from the plan that was reviewed and evaluated in the FEIS (section 4.1.4.9). Additional discussion can be found in section B.3.2.3.

1.2.2 Landslide Mitigation Report

Mountain Valley revised its *Landslide Mitigation Report* for the Amendment Project.[34] The revised report is specific for the Amendment Project and addresses areas of potentially unstable slopes, prescribes field reviews of potential landslide prone areas prior to construction, and details mitigation measures available to mitigate unstable slopes. The revised *Landslide Mitigation Report* includes additional measures and details regarding compaction of backfill and track-in workspaces as well as field review of construction areas prior to the start of construction. The measures described in the *Landslide Mitigation Report* did not materially change from what was reviewed and evaluated in the FEIS (section 4.1.4.4).

1.2.3 Acid-forming Materials

Mountain Valley identified 16 areas (totaling 4.4 miles) where AFM could be encountered.[35] Since issuance of the FEIS, Mountain Valley has developed an *AFM Contingency Plan* to establish the procedures that would be followed if AFM were encountered during construction. The *AFM Contingency Plan* would apply to all areas of potential AFM along the Amendment Project.

Mountain Valley would coat the pipe in fusion bonded epoxy to prevent any damage or deterioration to the pipeline. Mountain Valley would segregate excavated bedrock that could potentially produce acid conditions, limiting the amount of time the materials would be exposed. Mountain Valley would also conduct periodic inspections of the cathodic corrosion prevention system to ensure proper function of corrosion mitigation.

Additional mitigation measures found in the *AFM Contingency Plan* include:

- employing environmental inspectors to be onsite and conduct field observations during construction;
- managing spoils and applying agricultural lime to excavated trench materials;
- compacting trench backfill, where possible, to limit internal permeability while leaving the top 12 to 18 inches of backfill loose to promote plant growth; and
- bulk blending excess trench fill material with lime at the moderate or high-risk rate and placed in accordance with Mountain Valley's standard practice for excess fill.

---

[33] Mountain Valley February 3, 2025 Application Resource Report 1 Appendix 1-G. FERC Accession Number 20250203-5192.

[34] Mountain Valley March 28, 2025 Data Response at Appendix 1-G. FERC Accession Number 20250328-5286.

[35] Mountain Valley September 3, 2025 Data Response at Attachment 7. FERC Accession Number 20250903-5011.

We conclude that constructing and operating the Amendment Project facilities in accordance with its *AFM Contingency Plan* would not result in a significant effect on the pipeline from acid forming materials.

1.3 Updated Surveys/Data Within the Certificated Workspace

Mountain Valley intends to complete geophysical (electrical resistivity) surveys to further evaluate the subsurface conditions at the Sandy River HDD crossing.[36] According to Mountain Valley, these surveys will be completed in September 2025 and the results will be filed with the Commission in October 2025.[37]

1.4 Conclusion

Based on the above discussion, and in consideration of Mountain Valley's proposed mitigation and design criteria, we conclude that the Amendment Project would not significantly affect or be impacted by mineral resources or geological conditions.

2.0 Soils

2.1 New Footprint

As discussed above, the Amendment Project would affect 580.9 acres of land while the certificated Project would affect 1,465.9 acres of land.[38] Soil types that would be crossed by the Amendment Project are the same as those discussed in the FEIS (section 4.2).[39] Acid forming materials are discussed in section B.1.

Overall effects on soils for the Amendment Project would be less than those of the certificated Project; however, the Amendment Project would disturb soils in areas outside of the certificated Project footprint. Approximately 39.8 acres of prime farmland or farmland of statewide importance would be disturbed outside of the certificated Project footprint, of which 1.2 acres would be converted to industrial land use at the Lambert Interconnect (and MLV-1) and the Dan River Interconnect #2.[40] After construction is complete, temporary workspaces would be restored to approximate pre-construction conditions; therefore, effects on prime farmland and farmland of statewide importance in these areas would be temporary.

Mountain Valley would implement the measures in its Plan to control erosion and sedimentation during construction and to ensure proper restoration of disturbed areas following construction, as described in section 2.4 of the FEIS. These measures include the installation of

---

36 A summary of geotechnical information collected by Transco for the Sandy River crossing can be found at: Transco May 7, 2025 Data Response Question No. 25. FERC Accession Number 20250507-519.

37 Mountain Valley September 3, 2025 Environmental Information Request Response at 15. FERC Accession Number 20250903-5011.

38 Mountain Valley August 8, 2025 Table 1.3-1 of Attachment G-3. FERC Accession Number 20250808-5160.

39 Mountain Valley August 8, 2025 Table 7.2-2 of Attachment G-1. FERC Accession Number 20250808-5160.

40 Mountain Valley September 3, 2025 Table 7.3-1 of Attachment 3. FERC Accession Number 20250903-5011.

sediment barriers prior to ground-disturbing activities to prevent sediment flow into wetlands, waterbodies, and roads; use and maintenance of temporary erosion control measures (e.g., temporary slope breakers, mulch) during construction; and use of water application, as necessary, to suppress dust and minimize wind erosion. Mountain Valley would also implement the measures outlined in the Mountain Valley Plan, for revegetation of disturbed land areas following construction, including seeding of disturbed areas with native vegetation as recommended by soil conservation authorities and local landowners and monitoring disturbed areas for up to 3 years to ensure the success of revegetation.

Mountain Valley provided its E&SC Plan for the certificated Project on June 21, 2019, and stated that an Amendment Project-specific *Erosion and Sediment Control (E&SC) Plan* would be developed and implemented.[41] The E&SC Plan would be developed to comply with state-specific (Virginia and North Carolina) regulations to minimize impacts in during construction. However, an updated E&SC Plan for the Amendment Project has not been provided. Therefore, **we recommend that the following measure be included as an environmental condition in the Commission's Order:**

- **<u>Prior to construction</u>, Mountain Valley shall file with the Secretary, for review and written approval by the Director of OEP, or the Director's designee, its updated Erosion and Sediment Control (E&SC) Plan.**

2.2 Construction Method/Mitigation Measure Changes

Mountain Valley's revised construction plans that relate to soil include Mountain Valley's Plan and the *Winter Construction Plan* (see section A.4.3.3). The amended plans are not materially different than those reviewed and approved by FERC in the FEIS (as discussed in section 2.4.2.9).

Mountain Valley stated it is their preference to install permanent slope breakers across the full width of the construction right-of-way (rather than install slope breakers that only extend across the permanent right-of-way).[42] We agree, and consistent with section V.B.2.d of the FERC Plan, that full construction right-of-way slope breakers are an appropriate means to reduce runoff velocity and divert water off the construction right-of-way to minimize erosion and sedimentation. Installation of slope breakers across only the operational (rather than temporary) right-of-way may result in increased runoff velocity and subsequent erosion. Therefore, Mountain Valley is working to obtain approval from state agencies and landowners to install permanent slope breakers across the full width of the construction right-of-way, consistent with the FERC Plan. To ensure we have clear expectations for slope breakers when assessing construction compliance, **we recommend that the following measure be included as an environmental condition in the Commission's Order**:

- **<u>Prior to construction</u>, Mountain Valley shall file with the Secretary, correspondence from the applicable state agencies regarding whether they**

---

41 Mountain Valley February 3, 2025 Application Resource Report 1 at 1-7 FERC Accession Number 20250203-5192.

42 Mountain Valley July 15, 2025 Data Response at 22. FERC Accession Number 20250715-5108.

approve the installation of slope breakers across the full width of the construction right-of-way.

2.3 Updated Surveys/Data Within the Certificated Workspace

Mountain Valley conducted an updated search of federal and state regulatory databases to identify sites with known or potential environmental contamination within 0.25 mile of the Amendment Project.[43] The updated analysis identified five new sites that were not previously discussed in section 4.2.7 of the FEIS. The five new sites are all either closed facilities or no violations were reported. The closest of the new sites would be 279 feet from the Amendment Project. Based on distance from the proposed construction work area and regulatory status, the Amendment Project is not anticipated to be affected by the five other sites.

2.4 Conclusion

Except where land would be permanently converted to industrial use, effects on soils would be temporary to short-term, lasting until revegetation is successful. The acreage of prime farmland and farmland of statewide importance that would be permanently affected by the Amendment Project is negligible when compared to the total acreage of prime farmland and farmland of statewide importance in Pittsylvania County, Virginia (515,022 acres) and Rockingham County, North Carolina (253,506 acres) (NRCS – U.S. Department of Agriculture [USDA], 2024). Therefore, we conclude that Amendment Project effects on the availability of prime farmland and farmland of statewide importance would not be significant.

3.0 Water Resources

3.1 Groundwater

The aquifers that underlie the Amendment Project are the same as described in the FEIS (section 4.3.1.1). No sole source or principal source aquifers would be crossed by the Amendment Project (U.S. Environmental Protection Agency [USEPA], 2025; North Carolina Division of Water Resources, 2025). Mountain Valley consulted with the Virginia Department of Health Office of Drinking Water and the Pittsylvania County Public Works Department to request information regarding the presence of wellhead protection areas for the Amendment Project.[44] The Virginia Department of Health Office of Drinking Water confirmed that no public wells in Pittsylvania County have a wellhead or source water protection plan. A response from the Pittsylvania County Public Works Department has not been received. Private water supply wells and springs within the certificated Project footprint that would be retained for the Amendment Project are discussed in the FEIS (section 4.3.1.2) and general effects and mitigation measures relating to vegetation clearing, grading, excavation dewatering, and spill prevention and response measures would also remain as described in the FEIS at section 4.3.1.5.

---

43 Mountain Valley August 8, 2025 Appendix 2-D of Attachment G-3. FERC Accession Number 20250808-5160.

44 Mountain Valley August 8, 2025 Appendix 1-1 - Updated Agency Correspondence. FERC Accession Number 20250808-5160.

3.1.1 New Footprint

Commenters stated that drinking water wells may be affected by the Amendment Project. Data from the USEPA's Drinking Water Mapping Application to Protect Source Waters (USEPA, 2024), the USGS National Water Information System mapper (USGS, 2024), the VADEQ, Virginia Department of Energy (VDE), and the NCDEQ did not identify any public water supply wells or springs within 150 of the Amendment Project (NCDEQ, 2023; VADEQ, 2023; 2024a, VDE, 2024). Mountain Valley interviewed landowners to identify private wells and springs within 150 feet of the Amendment Project; one domestic water supply well (at MP 19.99) was identified within the proposed workspace for the Amendment Project outside of the certificated Project footprint.[45] Mountain Valley would install double- or triple-stacked compost filter sock to protect private wells during construction. No known public groundwater supply wells or springs were identified within 150 feet of the Amendment Project.

As outlined in its *Water Resources Identification and Testing Plan*, Mountain Valley would offer pre-construction and post-construction water quality and yield testing for all water supply wells located within 150 feet of the Amendment Project, with well owner permission. As discussed in section 4.3.1.2 of the FEIS, Mountain Valley would evaluate any complaints of damage to water supply wells associated with construction of the Project and identify a suitable settlement with the landowner if damage occurs. If it is determined that suitable potable water is no longer available due to construction-related activities, Mountain Valley would provide adequate quantities of potable water during repair or replacement of the damaged water supply.[46]

3.1.2 Construction Method/Mitigation Measure Changes

At this time, Mountain Valley is proposing to utilize surface water sources for the HDD crossings and hydrostatic testing as discussed in section B.3.2. Municipal water (which could consist of groundwater) would be a potential secondary water source if required.

3.1.3 Updated Surveys/Data Within the Certificated Workspace

As stated earlier, Mountain Valley interviewed landowners to update the data concerning private wells and springs within 150 feet of the Amendment Project. Seventeen private wells were identified within 150 feet of the Amendment Project (including the new well discussed in section B.3.1.1). The majority of the wells identified are used for groundwater testing (13) and the remaining 4 are domestic wells.[47] As discussed in section 4.3.1.2 of the FEIS, surveys to identify private wells and springs for the certificated Project were not complete and therefore, Environmental Condition 14 in the 2020 Order required Mountain Valley to file the locations of all water wells and springs within 150 feet of Project workspaces. According to Mountain Valley, all water wells identified within 150 feet of the Amendment Project have been filed.

---

45 Mountain Valley August 8, 2025 Table 2.2-1 of Attachment G-1. FERC Accession Number 20250808-5160.

46 Note the Commission does not adjudicate disputes regarding compensation for damages.

47 Mountain Valley August 8, 2025 Table 2.2-1 of Attachment G-3. FERC Accession Number 20250808-5160.

As discussed in section 4.3.1.4 of the FEIS, existing contaminated groundwater resources may be encountered during construction of the Amendment Project. The USEPA's Facility Registry Service database was used to identify updated contaminated groundwater sites located within 0.5 mile of the Amendment Project. The nearest site, Mountain Valley Pipeline, LLC South Electric Tap (construction NPDES), is approximately 324 feet from Amendment Project workspaces near MP 0.[48] Given the distance, the potential for Amendment Project activities to encounter associated groundwater contamination, if still present, is negligible.[49]

Disturbance of contaminated groundwater by construction activities could potentially elevate environmental risk. During construction, facilities and equipment may contain hazardous water or fluids, such as oil and fuel, which could leak or be spilled. Proper storage, containment, and handling procedures, as outlined in the *Spill Prevention, Control, and Countermeasures Plan and Unanticipated Discovery of Contamination Plan for Construction Activities in Virginia and North Carolina* (SPCC Plan) would minimize the occurrence and consequence of spills and leaks.

3.1.4 Conclusion

Based on the above discussion, as well as implementation of the measures in Mountain Valley's Plan and Procedures and *Water Resources Identification and Testing Plan,* we do not anticipate long-term or significant effects on groundwater resources as a result of construction or operation of the Amendment Project.

3.2 Surface Water Resources

The proposed Amendment Project's adjustments to the previously approved Southgate Project would result in 189 fewer waterbody crossings. The Amendment Project would generally cross the same larger waterbodies as described in section 4.3.2 of the FEIS, including the Sandy River and Dan River. Mountain Valley resurveyed waterbodies along the entire Amendment Project route and table A-3 in appendix A denotes all waterbodies crossings associated with the Amendment Project. The Amendment Project would cross 74 minor, 13 intermediate, and 1 major waterbodies. The flow status of waterbodies crossed includes 36 perennial, 32 intermittent, and 20 ephemeral. All waterbodies would be crossed via dry-ditch crossing methods (flume and dam-and-pump), conventional bore methods, or HDD as discussed in section 2.4.2.1 of the FEIS. Mountain Valley identified 30 waterbodies that would not be crossed by the pipeline, but would be located within construction workspace. Mountain Valley would set up high-visibility fencing and/or bridging to avoid effects at 10 waterbodies.[50]

Effects on sensitive waterbodies were re-evaluated for the Amendment Project. The Amendment Project would cross the Dan River, which is a federally designated wild, scenic, or recreational waterbody and included on the Nationwide Rivers Inventory (NRI). The Dan River

---

48 This facility is owned by Mountain Valley Pipeline, LLC for an electric tap associated with the Mountain Valley Pipeline mainline. Mountain Valley September 3, 2025 Environmental Information Request at 28. FERC Accession Number 20250903-5011.

49 Mountain Valley August 8, 2025 Table 2.2-2 in Attachment G-3. FERC Accession Number 20250808-5160.

50 Mountain Valley September 3, 2025 Attachment 2. FERC Accession Number 20250903-5011.

would be crossed via HDD; thus, direct effects on the waterbody would be avoided. The Virginia Scenic Rivers program identifies, designates, and protects rivers and streams that possess outstanding scenic, recreational, historic, and natural characteristics of statewide significance. No designated segments would be crossed by the Amendment Project. However, one waterbody crossed by the Amendment Project, the Sandy River, has been identified for potential designation with the Virginia Scenic Rivers program. The Sandy River would be crossed via HDD. The Amendment Project would not cross any Natural, Scenic, or Recreational rivers as defined by North Carolina Statues 143B-135.152 and 143B-135.154. The Amendment Project would not cross any Virginia-designated surface waters, designated trout waters, or VADEQ Exceptional State Waters. Lastly, the Amendment Project would not cross any North Carolina trout waters or North Carolina Wildlife Resources Commission (NCWRC) Designated Public Mountain Trout Waters.[51]

No public surface water supplies are located within 0.5 mile of Amendment Project workspaces in Virginia or North Carolina.

We received several comments regarding the 2014 Coal Ash Spill (refer to section 4.3.2.3 of the FEIS for additional information regarding this incident). Specifically, that the Dan River is still recovering from the incident and that pipeline construction may stir up coal ash during construction. As discussed above, the Dan River would be crossed via HDD. The HDD would tunnel about 37 feet below the stream bed.[52] While the Dan River crossing location has been modified (the currently proposed location is 150 feet further upstream from the coal ash release site than the certificated crossing[53]), the conclusion reached in section 4.3.2.3 of the FEIS, that no effects associated with the coal ash release are expected, remains valid.

Designated Flood Zones

Similar to the certificated Project, the Amendment Project would also cross A and AE designated flood zones (see section 4.3.2.5 of the FEIS for a discussion of A and AE designated flood zones). Mountain Valley is proposing to impact 4,025.3 feet of 100-year flood zones outside of the certificated Project footprint from MP 0 to MP 31.3.[54]

Two interconnects (Dan River Interconnect #1 and Dan River Interconnect #2) would be located within the FEMA 100-year flood zone in North Carolina. These facilities would displace 1.15 acres (0.7 acre for the Dan River Interconnect #1 and 0.5 acre for the Dan River Interconnect #2) of floodplain.[55] On September 3, 2025, Mountain Valley indicated that they are continuing to coordinate with county floodplain administrators, preparing their floodplain permit

---

51 Mountain Valley February 3, 2025 Resource Report 2 at 2-10 through 2-12. FERC Accession Number 20250808-5160.

52 Mountain Valley February 3, 2025 Application Resource Report 2 Appendix 1-C3. FERC Accession Number 20250203-5192.

53 Mountain Valley February 3, 2025 Application Resource Report 10 at 10-20. FERC Accession Number 20250203-5192.

54 Mountain Valley August 8, 2025 Table 2.3-2 of Attachment G-1. FERC Accession Number 20250808-5160.

55 Mountain Valley August 8, 2025 Table 2.3-3 of Attachment G-3. FERC Accession Number 20250808-5160.

applications, and expect to file plans (including storage capacity loss) in the fourth quarter of 2025 or early 2026.[56]

3.2.1 Construction Method/Mitigation Measure Changes

The FEIS (section 2.4.2.1) described two HDDs (Dan River and Stony Creek Reservoir) that would be conducted for the certificated Project. Due to modifications for the Amendment Project, the previously certificated crossing of the Stony Creek Reservoir was eliminated with removal of the pipeline route beyond MP 31.3. The Dan River (and two associated tributaries) would continue to be crossed via HDD, but the alignment has shifted approximately 150 feet to the southeast. Although effects might slightly shift from one location to another, the overall effects on surface waters from the Dan River HDD would be consistent with those disclosed in section 4.3.2.7 of the FEIS.

The Amendment Project would result in one new HDD crossing of the Sandy River (and one associated tributary) (MP 18.1). The Sandy River crossing was previously certificated as a dry-ditch crossing method (dam-and-pump or flume method). To avoid cultural resources (based on coordination with the Virginia Department of Historic Resources [VADHR]), to address topographical issues at the banks of the Sandy River, and to better accommodate the switch in crossing method to an HDD, Mountain Valley has incorporated an alignment shift at the Sandy River. Installing the pipeline beneath the Sandy River via HDD would avoid all in-water construction at this location. Associated waterbody stream bed and banks would also not be disturbed.

As discussed in section 4.3.2.3 of the FEIS, three waterbodies crossed by the Project in Virginia are designated as Category 4a Impaired (VADEQ, 2024b). Little Cherrystone Creek, White Oak Creek, and Sandy Creek are listed as impaired due to *Escherichia coli* (*E.coli*). The Amendment Project would only cross White Oak Creek once (as opposed to twice with the certificated Project). The crossing locations of Little Cherrystone Creek and Sandy Creek have not changed, but the crossing method of Little Cherrystone Creek has changed from a dry crossing to a conventional bore. We do not anticipate installation of a pipeline underneath waterbodies would contribute to the impairment of streams for *E. coli,* and therefore would not contribute to the further impairment of Little Cherrystone Creek, White Oak Creek, and Sandy Creek in Virginia.

In accordance with Mountain Valley's Procedures, Mountain Valley is required to provide a site-specific crossing plan for each major waterbody and HDD crossing.[57] Additionally, Mountain Valley would implement specific measures to minimize effects if an inadvertent return (IR) of drilling fluids were to occur within a waterbody.

Mountain Valley's *HDD Contingency Plan* (table A-1 of appendix A) prescribes measures to: minimize the potential for an IR associated with HDD activities; provide for the timely detection of an IR; protect areas that are considered environmentally sensitive (streams,

---

[56] Mountain Valley September 3, 2025 Environmental Information Request Response at 34. FERC Accession Number 20250903-5011.

[57] Mountain Valley February 3, 2025 Application Resource Report 1 Appendix 1-C3. FERC Accession Number 20250203-5192.

wetlands, other biological resources, cultural resources); provide an organized, timely, and "minimum-impact" response in the event of an IR; provide that all appropriate notifications are made to the appropriate regulatory agencies and that documentation is completed; and provide an alternative crossing method if the HDD is deemed unsuccessful. We have reviewed Mountain Valley's revisions to this plan and find it acceptable.

The FEIS (section 2.4.2) described three conventional bore waterbody crossings (Cascade Creek/Dry Creek, Wolf Island Creek, and Deep Creek). Due to modifications for the Amendment Project, the previously certificated crossings of the Wolf Island Creek and Deep Creek were eliminated with elimination of the pipeline route beyond MP 31.3. Mountain Valley has further evaluated waterbody crossing methods and 20 waterbodies would be crossed via conventional bore.[58]

In a July 15, 2025 letter to Mountain Valley, VADEQ identified 8 stream crossings[59], that would be crossed by the Amendment Project and Transco's SSE Project. Mountain Valley is proposing to cross these 8 waterbodies via conventional boring while Transco's analysis concluded that conventional bores at these locations would be impractical. Therefore, VADEQ directed Mountain Valley to provide geotechnical studies and other data which demonstrates that the information provided by Transco is either incorrect or change the proposed crossing method after conducting appropriate geotechnical evaluation(s).[60] Mountain Valley responded to the VADEQ, on August 22, 2025, stating that site- and project-specific conditions, engineering judgement, and Mountain Valley's prior experience with similar crossings in Pittsylvania County appear to account for the differences in the proposed crossing methods. According to Mountain Valley, conventional bore crossings of these streams remain their preferred and proposed crossing method.[61]

As discussed in the FEIS (section 4.3.2.2), Mountain Valley stated that enhanced and/or additional erosion control devices (ECDs) may be required to further protect waterbodies where the Amendment Project workspace would parallel and remove vegetation within 15 feet of the waterbody (see section B.3.4 below for our analysis of Mountain Valley's proposed modification to this requirement in our Procedures). On September 3, 2025, Mountain Valley filed site-specific plans for 12 waterbodies (S-A072, S-A027, S-A033A, S-A036, S-A040/S-A041, S-A051, S-A059, S-B040, S-B025/S-B023, S-B016, S-B010, and S-B002) located within 15 feet of proposed workspaces. The additional measures would include super silt fencing along sensitive resource boundaries, belted silt retention fencing along workspace boundaries, installing clean water diversion dikes, clean water diversion end treatments, and skimmer sediment basins.[62]

Geosyntec Consultants of NC, P.C (Geosyntec), at the request of Mountain Valley, developed pipeline burial recommendations to reduce the risk of pipeline exposure due to scour

---

58 Mountain Valley September 3, 2025 Attachment 2. FERC Accession Number 20250903-5011.

59 S-A002/A003 (Unnamed Tributary [UNT] of Little Cherrystone Creek), S-A008 (Cherrystone Creek), S-A051 (UNT of Silver Creek), S-B043 (Trayner Branch), S-B030/31 (UNTs Trotters Creek), S-B024/B025 (UNT Dan River), S-B022 (UNT Dan River), S-B020 (UNT Dan River).

60 Mountain Valley August 8, 2025 Attachment 1-5. FERC Accession Number 20250808-5160.

61 Mountain Valley September 3 Environmental Information Request Response at 61. FERC Accession Number 20250903-5011.

62 Mountain Valley September 3, 2025 Attachment 5. FERC Accession Number 20250903-5011.

(see the *Mountain Valley Southgate Pipeline Stream Crossing Burial Recommendations*).[63] Geosyntec provided stream specific recommendations for 83 stream crossings, however, the waterbody crossing table provided by Mountain Valley included 88 pipeline stream crossings.[64] In addition, Geosyntec utilized a stream identification (ID) that differs from the stream ID used by Mountain Valley. Lastly, Mountain Valley has not indicated if they would adhere to Geosyntec's recommendations. Therefore, in order to establish clear compliance expectations, **we recommend that the following measure be included as an environmental condition in the Commission's Order:**

- **Prior to construction, Mountain Valley shall file with the Secretary, for review and written approval by the Director of OEP, or the Director's designee, an updated *Mountain Valley Southgate Pipeline Stream Burial Recommendations*. The revised document shall resolve all discrepancies with the waterbody crossing table, utilize Mountain Valley's waterbody IDs, and clarify whether Mountain Valley would implement Geosyntec's recommendations.**

Mountain Valley reevaluated proposed water usage for hydrostatic testing, HDDs, and dust control for the Amendment Project. Mountain Valley anticipates that 3,300,000 gallons of water total would be needed for hydrostatic testing[65] (table A-4 of appendix A). As discussed in the FEIS (section 4.3.2.6), test water would be transferred to from one test segment to another to reduce the overall amount of water needed for testing. Mountain Valley has not proposed to add chemicals to test water. However, if chlorinated municipal water is used for hydrostatic testing, a dechlorinating agent may need to be added prior to discharge.[66] Section B.4.4 provides additional discussion of the measures Mountain Valley would utilize (such as floating intake structures, mesh covered intake screens, and intake velocity) during water withdrawals to avoid or minimize impacts on aquatic species (including listed species).

Mountain Valley anticipates 2,078,000 gallons of water would be needed to complete both HDD crossings[67] (table A-4 of appendix A). See section 4.3.2.6 of the FEIS for additional information regarding water for the HDD process. Mountain Valley anticipates 30,000 gallons per day (as needed) of water would be necessary for dust suppression (table A-4 of appendix A)[68]. Mountain Valley would obtain water from the Dan River for hydrostatic testing, HDDs, and dust control for the Amendment Project. Municipal water would be used if water from the Dan River is not available. Mountain Valley is required by Environmental Condition 16 of the 2020 Order to file with the Secretary written concurrence from the USFWS for water withdrawals from the Dan River.

---

63 Mountain Valley August 8, 2025 Attachment 1-4. FERC Accession Number 20250808-5160.

64 Mountain Valley September 3, 2025 Attachment 2-A. FERC Accession Number 20250903-5011.

65 Mountain Valley August 8, 2025 Table 2.3-7 of Attachment G-3. FERC Accession Number 20250808-5160.

66 Mountain Valley February 3, 2025 Application Resource Report 2 at 2-13. FERC Accession Number 20250203-5192.

67 Mountain Valley August 8, 2025 Table 2.3-8 of Attachment G-3. FERC Accession Number 20250808-5160.

68 Mountain Valley September 3 Environmental Information Request Response at 29. FERC Accession Number 20250903-5011.

3.2.2 Effects and Mitigation

During scoping and preparation of the EA, we received comments about surface water resources concerning water quality effects and spills and inadvertent releases. Substantive comments are addressed below.

Using trenchless crossing methods (such as the proposed HDDs and conventional bores) greatly reduces potential effects on surface waterbodies, particularly compared to open-cut crossings. In general, typical pipeline effects on waterbodies are avoided with trenchless methods. However, trenchless and dry-ditch crossing methods, as proposed in the Amendment Project, could still affect water quality. We received multiple comments concerning the possibility of erosion and off right-of-way sedimentation from waterbody crossing construction. As discussed in the FEIS (section 2.4), Mountain Valley would design and install best management practices (BMPs) in compliance with NPDES permit requirements that control soil erosion and sedimentation down-gradient of construction areas. Once the waterbody crossing is complete, Mountain Valley would restore construction areas and re-establish vegetation in order to prevent erosion and sedimentation into and along waterbodies.

In addition, equipment needed for waterbody crossings could leak, resulting in adverse effects on water quality. To avoid and reduce these potential effects on surface waterbodies, Mountain Valley would implement measures within its SPCC Plan, including locating hazardous material storage and equipment refueling activities at least 100 feet from waterbodies. These measures would reduce the potential for hazardous materials to enter waterbodies.

The construction methodologies and avoidance, minimization, and mitigation measures described in section 4.0 of the FEIS would still be used. We do not anticipate that the Amendment Project would have any additional qualitative effects on waterbodies beyond those impacts already considered in the FEIS (section 4.3.2), nor would it affect waterbodies in a manner not previously considered. With use of the HDD method to cross waterbodies and the proposed avoidance, minimization, and mitigation measures discussed in the FEIS (section 4.3.2.7), we conclude the activities associated with the Amendment Project would result in negligible to minor temporary effects on surface water resources.

Based on the above discussion, and in consideration of Mountain Valley's proposed mitigation and design criteria, we conclude that the Amendment Project would not significantly affect surface water resources.

3.3 Wetlands

The proposed Amendment Project's adjustments to the previously approved Southgate Project would result in reduced effects on wetlands (3.1 acres less). Wetlands are areas that are saturated with water either permanently or seasonally, and support aquatic and/or wetland-dependent plants and animals. Wetlands must exhibit the three wetland criteria established by the U.S. Corps of Engineers (COE) including hydrology, soils, and vegetation.[69]

[69] 1987 Corps of Engineers Wetlands Delineation Manual.

Mountain Valley conducted wetland surveys along the entire Amendment Project route in accordance with the 1987 COE Wetlands Delineation Manual and Eastern Mountains and Piedmont Regional Supplement. Mountain Valley has completed wetland surveys for all parcels except one (VA-PI-005.000 between MPs 1.0 and 1.5) where access was not granted. Table 5 provides a summary of wetlands crossed by the Amendment Project.[70]

Table 5
Summary of Wetlands Crossed by the Amendment Project

State / County	Wetland Type	Acres Affected	
		Construction [b]	Operation [c]
Virginia			
Pittsylvania	PEM	5.3	0.53
	PFO	5.5	2.1
	PSS	0.59	0.15
	PUB	0.21	0.0
	Virginia Total	*11.9*	*2.6*
North Carolina			
Rockingham	PEM	2.7	0.28
	PFO	2.7	1.1
	PSS	0.36	0.04
	North Carolina Total	*5.8*	*1.4*
	Amendment Project Total	**18.2**	**4.2**

Note: PEM = palustrine emergent; PSS = palustrine scrub/shrub; PFO = palustrine forested; PUB = palustrine unconsolidated bottom. Sums may not equal the total of addends due to rounding. Impacts have been calculated using the width of the construction ROW, regardless of crossing methods, therefore, impacts were included for wetlands within the construction workspace that would be avoided or matted.

[a] Crossing length is measured at the intersection of the wetland and the centerline of the pipeline or center of the access road.

[b] Total construction impacts include all wetland impacts (PEM, PFO, PSS, PUB) associated with the construction workspace.

[c] 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).

Source: Mountain Valley September 3, 2025 Attachment 2. FERC Accession Number 20250903-5011.

The Amendment Project would result in 89 wetland crossings (table A-5 in appendix A). The wetland crossing methods previously certificated (HDD, conventional bore, and dry-ditch open-cut) as described in section 2.4.2 of the FEIS would be utilized for the Amendment Project. Mountain Valley identified 79 wetlands that would not be crossed by the pipeline but would be located within construction workspace. Mountain Valley would set up high-visibility fencing to avoid impacts at 12 wetlands and 67 wetlands would be timber matted. However, effects were calculated using the width of the construction right-of-way, regardless of crossing method; therefore, effects reported here will overestimate the actual effects.

70 Mountain Valley September 3, 2025 Attachment 2. FERC Accession Number 20250903-5011.

3.3.1 Compensatory Mitigation

Mountain Valley would avoid wetlands along the proposed pipeline whenever possible. Where impacts on wetlands cannot be avoided, the COE requires mitigation to replace the loss of wetland functions and values.

As part of the Section 404 Clean Water Act (CWA) permitting process, Mountain Valley would be required to develop a compensatory mitigation plan to mitigate unavoidable wetland impacts. The compensatory mitigation plan would be subject to review and approval by the District Engineer for the COE, Norfolk District in Virginia and Wilmington District in North Carolina. Mitigation amounts may change as field surveys are completed; Mountain Valley would submit any changes in mitigation to the COE for approval.

On July 23, 2025, Mountain Valley notified the COE that suitable wetland credits were not available on the open market or through Virginia's Aquatic Resources Trust fund in-lieu fee program. As a result, Mountain Valley is proposing to satisfy the mitigation requirement for 6.3 wetland credits in Virginia through a Permittee-Responsible Mitigation (PRM) project. In North Carolina, Mountain Valley would mitigate permanent stream and wetland conversion effects through the purchase of credits from the North Carolina Division of Mitigation Services's In-Lieu Fee Program. The COE is still reviewing Mountain Valley's compensatory mitigation plan and will continue to work with Mountain Valley to determine the appropriate type and amount of mitigation needed for Mountain Valley's wetland effects in Virginia and North Carolina.[71]

3.3.2 Conclusion

Overall, the Amendment Project would result in a shift in effects at certain locations, resulting in some additional crossings of waterbodies and wetlands and shifts in crossing locations. Mountain Valley would comply with the avoidance, minimization, and mitigation measures that are fully described in section 4.0 of the FEIS and as required by the 2020 Order. Additionally, Mountain Valley would follow its Plan and Procedures. We conclude that the Amendment Project would not result in significant effects on wetland resources.

3.4 Alternative Measures to the Commission's Procedures

Mountain Valley requested additional modifications to certain requirements of the FERC Procedures and provided site-specific justifications which are further described below. Modifications that are applicable to the Amendment Project and were previously approved by the 2020 Order (as discussed in section 2.4 of the FEIS) remain valid and are not discussed further.

The requirements of the FERC Procedures that Mountain Valley requested modifications to are:

- where pipelines parallel a waterbody, at least 15 feet of undisturbed vegetation must be maintained between the construction right-of-way and the waterbody

[71] Mountain Valley August 8, 2025 Attachment 1-5. FERC Accession Number 20250808-5160.

(and any adjacent wetland), except where maintaining this offset would result in greater environmental impact (V.B.3.c); and

- the width of the construction right-of-way should be limited to 75 feet or less in wetlands (VI.A.3).[72]

Mountain Valley has requested to locate extra work areas closer than 50 feet from a wetland or waterbody in certain locations (table A-6 in appendix A), and has requested modifications to the 15-foot buffer (table A-7 in appendix A) described above. We have reviewed the requested locations of workspaces within 50 feet of waterbodies and wetlands and have found them acceptable.

Mountain Valley has requested a greater than 75-foot-wide construction corridor in wetlands at one location (W-F009 at MP 28.7) to allow for additional workspace to facilitate the 300-foot-long wetland crossing length. We have reviewed this location and find that the expanded construction corridor is adequately justified.

4.0 Fisheries, Vegetation, and Wildlife

4.1 Fisheries and Aquatic Resources

Section 4.6.5 of the FEIS describes the existing fisheries and aquatic resources; effects on these resources; and the avoidance, minimization, and mitigation measures that Mountain Valley committed to adopt for the certificated Project, which Mountain Valley would also apply to the Amendment Project. The Amendment Project would not affect any waterbodies managed by the National Marine Fisheries Service (NMFS), including essential fish habitat. As stated previously, the construction methodologies described in section 2.4 of the FEIS would still be used, and no new methodologies would be introduced for the installation of pipeline for the Amendment Project although the proposed crossing methods would change for some individual waterbodies as described in sections A.4.3.1 and B.3.2.3. Thus, general effects on these resources as a result of the Amendment Project would be the same as described in the FEIS (section 4.6.5).

4.1.1 New Footprint

The list of typical fish and aquatic species presented in table 4.6-3 of the FEIS remains applicable for the Amendment Project. Mountain Valley confirmed that no new fisheries of special concern or fish habitats not already discussed in section 4.6.5 of the FEIS were identified within the new footprint of the Amendment Project except for the Dan River Aquatic Habitat. According to the North Carolina Natural Heritage Program (NCNHP), the Dan River Aquatic Habitat would be crossed by the Amendment Project area at MP 30.8. The Dan River crossing would be the only crossing of a river containing a fishery of special concern within the new footprint of the Amendment Project. The Dan River Aquatic Habitat is a state-designated natural area with the potential to support sensitive and/or protected species such as federal and/or state protected fish and freshwater mussel species. Mountain Valley would attempt to avoid effects on the Dan River Aquatic Habitat by implementing conservation measures detailed in section B.4.4 including crossing the Dan River using an HDD and adhering to Virginia Department of

[72] Mountain Valley September 3, 2025 Attachment 7. FERC Accession Number 20250903-5011.

Wildlife Resources (VDWR)-recommended methods for water withdrawals from the Dan River.[73]

4.1.2 Conclusion

Overall, the qualitative effects of the Amendment Project on aquatic resources would be the same as those described in the FEIS (section 4.6.5). The Amendment Project would result in an overall decrease and some shifting of effects on aquatic resources, which would result in negligible to minor effects on these resources. The Amendment Project, like the certificated Project, is not expected to incur more than minor and temporary impacts on recreational fisheries. Therefore, the fisheries of special concern crossed by the Amendment Project would be limited to threatened or endangered species potentially present in the Dan River. The potential effects of the Amendment Project on these species are discussed in section B.4.4.

Mountain Valley would comply with the avoidance, minimization, and mitigation measures that are fully described in the FEIS (section 4.6.5) and required by the 2020 Order. With these measures in place, no significant effects on aquatic resources are expected to result from the proposed modifications associated with the Amendment Project. Additionally, the implementation of HDD techniques and IR response procedures at two waterbody crossings, increased use of conventional bores for waterbody crossings (refer to section B.3.2), the use of mesh screens following VADEQ specifications during water withdrawals (VADEQ, 2019) (additional discussion in section B.4.4), would be protective of common fisheries and aquatic species within the waterbodies. Accordingly, the Amendment Project would result in minor temporary effects on aquatic species and their habitat.

4.2 Vegetation

Section 4.5 of the FEIS describes the existing vegetation, effects on vegetation, and the avoidance, minimization, and mitigation measures that Mountain Valley committed to adopt for the certificated Project, which Mountain Valley would also apply to the Amendment Project. As stated previously, the general construction methodologies described in the FEIS (section 2.4) would still be used, and no new methodologies related to vegetation clearing and restoration would be introduced for the Amendment Project. Additionally, no new vegetation land cover types would be affected by the Amendment Project modifications.

4.2.1 New Footprint

The new construction footprint of the Amendment Project would affect 43.7 acres of upland vegetation, consisting of 23.5 acres of upland forest, 14.2 acres of upland herbaceous/scrub-shrub, and 6.0 acres of agricultural land. The new operational footprint of the pipeline would affect 10.6 acres of upland vegetation, consisting of 8.2 acres of upland forest, 1.4 acres of agricultural land, and 1.0 acre of upland herbaceous/scrub-shrub.[74] Table A-8 (in appendix A) provides a summary of the upland vegetation types that would be affected by the

[73] Mountain Valley July 15, 2025 at page 35. FERC Accession Number 20250715-5108.

[74] Mountain Valley September 3, 2025 Attachment 3, Table 3.4-1. FERC Accession Number 20250903-5011.

new construction and operation footprints of the pipeline right-of-way, additional temporary workspaces, contractor yards, and access roads of the Amendment Project.

4.2.2 Construction Method/Mitigation Measure Changes

Section 4.5.3 of the FEIS details the most common exotic or invasive species documented in the vicinity of the certificated Project right-of-way in Virginia and North Carolina. Mountain Valley revised its *Exotic and Invasive Plant Species Control Plan* for the Amendment Project.[75] Mountain Valley used the 2024 Virginia Department of Conservation and Recreation – Division of Natural Heritage (VDCR – DNH) Virginia Invasive Plant Species List (VDCR, 2024a) and the 2023 North Carolina Invasive Plant Council List (North Carolina Invasive Plant Council, 2023) to update the non-native and/or invasive plant species that may occur with the Amendment Project area. As part of the update, Mountain Valley added 31 new species to the *Exotic and Invasive Plant Species Control Plan*. Mountain Valley's *Exotic and Invasive Species Control Plan* was originally developed in coordination with VDCR – DNH and NCNHP. Mountain Valley would implement measures described in the FEIS (section 4.5.3) to prevent the introduction and control the spread of noxious weed species along the Amendment Project alignment. Additionally, Mountain Valley would follow refined measures regarding herbicidal treatment for eradication of exotic or invasive species as provided in its revised *Exotic and Invasive Species Control Plan*.

4.2.3 Updated Surveys/Data Within the Certificated Workspace

Mountain Valley consulted with federal and state resource agencies to identify sensitive or protected vegetation types, natural areas, and unique plant communities in the vicinity of the Amendment Project. Consultation with the USFWS indicated no federally listed plant species or special plant communities are known to occur in the vicinity of the Amendment Project (USFWS, 2024a; USFWS, 2024b). Consultation with VDCR – DNH initially indicated two plant species listed as endangered by the Commonwealth of Virginia: Virginia quillwort and small whorled pogonia could occur in the vicinity of the Amendment Project (VDCR, 2024b). However, Mountain Valley conducted rare plant surveys in 2019 for the originally certificated Project area and again in 2024 for the Amendment Project area; no individual populations or suitable habitat were documented for either species during the 2019 or 2024 surveys. In correspondence with Mountain Valley, VDCR – DNH stated the agency concurred with the methodology followed by Mountain Valley for rare plant surveys and had no further comments regarding rare plants (VDCR, 2024c).[76]

Mountain Valley's consultation with the NCNHP indicated that multiple sensitive vegetation communities or species listed as threatened, special concern, or significantly rare by the state of North Carolina may occur within a one-mile radius of the Amendment Project; however, there are no records of protected species or sensitive natural areas within the new footprint of the Amendment Project construction right-of-way and the NCNHP has not requested updated surveys (NCNHP, 2024).

---

75 Mountain Valley July 15, 2025 Data Response Attachment 1-1. FERC Accession No. 20250715-5108.

76 Mountain Valley February 3, 2025 Application Resource Report 3 at 3-16. FERC Accession Number 20250203-5192.

4.2.4 Conclusion

Overall, the qualitative effects of the Amendment Project on vegetated upland habitat would be the same as those described in the FEIS (section 4.5), as the Amendment Project would generally shift impacts on vegetation from one location to another in a few places. In addition, upland vegetation effects would be reduced overall from 1,367.1 acres to 483.4 acres, inclusive of the previously certificated portions.[77] Mountain Valley would comply with all avoidance, minimization, and mitigation measures as fully described in section 4.0 of the FEIS and required by the 2020 Order. Mountain Valley would also follow its Plan regarding vegetation clearing, restoration, and conservation measures to minimize the impacts of the Amendment Project on vegetation. Despite the new (i.e., outside the certificated footprint) long-term effects on 23.5 acres of forest within temporary workspaces and 8.2 acres of new permanent effects on forest during operations,[78] overall, the proposed Amendment Project's adjustments to the previously approved Southgate Project would result in reduced impacts on forest (374.0 acres less). With implementation of Mountain Valley's construction and mitigation measures, we conclude the Amendment Project would not result in significant effects on vegetation.

4.3 Wildlife

Section 4.6.1 of the FEIS describes the existing wildlife resources, impacts on wildlife, and the avoidance, minimization, and mitigation measures that Mountain Valley committed to adopt for the certificated Project, which Mountain Valley would also apply to the Amendment Project. Given the vegetation types and therefore wildlife habitat would be consistent between the certificated Project and the Amendment Project, the species of wildlife that could potentially occur in the vicinity of the Amendment Project right-of-way would be consistent with the common wildlife described for the certificated Project (in section 4.6.1 of the FEIS). Therefore, updated surveys for common wildlife were not necessary.

4.3.1 New Footprint

We received multiple comments regarding potential effects on wildlife from the Amendment Project. The types of wildlife present in an area are strongly correlated with the types of vegetation typically present. Upland forest comprises the largest component of the vegetated habitat crossed by the new footprint of the Amendment Project (54 percent).[79] Table 4.6-1 of the FEIS identifies the terrestrial wildlife species commonly associated with the vegetation cover types that would be crossed by the Amendment Project.

As with the certificated Project, the new footprint of the Amendment Project would not cross any federally protected lands, such as National Wildlife Refuges, or cross any state Wildlife Management Areas or Game Lands. Although an ATWS for the Amendment Project would be constructed within 1 mile of the White Oak Mountain Wildlife Management Area

---

77 Mountain Valley September 3, 2025 Attachment 4, Table 3.4-1. FERC Accession Number 20250903-5011.

78 Mountain Valley September 3, 2025 Attachment 3, Tables 3.4-1 and 8.2-2. FERC Accession Number 20250903-5011.

79 Mountain Valley September 3, 2025 Attachment 3, Tables 3.4-1. FERC Accession Number 20250903-5011.

(WMA), between MPs 0 and 3.1, the Amendment Project would not directly affect wildlife within the WMA as State Highway 57 and State Route 703 are between the Amendment Project right-of-way and the White Oak Mountain WMA. The construction footprint of the Amendment Project would cross 3.0 acres of forested habitat within a state-managed conservation site (the MVP Southgate Net VA-SB01CA Conservation Site).[80] Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. The VA-SB01CA Conservation Site was established for conservation of the tricolored bat. This portion of the Amendment Project right-of-way would be collocated with an existing right-of-way and Mountain Valley would comply with recommended time of year restrictions (April 1 to November 14) for tree clearing in suitable habitat associated with tricolored bats.[81]

The Amendment Project would cross the Virginia Piedmont Forest Block Complex Important Bird Area (IBA) from about MP 23.0 to MP 26.3. A portion of the certificated route (between MP 23.5 and 25.5) was modified to shift the certificated centerline and workspaces to avoid conflicts with the SSE Project. Section 4.6.2.1 of the FEIS defines IBAs and describes the fragmented nature of the block that the Amendment Project would cross, which contains approximately 15,567 acres of forested habitat. The construction footprint of the Amendment Project would cross approximately 13.8 acres of forested habitat within the IBA not previously affected by the certificated footprint. The operation footprint of the Amendment Project would permanently convert approximately 6.9 acres of forested habitat to non-forested habitat not previously affected by the certificated footprint.[82] This would equate to a long-term decrease of 0.09 percent of forested habitat and permanent loss of 0.04 percent of the forested habitat within the Virginia Piedmont Forest Block Complex through which the Project would pass. Given that the Amendment Project route would affect small patches of currently fragmented forested habitat and would affect a relatively low proportion of forested habitat within the forest block, we conclude the effects of the Amendment Project on wildlife within the IBA would not be significant.

4.3.2 Construction Method/Mitigation Measure Changes

The methods used by Mountain Valley to construct and operate the Amendment Project and the conservation methods proposed to minimize impacts on wildlife within the Amendment Project footprint are generally the same as those described in the FEIS for the certificated Project (section 4.6.1). Mountain Valley proposes to add an HDD crossing of the Sandy River rather than a dry-ditch crossing method, as described in the FEIS (section 2.4.2). HDD waterbody crossings require 24-hour construction activities. Consequently, construction work at the new HDD crossing of the Sandy River (and the Dan River as part of the certificated Project) would occur at night and require artificial lighting. These nighttime construction activities would increase the amount of construction noise and artificial light that wildlife would be exposed to

---

80 Mountain Valley August 8, 2025 Table 3.3-1 of Attachment G-3. FERC Accession Number 20250808-5160.

81 Mountain Valley February 3, 2025 Application Resource Report 3 at 3-25. FERC Accession Number 20250203-5192.

82 Estimate from calculation performed using data from Mountain Valley August 8, 2025 Appendix 8-A of Attachment G-1. FERC Accession Number 20250808-5160.

during construction of the Amendment Project. The potential effects of elevated construction noise and artificial light on wildlife are described in section 4.6.1.1 of the FEIS. Mountain Valley would implement the same measures to minimize the effects of elevated noise and artificial light on wildlife as described in the FEIS (section 4.6.1.1), including restricting construction activities to daylight hours, to the extent practicable, except for during emergencies or instances where 24-hour construction is required (e.g., HDD crossings). Mountain Valley has committed to developing site-specific noise control plans for the HDD crossings. As described below in section 8.1.1, predicted noise levels with mitigation for HDDs would be protective of the public and as such considered protective of wildlife. We also recommend in section 8.1.1 that Mountain Valley submit noise mitigation plans for 24-hour conventional bores for our review and approval. Mountain Valley would also use fully shielded, "full cut-off" lighting fixtures to minimize light scatter beyond the construction areas being illuminated. Given these proposed measures, the submittal of noise mitigation plans for our review and approval, and the fact that noise and light pollution would be temporary and localized to the immediate areas surrounding the crossings, we conclude that effects on wildlife would be minimal and not significant.

4.3.3 Conclusion

Overall, the qualitative effects as disclosed in the FEIS (section 4.6) on wildlife, are not expected to significantly change with the proposed Amendment Project, as it would generally shift effects on the same types of wildlife species from one location to another in the limited areas where the new footprint of the Amendment Project diverges from the certificated Project. Mountain Valley would comply with all avoidance, minimization, and mitigation measures as fully described in section 4.0 of the FEIS and required by the 2020 Order. With these measures in place, no significant effects on wildlife are expected to result from the Amendment Project.

4.4 Special Status and Protected Species

Special status species are those species for which state or federal agencies afford an additional level of protection by law, regulation, or policy. Protected and special status species include federally listed threatened and endangered species that are protected under the ESA; species proposed or are candidates for listing by the USFWS or NMFS; species that are state-listed as threatened or endangered; and migratory birds, including bald and golden eagles.[83,84,85]

---

[83] Migratory birds are protected under the Migratory Bird Treaty Act (16 U.S Code [U.S.C.] 703-711) (MBTA); bald and golden eagles are additionally protected under the Bald and Golden Eagle Protection Act (16 U.SC. 668-668d). Executive Order (EO) 13186 (66 FR 3853) directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and to avoid or minimize adverse impacts on migratory birds through enhanced collaboration with the USFWS.

[84] On March 20, 2011, the USFWS and the Commission entered into a Memorandum of Understanding that focuses on avoiding or minimizing adverse effects on migratory birds and strengthening migratory bird conservation though enhanced collaboration between the two agencies. This voluntary Memorandum of Understanding does not waive legal requirements under the MBTA, ESA, NGA, or any other statutes and does not authorize the take of migratory birds.

[85] Golden eagles are not known to nest in the eastern United States and are primarily only found in the western mountainous regions of Virginia and North Carolina during migration or in winter (Katzner et al., 2020). Therefore, the amendment project would have no effect on golden eagles and, as such, they are not discussed in this document.

We received multiple comments stating that special status species may be affected due to the Amendment Project. These effects are addressed below.

4.4.1 Federally Listed Species

ESA consultation was previously completed for the certificated Project, but we reinitiated consultation due to the time that has passed since the original consultation and the proposed revisions to the Amendment Project. We have determined that the Amendment Project is *not likely to adversely affect* any listed species. We are currently consulting informally with the USFWS and will be requesting concurrence from the USFWS for our determinations of effect in accordance with Section 7 of the ESA. This section will assess the effects of the entirety of the Amendment Project on federally listed species rather than limiting the assessment to portions of the Amendment Project that were not previously certificated.

Mountain Valley, acting as FERC's non-federal representative for the proposed Project (18 CFR 380.13), informally coordinated with the USFWS regarding federally listed species and designated critical habitat in the Amendment Project area.[86] Mountain Valley also communicated with the VDCR-DNH, VDWR, NCNHP, and NCWRC. Based on these communications, a review of the USFWS's Information for Planning and Conservation (IPaC) database, and other publicly available information, 8 federally listed or otherwise sensitive species were identified as occurring or possibly occurring in the Amendment Project area. These consist of 3 species federally listed as threatened or endangered, 3 species proposed as threatened or endangered, 1 species under review for listing, and 1 species identified as a species of concern.[87] As noted in section B.4.2.3, consultation with the USFWS indicated no federally listed plant species are present within the action area. Therefore, 3 plant species discussed in the FEIS—small whorled pogonia, smooth coneflower, and Virginia quillwort—are not discussed herein as the species are not known to occur in the action area and the Amendment Project would have no effect on these species. The Roanoke logperch, was identified as possibly occurring in the Amendment Project area; however, this species was delisted on August 22, 2025, and no longer requires protection under the ESA (90 FR 34372). Mountain Valley stated that it would address species proposed for federal listing in an upcoming conferencing process in the fourth quarter of 2025. Table 6 provides an overview of the species, the habitat in which they typically occur, the project components that could affect the species, the results of recent surveys conducted to assess their presence in the action area, and our determination of the likely effects of the Amendment Project on the species.

---

86 Section 7(a)(2) of the ESA requires the Commission to ensure that any action it authorizes, funds, or carries out would not jeopardize the continued existence of federally listed or proposed listed species, or result in the adverse modification or destruction of critical habitat for federally listed and proposed species. As the lead federal agency, the FERC is responsible for determining whether any federally listed endangered or threatened species or any of their designated critical habitats are affected by the proposed action and determining the effects of the proposed action on those species or critical habitats. None of the waters crossed by the Amendment Project are managed by the NMFS. Consequently, consultation with the NMFS is not required.

87 Mountain Valley August 8, 2025 Table 3.5-1 of Attachment G-1. FERC Accession Number 20250808-5160

Table 6 Federal Endangered, Threatened, or Other Special Status Species Known to Occur or Potentially Occurring in the Amendment Project Area [a/]					
Species	**Federal Status**	**State Status**	**Project Component of Potential Occurrence**	**Habitat Description and Survey Results**	**Determination and Rationale**
Mammals					
Northern long-eared bat (*Myotis septentrionalis)*	E	VA: T NC: T	Tree clearing activities in VA; not present in NC; dust, lighting, noise	Roost during summers in a wide variety of forested habitats; forage and travel/migrate in forested habitat and adjacent and interspersed non-forested habitat such as emergent wetlands and field edges. Occasionally roost in structures such as barns or sheds Hibernate in caves and mines. Presence absence surveys conducted in VA in 2024 and 2025 within and in the vicinity of the action area, outside of the known acoustic detection, and none were captured. Acoustic surveys not associated with the Amendment Project documented presence near MP 5.7-7.8. [a/]	NLAA No hibernacula or maternity roosts are known to be present in the vicinity of the Amendment Project. No karst features, caves or portals were identified within 0.25-mile of the Amendment Project alignment. No documented presence of northern long-eared bats outside of the MP 5.7-7.8 acoustic detection location. Mountain Valley would implement bat conservation measures to minimize impacts on bats within the 1.5-mile inner tier buffer of the MP 5.7-7.8 acoustic detection location including the following: prohibiting tree clearing between April 1 – September 30; avoiding building/structure removal / modification during migration season (April 1 – May 14, August 1 – November 14; avoiding tree cutting or trimming between April 1 – September 30; implementation of dust control measures; minimizing artificial lighting impacts by instituting 7:00 am to 7:00 pm general construction workdays and using directional lighting and fully shielded, “full cut-off” type lighting fixtures during 24-hour operations such as HDD activities; avoiding noise impacts by avoiding blasting and HDD during the pup season (May 15 – July 31) within MP 5.7 to 7.8 or developing a site-specific blasting plan designed to avoid effects. [a/]

Table 6 Federal Endangered, Threatened, or Other Special Status Species Known to Occur or Potentially Occurring in the Amendment Project Area [a/]					
Species	**Federal Status**	**State Status**	**Project Component of Potential Occurrence**	**Habitat Description and Survey Results**	**Determination and Rationale**
Tricolored bat (*Perimyotis subflavus)*	PE	VA: E NC: E	Tree clearing activities in VA, NC; dust lighting, noise	Primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. Often forage in patches adjacent to roosting habitat including forest, fields, and over water. Hibernate in caves and mines. MVP would assume presence of tricolored bat throughout the action area of the Amendment Project within suitable habitat. [a/]	NLJCE Mountain Valley's conservation measures implemented for the northern long-eared bat would also be protective of the tricolored bat [a/] Mountain Valley would minimize vegetation clearing during construction between April 15-August 1 as part of its migratory bird conservation measures, which would also be protective of roosting tricolored bats. [b/] Mountain Valley would consult with USFWS once a final listing decision for the tricolored bat is made to implement additional tricolored bat-specific conservation measures. [a/]
Fish					
Orangefin madtom (*Noturus gilberti)*	UR	VA: T NC: E	Waterbody crossings in the Dan River watershed, NC; sedimentation	Waterbodies with fast riffles over small cobble without much sand or silt. Inhabits the interstitial space between the cobbles Occurrence records limited to Stokes County, NC. Query of NCNHP did not identify orangefin madtom within 1 mile of action area. [c/]	No Effect Species is not documented in waterbodies crossed by the Amendment Project.

Table 6 Federal Endangered, Threatened, or Other Special Status Species Known to Occur or Potentially Occurring in the Amendment Project Area [a/]					
Species	**Federal Status**	**State Status**	**Project Component of Potential Occurrence**	**Habitat Description and Survey Results**	**Determination and Rationale**
Aquatic Invertebrates					
Atlantic pigtoe (*Fusconaia masoni)*	T; CH	VA: T NC: T	Waterbody crossings of the Dan River; water withdrawals, sedimentation	Typically occurs in gravel and coarse sand in silt-free, moderate-flowing creeks and rivers of high water quality [a/] Occurs in the main stem of the Dan River and tributaries of the Dan River in VA and NC that are not crossed by the Amendment Project. No other waterbodies that would be crossed by the Amendment Project, other than the Dan River, are known to contain Atlantic pigtoe. Occurrence records of the species' presence in the Dan River are sparse and infrequent. Critical habitat is designated in over 29 miles of rivers in VA and NC, including portions of the Dan River basin. The Amendment Project action area would overlap with the portions of the Dan River basin that contain critical habitat. [a/]	NLAA NLAA Atlantic pigtoe critical habitat Atlantic pigtoe is not known to occur in the Dan River basin waterbodies that would be crossed by the Amendment Project. Nonetheless, Mountain Valley would cross the Dan River using the HDD method to avoid direct impacts on Atlantic pigtoe associated with waterbody crossing construction activities. Mountain Valley would implement conservation measures to avoid or minimize potential impacts associated with water withdrawals for hydrostatic testing and dust suppression including the following: using temporary, floating intake structures placed well above the river bottom; refraining from withdrawing water between May 15-July 31 when Atlantic pigtoe glochidia are present in the water column; using intake screens with mesh less than 1.0 millimeter (in accordance with VDWR recommendations) and intake velocity less than 0.25 feet per second; and refraining from withdrawing more than 10 percent of the river's flow at any time. Mountain Valley would adhere to construction methods in its Plan and Procedures and the VADEQ Virginia Stormwater Management Handbook (2025) and NCDEQ Erosion and Sediment Control Planning and Design Manual (2013) to avoid or minimize sedimentation impacts on waterbodies associated with surface water runoff in the construction right-of-way. [a/]

Table 6
Federal Endangered, Threatened, or Other Special Status Species Known to Occur or Potentially Occurring in the Amendment Project Area [a/]

Species	Federal Status	State Status	Project Component of Potential Occurrence	Habitat Description and Survey Results	Determination and Rationale
Green floater (*Lasmigona subviridis)*	PT; PCH	VA: T NC: E	Waterbody crossings of the Dan River and Cascade Creek; water withdrawals, sedimentation	Occurs in sand and gravel substrates of clean, calm portions of streams and rivers. Proposed critical habitat likely occurs in the action area in the vicinity of the Dan River crossing based on communication with the USFWS. The species is not known to occur in the action area except for in the Dan River and Cascade Creek. Mountain Valley would conduct species-specific surveys for the green floater if a final listing decision is made by the USFWS. [a/, c/]	NLJCE Mountain Valley would cross the Dan River and Cascade Creek using the HDD method to avoid direct impacts on green floater associated with waterbody crossing construction activities. Mountain Valley would implement conservation measures to avoid or minimize potential impacts associated as described above for the Atlantic pigtoe. [a/]
James spinymussel (*Parvaspina collina)*	E	VA: E NC: E	Waterbody crossings of the James River basin and Dan River basin; water withdrawals, sedimentation	Occurs in small to medium rivers with clear, free-flowing water over stable sand and gravel substrates that are free of silt. Present in the James River basin in VA and the Dan River basin in NC. Mountain Valley conducted mussel surveys in Virginia rivers within the action area recommended by the USFWS. Of the nine Virginia streams surveyed, Only Cherrystone Creek, Banister River, White Oak Creek (1), White Oak Creek (2), and Sandy River contained suitable mussel habitat but surveys did not document presence of James spinymussel. Historical mussel surveys have documented James spinymussel presence in the Dan River within the action area. No other waterbodies within the action area in VA or NC are known to contain James spinymussel. The USFWS and NCWRC recommended Mountain Valley use trenchless crossings in NC waterbodies in lieu of conducting updated mussel surveys in NC. [a/]	NLAA James spinymussel is not known to occur in the waterbodies that would be crossed by the Amendment Project in VA. Mountain Valley would cross the Dan River using the HDD method to avoid direct impacts on James spinymussel associated with waterbody crossing construction activities. Mountain Valley would implement conservation measures to avoid or minimize potential impacts as described above for the Atlantic pigtoe. [a/]

Table 6 Federal Endangered, Threatened, or Other Special Status Species Known to Occur or Potentially Occurring in the Amendment Project Area [a/]					
Species	**Federal Status**	**State Status**	**Project Component of Potential Occurrence**	**Habitat Description and Survey Results**	**Determination and Rationale**
Yellow lampmussel (*Lampsilis cariosa)*	SC	VA: W(II) NC: E	Waterbody crossing of the Dan River; water withdrawals, sedimentation	Most often found in sandy substrate downstream of large boulders in medium sized rivers and medium-to-large sized creeks with relatively fast flow (FEIS section 4.7.4.4). 2025 mussel surveys and correspondence with NCNHP indicate the yellow lampmussel may occur in the Dan River but not in any other waterbodies within the action area. [a/]	Adverse impacts are not likely. Mountain Valley would cross the Dan River using the HDD method to avoid direct impacts on yellow lampmussel associated with waterbody crossing construction activities. Mountain Valley would implement conservation measures to avoid or minimize potential impacts as described above for the Atlantic pigtoe. [a/]
Terrestrial Invertebrates					
Monarch butterfly (*Danaus plexippus)*	PT	VA: NL NC: NL	Herbaceous vegetation clearing activities in VA, NC	Healthy and abundant milkweed for migration, breeding, and early life stage development; nectar providing flowers for breeding and migration; clean water sources.	NLJCE Mountain Valley would avoid or minimize vegetation clearing during construction and operation between April 15-August 1, except as allowed in writing by the USFWS, as part of its migratory bird conservation measures and its Plan, which would also be protective of migrating and feeding monarch butterflies; during restoration, Mountain Valley would will consult state agencies in choosing specific native seed mixes of plant species that facilitate the restoration and enhancement of wildlife habitat. [b/]

CH = Designated Critical Habitat; E = Listed Endangered; NL = Not Listed; NLAA = Not Likely to Adversely Affect; NLJCE = Not Likely to Jeopardize the Continued Existence of the Species; PCH = Proposed Critical Habitat; PE = Proposed Endangered; PT = Proposed Threatened; SC = Species of Concern; SR = Significantly Rare; T = Listed Threatened; UR = Under Review; W(II) = Wildlife Action Plan, Tier II.

[a] Mountain Valley September 11, 2025 Biological Assessment. FERC Accession Number 20250911-5014.

[b] Mountain Valley August 8, 2025 Migratory Bird Conservation Plan at 14, 16. FERC Accession Number 20250808-5160.

[c] Mountain Valley July 30, 2025 Data Response at 8,9. FERC Accession Number 20250730-5135.

We conclude that the Amendment Project may affect, but is *not likely to adversely affect* the northern long-eared bat, Atlantic pigtoe (mussel), and the James spinymussel. We conclude the Project is *not likely to jeopardize the continued existence* of the tricolored bat, green floater (mussel), and the monarch butterfly. Finally, we conclude the Project would have *no effect* on the orangefin madtom and that adverse impacts are not likely for the yellow lampmussel.

Conclusion for Federally Listed Threatened, Endangered, and Other Species of Concern

Our determinations of effects described above and in table 6 are based on current information available for the species in the Amendment Project action area. The best scientific and commercial data available have been used to complete this analysis and we hereby will request concurrence from the USFWS with these determinations. The 2020 Order included Environmental Condition 19 requiring Mountain Valley to not begin construction until the results of all outstanding biological surveys are filed, FERC staff completes ESA consultation with the USFWS, and Mountain Valley receives written notification from the Director of OEP or designee that construction or use of mitigation may begin. This condition would apply to the Amendment Project.

4.4.2 State-Listed and Special Concern Species

Effects on state-listed sensitive species for the certificated Project were discussed in section 4.7.7 of the FEIS. Since the issuance of the FEIS, four state-protected species, not previously discussed in the FEIS and not already discussed above for the federally listed species, have been identified within the Amendment Project area (table 7). Each of these species is discussed further below.

Table 7
Newly Identified State-Listed Endangered, Threatened, or Other Special Status Species Occurring or Potentially Occurring in the Amendment Project Area [a]

Common Name	Scientific Name	Status	
		Virginia [b]	North Carolina [c]
Fish			
Bigeye jumprock	*Moxostoma ariommum*	III	T
Mollusks			
Notched rainbow	*Villosa constricta*	III	T
Spirit supercoil	*Paravitrea hera*	E	N/A
Plants			
Carolina birdfoot trefoil	*Acmispon helleri*	N/A	T
American barberry	*Berberis canadensis*	N/A	SC
Southeastern bold goldenrod	*Oligoneuron jacksonii*	N/A	SR

Sources: NCWRC, 2021; VDWR, 2023. Mountain Valley August 8, 2025 Table 3.5-1 of Attachment G-1. FERC Accession Number 20250808-5160.
[a] This table only includes species that have been identified since issuance of the FEIS and are not federally listed.
[b] Virginia Status: T = Listed Threatened; III = Tier III Species of Greatest Conservation Need
[c] North Carolina Status: E = Listed Endangered; T = Listed Threatened; SC = Species of Special Concern; SR = Significantly Rare; and N/A = Not Applicable.

One newly identified state-listed fish species, the bigeye jumprock, potentially occurs in the Amendment Project area. The bigeye jumprock most often inhabits small to large clear upland streams with rubble or boulders and feeds primarily on midge larvae (VDWR, 2025).

Bigeye jumprock is known to occur within the Dan River and Cascade Creek. As discussed above, Mountain Valley would cross these streams with trenchless crossing methods (HDD and conventional bore, respectively). Therefore, direct effects from instream construction would be avoided. In addition, Mountain Valley implementing conservation measures in its Plan and Procedures and *HDD Contingency Plan* would provide protection for this state-listed species.

Two newly identified state-listed mollusk species, spirit supercoil (habitat is not present along the Amendment Project right-of-way) and notched rainbow, potentially occur in the Amendment Project area. The notched rainbow typically inhabits fast-flowing, clean water containing firm rubble, gravel, and sand substrates (VDWR, 2025). The species could occur within the Dan River. As discussed above, Mountain Valley would cross the Dan River using a trenchless crossing method (HDD). Therefore, direct effects from instream construction would be avoided. In addition, the avoidance and minimization measures discussed above for federally listed aquatic species within the Dan River such as use of HDD, measures to avoid or minimize potential effects due to water withdrawals as described in table 6 for the Atlantic pigtoe, and Mountain Valley implementing conservation measures in its Plan, Procedures, and *HDD Contingency Plan*, would also provide protection for the notched rainbow.

Three newly identified state-listed plant species, Carolina birdfoot trefoil, American barberry, and southeastern bold goldenrod, were identified as potentially occurring in the Amendment Project area in North Carolina. However, Mountain Valley's coordination with NCNHP indicated that there were no records of state-listed rare plants in the Amendment Project area and concurred that no additional rare plant surveys would be required.

Based on Mountain Valley's commitment to implementing mitigation measures in its Plan and Procedures and avoidance of sensitive habitat, as well as Mountain Valley's coordination with VDWR, VDCR, and NCNHP, we conclude that the proposed Amendment Project would not result in significant effects on state-listed special status species.

4.4.3 Migratory Birds

Table 4.6-2 in the FEIS provides a list of migratory bird species of concern potentially present within the certificated Project that would also be affected by the Amendment Project. The chuck-will's widow was identified as a species of concern, not discussed in the FEIS, that could be affected by the Amendment Project. The chuck-will's widow is a ground nesting bird found in dry-mesic forests with a primary nesting season of March 1 through July 1. It may be found in Pittsylvania and Rockingham Counties.

Effects on migratory birds and Mountain Valley's mitigation measures to protect migratory birds during construction and operation were discussed and evaluated in the FEIS (section 4.6.3). Additionally, in August 2025, Mountain Valley developed a MBCP to outline conservation measures to protect migratory birds and migratory bird habitat.[88] Mountain Valley

[88] Mountain Valley August 8, 2025 Attachment 1-4. FERC Accession Number 20250808-5160.

indicated that it would minimize construction-related right-of-way clearing during the migratory bird nesting season (April 15 to August 1) to the extent feasible. The conservation measures follow measures described in the USFWS Nationwide Avoidance and Minimization Measures for Birds (USFWS, 2024c), USFWS National Bald Eagle Management Guidelines (USFWS, 2007), the VDWR bald eagle guidelines for landowners (VDWR, 2012), and the FERC's Plan and Procedures. Mountain Valley has committed to implementing the following measures to protect migratory bird species:

- complete nesting bird surveys within the Amendment Project footprint prior to construction-related vegetation clearing (e.g., tree removal, grubbing) between April 15 and August 31 within potential migratory bird habitat;
- complete a large bird (e.g., great horned owls, bald eagles, and colonial waterbirds) nest survey prior to construction-related tree clearing, between January 31 and March 31, within a 328-foot survey corridor in areas where tree clearing is proposed;
- maximize the use of existing rights-of-way to reduce habitat fragmentation;
- reduce the construction right-of-way width to 75 feet at stream and wetland crossings; and
- following the measures outlined in their Plans and Procedures

Mountain Valley would conduct nest surveys within one week of proposed clearing activities. If vegetation was not cleared from the surveyed areas within seven days, Mountain Valley would resurvey the areas. If active nests were identified, the nest would be protected with signage identifying a 33-foot-diameter buffer in scrub-shrub habitat, or a 50-foot-diameter buffer in forested habitat, that would remain until the young have fledged or the nest is determined to have failed.

Noise and ground-disturbing activities from the Amendment Project could affect birds that might be nesting, foraging, or sheltering nearby. Bird species inhabiting the surrounding area could be temporarily displaced during construction but would be able to return to the area after construction is completed. Mountain Valley would follow its MBCP to minimize any potential impacts on migratory birds.

Mountain Valley reviewed the Center for Conservation Biology Virginia Eagles Nest Locator Tool (CCB, 2025), and the NCNHP online database to identify known bald eagle nest locations within 0.5-mile of the Amendment Project. The closest known nest to the Amendment Project was identified in Pittsylvania County approximately 8 miles from the Amendment Project. As discussed in section 4.6.3.4 of the FEIS and in Mountain Valley's MBCP, to account for the possibility of bald eagles nesting in the vicinity of the Project prior to the start of construction, Mountain Valley would conduct bald eagle nest surveys prior to the beginning of construction within 0.5-mile of Project rights-of-way. The 2020 Order included a condition requiring Mountain Valley to file the results of the bald eagle nest surveys with the Secretary. As discussed in section D, applicable environmental conditions of the 2020 Order would apply to the Amendment Project.

Based on Mountain Valley's proposed measures, we conclude that the Amendment Project would not result in population-level impacts on migratory birds, including bald eagles, or significant measurable negative effects on their habitat.

5.0 Cultural Resources

Section 106 of the NHPA requires that the FERC take into account the effect of its undertakings[89] (including authorizations under Section 7 of the NGA) on historic properties.[90] Mountain Valley, as a non-federal representative, is assisting the FERC staff in meeting our obligations under the NHPA by providing data, analyses, and recommendations in accordance with Part 800.2(a)(3) and the FERC's regulations at 18 CFR § 380.12(f). Cultural resources[91] information was gathered for Mountain Valley by its consultants. However, the FERC staff remains responsible for all final determinations made under the NHPA.

As discussed in the FEIS (section 4.10.5), the FERC produced a Programmatic Agreement (PA) for the Mountain Valley Southgate Project. The PA was executed on May 17, 2020. On August 1, 2025, Mountain Valley filed an amendment to the PA to revise stipulation X (Duration) to state that the "PA shall remain in effect until all stipulations and requirements for fieldwork, treatment, analyses, reporting, curation, public outreach, and dissemination of information required under the PA have been met. However, this PA will expire if its terms are not carried out within 12 years from the date of its execution, unless the signatories agree in writing to a further extension."[92] Approval of the amended PA is still pending.

5.1 Area of Potential Effect

The area of potential effects (APE) for direct effects on cultural resources was defined by Mountain Valley as the area of ground disturbance which could physically alter or destroy a resource. The direct effects APE includes a 300-foot-wide corridor where the pipeline would not be collocated with an existing right-of-way, and a 400-foot-wide corridor where it would be collocated. The direct APE also includes a 50-foot-wide corridor centered along proposed access roads, additional workspaces, staging areas, contractor yards, and the limits of aboveground facilities. The indirect effects APE includes a 450-foot-wide corridor centered on the pipeline, a 250-foot-wide corridor centered on access roads, and a 0.5-mile area around aboveground facilities.

---

89 "Undertaking means a project activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a Federal agency," as defined in Part 800.16(y).

90 Historic properties include prehistoric or historic sites, districts, buildings, structures, objects, landscapes, or properties of traditional religious or cultural importance listed on or eligible for listing on the National Register of Historic Places, as defined in Part 800.16(l).

91 Cultural resources are locations of human activity, occupation, or use. According to the FERC's Office of Energy Projects "Guidelines for Reporting on Cultural Resources Investigations for National Gas Projects," cultural resources include any prehistoric or historic archaeological site, district, object, cultural feature, building or structure, cultural landscape, or traditional cultural property. Although "cultural resources" are not defined in 36 CFR 800, it is a "term-of-art" in the field of historic preservation and archaeological research. Some Indian tribes believe that cultural resources could include natural resources, such as plants and animals of traditional cultural or religious importance to tribes, topographic features that may be sacred, and viewsheds.

92 Mountain Valley August 1, 2025 supplemental filing. FERC Accession Number 20250801-5151.

The APE for visual effects is considered to be the geographic area from which any permanent infrastructure has the potential to visually diminish or alter the setting of a property. According to Mountain Valley, the indirect APE is subsumed within the direct APE.

5.2 Surveys

Mountain Valley met with the State Historic Preservation Offices (SHPOs)[93] to reinitiate consultation for the Amendment Project in July 2024. Archeological and architectural field surveys resumed in mid-July 2024.

5.2.1 Virginia Department of Historic Resources

From July to October 2024, archaeologists from TRC Environmental Corporation (TRC), conducted cultural resources surveys for the Amendment Project APE not covered by previous surveys in Virginia.[94] No new archeological sites were identified. One previously recorded site was revisited within the Amendment Project APE in Virginia and was found to have been previously destroyed. The 2024 survey report was reviewed and accepted by the Virginia SHPO on March 13, 2025. We agree with the Virginia SHPO.

Mountain Valley submitted archaeological resource protection plans for sites 44PY0449, 44PY0452, and 44PY0479 to the Virginia SHPO on December 13, 2024.[95] The Virginia SHPO accepted the resource protection plans on March 13, 2025. We agree.

From August to October 2024, architectural historians from TRC conducted aboveground resources surveys for the Amendment Project APE not covered by previous surveys in Virginia.[96] The survey report identified seven new resources and 16 previously recorded resources in Virginia. Three previously identified properties are listed on the NRHP and eight properties have been determined eligible for the NRHP or are potentially eligible. Protection plans for 071-5222, 071-5217, 071-5580, 071-5598, and 071-5620 were previously submitted and approved by the Virginia SHPO. Protection measures were proposed at 071-0036, 071-5720, and 071-0025 that would result in no adverse effects; the Virginia SHPO concurred. The Virginia SHPO also concurred that protective measures are not needed at 071-5622, 071-0004 and 071-5820 and there would be no adverse effects. The Virginia SHPO in its March 14, 2025, letter listed 071-5227 as not eligible. The remaining five previously identified resources and the seven newly identified resources were evaluated as not eligible for the NRHP. The survey report was reviewed and accepted by the Virginia SHPO on March 14, 2025. We agree.

---

93 The Virginia SHPO is represented by the Virginia Department of Historic Resources (VADHR); while the North Carolina SHPO is housed within the North Carolina Department of Natural and Cultural Resources (NCDNCR) which also includes the North Carolina Office of State Archaeology (NCOSA).

94 Mountain Valley February 3, 2025 Phase I Archaeological Survey Report for Virginia: Addendum 3 dated February 2025 (Priv). Filed FERC Accession Number 20250203-5193.

95 Mountain Valley February 3, 2025 Avoidance Documentation for Archaeological Site 44PY0449, Pittsylvania County, Virginia dated December 2024; Protection Plan for Archaeological Site 44PY0452, Pittsylvania County, Virginia dated December 2024; Avoidance Documentation for Archaeological Site 44PY0479, Pittsylvania County, Virginia dated December 2024 (Priv). Filed FERC Accession Number 20250203-5193.

96 Mountain Valley February 3, 2025 Draft Addendum Report 2, Historic Architectural Survey for the MVP Southgate Project, Pittsylvania County, Virginia (Priv) dated January 2025. Filed FERC Accession Number 20250203-5193.

Mountain Valley submitted protection plans for aboveground resources 071-0036 and 071-5622[97] to the Virginia SHPO on January 9, 2025.[98] The Virginia SHPO accepted the resource protection plans on March 14, 2025. We agree.

5.2.2 North Carolina Historic Preservation Office

From July 22 to July 24, 2024, archaeologists from TRC conducted cultural resources surveys for the Amendment Project APE not covered by previous surveys in North Carolina.[99] The survey report identified one new archeological site (31RK299) and the boundary of one previously recorded site (31RK262) was expanded and determined to be not eligible within the APE. The survey report was reviewed and accepted by the North Carolina SHPO on February 12, 2025. We agree.

Mountain Valley submitted resource protection plans for sites 31RK44 (discussed in section 4.10.3.2 of the FEIS) and 31RK299 to the North Carolina SHPO on December 5, 2024.[100] The North Carolina SHPO accepted the resource protection plans on February 12, 2025.[101] We agree.

Section 4.10.3.3 of the FEIS, included brief discussions regarding archeological sites 31RK217 and 31RK265. As discussed in the SHPO's letter[102] dated June 20, 2025, site 31RK265 would be outside of the proposed workspaces and would therefore be avoided by the Amendment Project. Effects to site 31RK217 would be avoided through use of an HDD. The SHPO reviewed and accepted a resource protection plan for site 31RK217.

In August 2024, architectural historians from TRC conducted aboveground resources surveys for the Amendment Project APE not covered by previous surveys in North Carolina.[103] The survey report examined one previously NRHP listed resource and eight additional resources. Resource RK0001 remains eligible for the NRHP but will not be affected as it would be more than 0.25 mile from the Amendment Project. The remining sites are not eligible for listing or would not be affected due to distance and vegetation. The survey report was submitted to the

---

97 While site 071-5622 is not eligible for the NRHP it is protected by Virginia laws. A route adjustment for the Amendment Project would avoid this site.

98 Mountain Valley February 3, 2025 Updated Protection Plan for Resource 071-0036 (Little Cherrystone), Pittsylvania County, Virginia dated January 2025; and Protection Plan for Historic Cemetery 071-5622, Pittsylvania County, Virginia dated January 2025 (Priv). Filed Accession Number 20250203-5193.

99 Mountain Valley February 3, 2025 Addendum 6: Phase I Archaeological Survey for the MVP Southgate Project, Rockingham County, North Carolina dated December 2024 (Priv). Filed FERC Accession Number 20250203-5193.

100 Mountain Valley February 3, 2025 Application Resource Report 4 at 4-3. FERC Accession Number 20250203-5192. Mountain Valley February 3, 2025 Protection Plan for Archaeological Site 31RK44, Rockingham County, North Carolina dated December 2024; and Protection Plan for Archaeological Site 31RK200, Rockingham County, North Carolina dated December 2024 (Priv). Filed Accession Number 20250203-5193.

101 Mountain Valley March 28, 2025 Data Response Appendix 1-I. FERC Accession Number 20250328-5286.

102 North Carolina SHPO June 20, 2025. FERC Accession Number 20250620-5426.

103 Mountain Valley February 3, 2025 Addendum 3: Historic Architectural Survey for the MVP Southgate Project, Rockingham County, North Carolina (Priv) dated December 2024. Filed FERC Accession Number 20250203-5193.

North Carolina SHPO on December 6, 2024 and was reviewed and accepted by the North Carolina SHPO on January 16, 2025.[104] We agree.

5.3 Unanticipated Discovery Plan

Mountain Valley revised its *Plan for Unanticipated Discovery of Historic Properties and Human Remains* for the Amendment Project (table A-1 of appendix A). The plan describes the procedures that would be employed if previously unidentified archeological resources, including human remains, are encountered during construction. SHPO review and acceptance of the revised unanticipated discovery plan has not been received.

5.4 Consultations

The FERC sent copies of the May 22, 2025 NOS for the Amendment Project to a wide range of stakeholders, including other federal agencies, such as the COE, the USEPA, the U.S. Department of the Interior, and the National Park Service, state and local government agencies, such as the SHPOs of Virginia and North Carolina, affected landowners, and Indian tribes that may have an interest in the Amendment Project area. The NOS contained a paragraph about Section 106 of the NHPA, which stated that we use the notice to initiate consultations with the SHPOs as well as to solicit their views and those of other government agencies, interested Indian tribes, and the public on the Amendment Project's potential effects on historic properties.

5.4.1 Consultations with the SHPOs

As stated above, Mountain Valley provided copies of its cultural resources reports to the SHPOs of Virginia and North Carolina. The Virginia and North Carolina SHPOs have reviewed and accepted all reports submitted for the Amendment Project.

5.4.2 Consultations with Indian Tribes

The FERC sent the NOS to 11 federally-recognized Indians tribes and 11 non-federally recognized Indian tribes that may have an interest in the Amendment Project.

On July 31, 2024, Mountain Valley emailed a letter regarding changes made to the certificated Project for the Amendment Project to interested Indian tribes, together with a request for tribes to provide their concerns with the Amendment Project. Mountain Valley sent copies of the letter to the Catawba Indian Nation, Cherokee Nation of Oklahoma, Chreoenhaka (Nottoway) Tribe, Chickahominy Tribe, Chickahominy Tribe – Eastern Division, Coharie Tribe, Delaware Nation, Eastern Band of Cherokee, Haliwa-Saponi Tribe, the Lumbee Tribe, Mattaponi Tribe, Meherrin Indian Tribe, Monacan Indian Nation, Nansemond Tribe, Nottoway Indian Tibe of Virginia, Occaneechi Band of the Saponi Nation, Pamunkey Tribe, Patawomeck Tribe, Rappahannock Tribe, Sappony, Upper Mattaponi, and Waccamaw Sioux.[105]

---

104 Mountain Valley February 3, 2025 Application Resource Report 4 at 4-3. FERC Accession Number 20250203-5192.

105 Mountain Valley February 3, 2025 Application Resource Report 4 at 4-3. FERC Accession Number 20250203-5192.

In response, the Catawba Nation requested on August 31, 2024, that a third-party archeologist conduct future field work and that all cultural resource reports should be mailed to the Catawba Nation for review. The Catawba Nation requested that sites 31RK44 and 31RK299 be avoided by the Amendment Project. On January 17, 2025, the Catawba Nation concurred with the protection plans for sites 31RK44 and 31RK299.[106]

On October 1, 2024, the Occaneechi Band of Saponi Nation requested copies of cultural resource reports for the Amendment Project. Copies of the requested reports were provided by Mountain Valley on December 13, 2024.[107]

5.5 Compliance with the NHPA

As discussed above, cultural resources identified within the APE by Mountain Valley or its consultants for the Amendment Project, were determined to be ineligible, avoided, or subject to resource protection plans.

The PA executed for the Mountain Valley Pipeline Southgate Project required mitigation for historic properties that could not be avoided and may be adversely affected by the Mountain Valley Pipeline Southgate Project. The Amendment Project does not require changes to this portion of the PA. However, the amended PA has not been finalized. Section 106 consultation is not complete. Environmental Condition (No. 20) of the 2020 Order required completion of the section 106 consultation process prior to any construction activity. That condition would apply to the Amendment Project.

6.0 Land Use, Special Interest Areas, and Visual Resources

New Footprint

Construction of the Amendment Project would temporarily affect about 59.3 acres that are not within the previously certificated footprint. This would include 23.5 acres of upland forest, 14.2 acres of upland open land, 6.0 acres of agricultural land, 14.0 acres of commercial/industrial land, and 0.4 acre of open water.[108] Operation of the Amendment Project would permanently affect about 15.8 acres of land, outside the previously certificated footprint; this includes interconnects that would be converted from other land uses to an industrial/commercial use, and the permanent right-of-way that would be maintained for operation of the pipeline. Operation of the Amendment Project would permanently affect about 6.4 acres within the certificated temporary workspace; including 1.3 acres of agriculture, 2.0 acres of upland forest, 1.6 acres of open land, and 0.3 acre of commercial/industrial land. This includes 0.5 acre for the Lambert Interconnect that would be converted from upland forest to an industrial/commercial use.[109]

---

106 Mountain Valley February 3, 2025 Application Resource Report 4 at 4-3. FERC Accession Number 20250203-5192.

107 Mountain Valley February 3, 2025 Application Resource Report 4 at 4-3. FERC Accession Number 20250203-5192.

108 Mountain Valley September 3, 2025 Table 8.2-2 of Attachment 3. FERC Accession Number 20250903-5011.

109 Mountain Valley September 3, 2025, Response to Resource Report 1, Question 4 Table B. FERC Accession Number 20250903-5011.

The newly proposed Dan River Interconnect #2 would be situated on lands inside of the original certificated footprint, and would result in a negligible increase of permanent effects (less than 0.1 acre). Newly proposed contractor yards CY-36 and CY-37 would affect a total of 11.8 acres including 0.4 acre of upland forest, 7.7 acres of upland open land, and 3.8 acres of commercial/industrial land.[110] CY-37 is an existing contractor yard. Construction of 13 temporary access roads totaling 3.8 acres not addressed in the 2020 Order would primarily affect 0.3 acre of upland forest, 2.9 acres of upland open land, 0.6 acre of agricultural land, and negligible amounts of commercial/industrial land, wetlands, and open water.[111] No new permanent access roads were proposed.

In the case of agricultural and open lands, following construction, work areas would be allowed to revert to their previous land use. Thirteen pine plantations would be crossed by the Amendment Project, with 12 not addressed in the FEIS. The 12 new pine plantations would be crossed by the pipeline or access roads in relatively small (0.3-mile or less) disjunct segments from MP 11.2 to 29.7, and with a total of 22.5 acres affected during construction and 7.5 acres affected during operations.[112] Mountain Valley is committed to compensating landowners for permanent or temporary reduction in revenue from loss of trees in pine plantations.[113] No known irrigation systems or drain tiles would be crossed. If previously unknown irrigation systems or drain tiles would be encountered during construction, the mitigation measures discussed in the FEIS (section 2.4.2.6) would be utilized.

The Amendment Project would be located within 25 feet of 2 residences that were not evaluated in the FEIS.[114] Mountain Valley prepared site-specific residential construction plans (RSS-H650-046 near MP 8.6 and RSS-H650-047 near CY-036) for these residences (see figures B-1 and B-2 in appendix B) and we find them acceptable. Mitigation measures for residences are unchanged from those discussed in the FEIS (section 4.8.3.1). No newly identified septic systems would be associated with the Amendment Project.

Mountain Valley identified 4 churches, and 3 schools located 0.1-mile or less from the Amendment Project.[115] Mitigation measures for the newly identified Southside Elementary School, which would be located southwest of newly proposed CY-37, and newly identified Harmony Church, which would be located 0.1-mile northwest of MP 24.2, are discussed below in section B.9.4. Effects on churches and schools are not expected to be significant given the lack of direct effects on church or school property, noise analysis presented in section B.8, and traffic control measures as discussed in section B.9.4.

---

110 Mountain Valley September 3, 2025 Table 8.2-2 of Attachment 3. FERC Accession Number 20250903-5011.

111 September 3, 2025 Table 8.2-2 of Attachment 3. FERC Accession Number 20250903-5011.

112 Mountain Valley August 8, 2025 Table 8.2-3 of Attachment G-3. FERC Accession Number 20250808-5160.

113 The Commission is not a party to easement negotiations and does not adjudicate disputes regarding compensation for damages.

114 Mountain Valley September 3, 2025 Response to Attachment G-3 Question 8 at 88 and Table 8-E of Attachment 4. FERC Accession Number 20250903-5011.

115 Mountain Valley February 3, 2025 Application Resource Report 8 at 8-13. FERC Accession Number 20250203-5192.

About 14.0 acres of land designated as industrial/commercial would be disturbed during construction of the pipeline outside of the certificated footprint.[116] Mountain Valley would coordinate with utility owners to ensure that facilities are appropriately marked and protected.

6.1 Public Lands and Recreational Use Areas

New Footprint

The Amendment Project's new footprint would affect predominantly privately held land. No federally-owned or managed lands or North Carolina state-owned or managed lands would be crossed by the Amendment Project. One segment of a proposed North Carolina-designated Blueway (i.e., a watercraft trail) at the Dan River would be crossed at MP 30.7.[117] This Blueway is outside of the certificated footprint, and was not previously affected by the certificated Project. If certificated, the Amendment Project would avoid effects on the Dan River Blueway with the successful completion of an HDD.

The Amendment Project pipeline and a temporary access road would cross the Berry Hill Industrial Park, a 3,500-acre site for future commercial/industrial development managed by the Danville-Pittsylvania Regional Industrial Facility Authority (DPRIFA). The DPRIFA is a political subdivision of the Commonwealth of Virginia, jointly owned by the City of Danville and Pittsylvania County (Brown and Edwards, 2024). Potential effects on the industrial park were addressed in the FEIS (table 4.8-3), but the Amendment Project would result in increased effects on the Berry Hill Industrial Park for crossing length and acreage during operation, but acreage affected during construction would be slightly less. The proposed pipeline would cross the Berry Hill Industrial Park for 14,399 feet and would affect 29.0 acres during construction and 16.2 acres during operation.[118] The pipeline would be collocated with an existing right-of-way. Effects associated with two temporary access roads would be approximately 2.0 acres, approximately 1.6 acres less than the certificated Project. The Berry Hill Industrial Park is in the initial phases of development, allowing for advance coordination regarding future development. Construction of the temporary access roads could increase traffic in the area, but Mountain Valley has committed to coordinate with the management staff of the Berry Hill Industrial Park during construction.

The Amendment Project would also cross the Commonwealth of Virginia designated MVP Southgate Net VA-SB01CA Conservation Site from MP 1.9 – 2.1 (3.0 acres during construction and 1.1 acres during operation)[119] and access road TA-PI-035 at MP 14.6 would utilize an existing access road at the edge of a Virginia Outdoors Foundation conservation

---

116 Mountain Valley September 3, 2025 Table 8.2-2 of Attachment G-1. FERC Accession Number 20250903-5011.

117 Mountain Valley August 8, 2025 Table 8.4-1 of Attachment G-3. FERC Accession Number 20250808-5160.

118 Mountain Valley August 8, 2025 Table 8.4-1 of Attachment G-3. FERC Accession Number 20250808-5160.

119 Mountain Valley August 8, 2025 Table 3.3-1 of Attachment G-3. FERC Accession Number 20250808-5160.

easement but no effects would be anticipated.[120] MVP Southgate Net VA-SB01CA is a VDCR-site associated with conservation of the tricolored bat.

The Amendment Project would cross land owned by Pittsylvania County from MP 5.8 to 6.9.[121] A portion of the County-owned property contains a landfill, but the proposed pipeline route would not cross the landfill, would be collocated with the existing Transco pipeline, and use of associated access roads would not be expected to affect landfill operations.

All contractor yards would be in private ownership, as would all access roads except for access roads TA-PI-061 and TA-PI-063, which would be located within the above-mentioned Berry Hill Industrial Park. We conclude the Amendment Project would not result in significant effects on public lands and recreation.

6.2 Visual Resources

With one exception—the Dan River is listed on the NRI and is a candidate for listing as a National Wild and Scenic River—the Project is not located within any federal, state, or locally designated scenic areas, such as scenic roads, highways, and byways. The Dan River is discussed above in section B.6.1.

Effects on visual and/or aesthetic resources would primarily occur during construction. Temporary visual effects would occur during construction of the pipeline and appurtenant facilities, HDD and bore crossings, vehicle and equipment movement, vegetation clearing and grading, trench excavation, and pipe storage. Short-term effects would be primarily related to the removal of vegetation and the presence of construction equipment, but these activities would not result in significant adverse effects. HDD entry and exit locations at each of the Sandy River and Dan River HDD crossings would cause minor aesthetic effects during construction.

Visual effects for aboveground facilities would be less than (i.e., the elimination of the Lambert Compressor Station) or the same as described in the FEIS (section 4.8.6), except for the newly proposed Lambert Interconnect at MP 0.0 (which would also contain MLV-1 and affect 0.5 acre during construction and operation[122]) and the Dan River Interconnect #2 at MP 31.3. The Lambert Interconnect and MLV-1 would be located in an agricultural and forested setting and screened from the public on three sides by trees. The closest residence would be 0.6-mile away but would not have a direct view due to tree cover. The Dan River Interconnect #2 would be adjacent to the Dan River Interconnect # 1 (which contains MLV-4), which was certificated in the 2020 Order, and would be located opposite of existing natural gas facilities. A residence is approximately 500 feet to the south, but the residence would be screened by a forested area.[123] Both short- and long-term visual effects would result from the construction and operation of the two interconnects and the access roads, but the effects would be minor. Permanent visual effects may occur along the pipeline right-of-way from periodic vegetation mowing or clearing to allow

---

120 Mountain Valley September 3, 2025 Table 3.3-1 of Attachment G-3. FERC Accession Number 20250903-5011.

121 Mountain Valley September 3, 2025 Table 8.4-1 of Attachment G-3. FERC Accession Number 20250903-5011.

122 Mountain Valley September 3, 2025 Table 3.4-1 of Attachment 4. FERC Accession Number 20250903-5011.

123 Mountain Valley February 3, 2025 Resource Report 8 at 8-25. FERC Accession Number 20250203-5192.

for visual pipeline inspection. MLVs 2 and 3 were authorized by the 2020 Order and are unchanged. The two proposed cathodic protection beds, which would contain small aboveground rectifiers, were also authorized by the 2020 Order and are unchanged.

The modifications associated with the Amendment Project would not significantly affect visual resources.

7.0 Air Quality

Federal and state air quality standards are designed to protect human health. The USEPA has developed National Ambient Air Quality Standards (NAAQS) for criteria air pollutants: NO_x, carbon monoxide (CO), sulfur dioxide (SO_2), and inhalable particulate matter ($PM_{2.5}$ and PM_{10}). The NAAQS were set at levels the USEPA believes are necessary to protect human health and welfare. VOC are regulated by USEPA mostly to prevent the formation of ozone, a constituent of photochemical smog. NOx and VOC are referred to as ozone precursors. HAPs are emitted during fossil fuel combustion and are suspected or known to cause serious health effects.

Fossil-fuel combustion also generates greenhouse gases (GHGs); these are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). GHGs status as a pollutant is not related to toxicity. GHGs are non-toxic and non-hazardous at normal ambient concentrations, and there are no applicable ambient standards or emission limits for GHG under the Clean Air Act (CAA). During construction and operation of the Amendment Project, GHGs would be emitted from construction equipment and once the facility is in operation (in the fugitive emissions).[124] Emissions of GHGs are typically expressed in terms of CO_2e.

We received general comments from the public that the Amendment Project would affect air quality and lead to climate change. Responses to these comments are included in this section and section 12.0.

Section 4.11.1 of the FEIS includes a discussion of the existing environment and existing air quality and climate in the region. If measured ambient air pollutant concentrations for a subject area remain below the NAAQS, the area is considered to be in attainment with the NAAQS. Conversely, locations with monitored ambient backgrounds above any NAAQS may be designed as nonattainment by the USEPA. The Amendment Project would be located in the counties of Pittsylvania, Virginia and Rockingham, North Carolina. Both areas where the Amendment Project would be located are in attainment with the NAAQS for all criteria pollutants. Therefore, a CAA General Conformity Determination is not required.

7.1 Federal Air Quality Requirements

The CAA is the basic federal statute governing air pollution in the United States. Because the Amendment Project would only include construction emissions and operational fugitive emissions, there would be no required Prevention of Significant Deterioration and

[124] Fugitive emissions are potential emissions from incidental leaks or releases from valves, connectors, flanges, and seals, as well as emissions from emergency blowdown events that could occur at the interconnects. Fugitive dust is a source of respirable airborne PM, including PM_{10} and $PM_{2.5}$, which could result from land clearing, grading, excavation, and mobile source traffic on paved and unpaved roads.

Nonattainment New Source Review, Title V air permits, or General Conformity for the Amendment Project facilities. For the interconnection meter station facilities, the state may require a minor source permit and may be subject to federal New Source Performance Standards or National Emission Standards for Hazardous Air Pollutants.

A discussion of applicable state air quality regulations can be found in section 4.11.1.6 of the FEIS.

7.1.1 Construction Emissions and Mitigation Measures

During construction, a temporary reduction in ambient air quality may result from criteria pollutant emissions and fugitive dust generated by construction equipment. The quantity of fugitive dust emissions would depend on the moisture content and texture of the soils that would be disturbed. Fugitive dust and other emissions due to construction activities generally do not pose a significant increase in regional pollutant levels; however, local pollutant levels could increase. Dust suppression techniques, such as watering the right-of-way would be used as necessary in construction zones near residential and commercial areas to minimize the impacts of fugitive dust on sensitive areas. As discussed in section 2.4.1 of the FEIS, construction would generally proceed in an assembly line fashion with crews moving down the right-of-way as work progresses (in contrast with the proposed interconnects and meter stations which would be stationary). In addition, Mountain Valley has committed to implementing the same measures to reduce construction emissions as described in section 4.11.1.7 of the FEIS.[125]

As discussed in section 4.11.1.7 of the FEIS, Mountain Valley may utilize open burning as a means of disposing of land clearing waste during construction of the Amendment Project. Any open burning would be conducted on a site-specific basis, and in accordance Mountain Valley's *Fire Prevention and Suppression Plan* and Virginia and North Carolina regulations (9VAC5-130; 15A NCAC 02D.1900).

Construction is estimated to begin in the fourth quarter of 2026 (if all necessary approvals and clearances have been obtained) with initial clearing activities. Pipeline construction would begin in early 2027 and continue to a target in-service date of mid-2028. The expected construction emission estimates are presented below in table 8.

Table 8
Total Construction Emissions (Tons)

Source	Year	CO_2e	CO_2	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC	Total HAPs
Interconnects and Meter Stations [a]										
Construction Equipment Engines	1	1,261	1,260	0.42	1.4	0.08	0.08	0.00	0.12	0.05

[125] Mountain Valley has identified additional mitigation measures to minimize construction combustion emissions, including using newer model equipment that are equipped with the latest emissions reduction technologies when practical; following manufacturer's operating recommendations regarding good combustion practices; enforcement of idling limits for construction equipment; and the use of low sulfur diesel fuel (Mountain Valley February 3, 2025 Application Resource Report 9 at 9-14. FERC Accession Number 20250203-5192).

Table 8 Total Construction Emissions (Tons)										
Source	**Year**	**CO_2e**	**CO_2**	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**Total HAPs**
On-Road Vehicle Travel	1	507	493	1.7	0.5	0.01	0.01	0.00	0.18	0.04
Off-Road Vehicle Travel	1	NA	NA	NA	NA	60.8	6.1	NA	NA	NA
Earthmoving Fugitives	1	NA	NA	NA	NA	5.3	0.53	NA	NA	NA
Open Burning	1	17.2	17.2	0.75	0.02	0.09	0.09	NA	0.13	NA
Wind Erosion	1	NA	NA	NA	NA	0.76	0.08	NA	NA	NA
Project Interconnects and Meter Stations 2027 Total	*1*	*1,784*	*1,770*	*2.9*	*1.9*	*66.9*	*6.9*	*0.01*	*0.42*	*0.10*
H-650 Pipeline										
Construction Equipment Engines	1	49,894	49,889	17.2	69.7	3.0	2.9	0.14	3.5	1.5
On-Road Vehicle Travel	1	2,534	2,491	15.8	1.8	0.05	0.05	0.01	1.3	0.34
Off-Road Vehicle Travel	1	NA	NA	NA	NA	209.5	20.9	NA	NA	NA
Earthmoving Fugitives	1	NA	NA	NA	NA	380.10	38.0	NA	NA	NA
Open Burning	1	3,472	3,472	152.6	4.3	18.6	18.6	NA	26.2	NA
Wind Erosion	1	NA	NA	NA	NA	54.7	5.5	NA	NA	NA
H-650 Pipeline Year 1 Total	**1**	**55,901**	**55,853**	**185.6**	**75.8**	**666.0**	**85.0**	**0.15**	**31.0**	**1.9**
Pipeline in Pittsylvania, VA	*1*	*47,005*	*46,678*	*159.8*	*64.3*	*495.2*	*66.8*	*0.12*	*27.2*	*1.49*
Pipeline in Rockingham, NC	*1*	*8,896*	*8,875*	*25.8*	*11.5*	*170.8*	*19.2*	*0.03*	*3.8*	*0.39*
Amendment Project Year 1 Total	**1**	**57,686**	**57,623**	**188.5**	**77.6**	**732.9**	**92.9**	**0.15**	**31.4**	**1.8**
H-650 Pipeline										
Construction Equipment Engines	2	3,828	3,827	0.71	3.1	0.14	0.14	0.01	0.17	0.07
On-Road Vehicle Travel	2	215	210.4	1.1	0.15	0.00	0.00	0.00	0.09	0.02
Off-Road Vehicle Travel	2	NA	NA	NA	NA	19.1	1.9	NA	NA	NA
Earthmoving Fugitives	2	NA	NA	NA	NA	221.7	22.2	NA	NA	NA
Open Burning	2	0	0.00	0.00	0.00	0.00	0.00	NA	0.00	NA
Wind Erosion	2	NA	NA	NA	NA	31.9	3.2	NA	NA	NA
H-650 Pipeline 2028 Total	2	*4,042*	*4,038*	*1.9*	*3.3*	*272.9*	*27.4*	*0.01*	*0.26*	*0.09*

Table 8 Total Construction Emissions (Tons)										
Source	**Year**	**CO_2e**	**CO_2**	**CO**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**Total HAPs**
Pipeline in Pittsylvania, VA	2	*3,382*	*3,379*	*1.2*	*2.8*	*226.2*	*22.7*	*0.01*	*0.19*	*0.07*
Pipeline in Rockingham, NC	2	*660*	*658*	*0.65*	*0.53*	*46.7*	*4.7*	*0.00*	*0.07*	*0.02*
Amendment Project Year 2 Total	**2**	***4,042***	***4,038***	***1.9***	***3.3***	***272.9***	***27.4***	***0.01***	***0.26***	***0.09***
NA indicates that the specific pollutant emissions are not expected from that source. NOx = nitrogen oxide [a] Interconnect construction would only occur in 2027. Mountain Valley September 3, 2025 Environmental Information Request Response at 1. FERC Accession Number 20250903-5011. Sums may not equal the total of addends due to rounding.										

The Amendment Project would result in construction emissions in the Project areas. However, those emissions would only occur during construction activities and would be dispersed over the 31.3 miles of the pipeline route. As discussed in section 2.4.1 of the FEIS, pipeline construction would generally proceed in an assembly line fashion with crews moving down the right-of-way as work progresses (in contrast to construction of the proposed interconnects which would be stationary).

Overall, the Amendment Project would result in a reduction in construction emissions as compared to the certificated Project. Combined construction emissions for the Amendment Project would result in a reduction of 187.4 tons of NOx, 870.5 tons of PM_{10}, and 58,226.0 tons of CO_2e as compared to the certificated Project. We conclude that there would be minor temporary impacts on localized air quality due to increases in criteria pollutants and VOC, however construction emissions would not have a significant effect on air quality.

7.1.2 Operational Emissions and Mitigation Measures

Operation of the Amendment Project would result in emissions from maintenance and testing blowdowns and fugitive emissions from leaks from the pipeline, valves and the interconnects. Estimated operational emissions are shown in table 9.

Table 9 Estimated Operational Emissions for the Amendment Project (tons per year)							
Component	**County**	**Length (miles)**	**VOC**	**Total HAPs**	**CO_2**	**Methane**	**Total CO_2e**
H-650 Pipeline	Pittsylvania, VA	26.8	0.18	0.01	0.21	17.3	484.4
	Rockingham, NC	4.6	0.03	<0.01	0.04	3.0	83.1
Aboveground Facilities							
Lambert Interconnect & Meter Station	Pittsylvania, VA	NA	0.68	0.03	0.34	65.6	1,837.2
LN 3600 Interconnect & Meter Station	Rockingham, NC	NA	0.68	0.03	0.34	65.6	1,837.2

Table 9 Estimated Operational Emissions for the Amendment Project (tons per year)							
Component	**County**	**Length (miles)**	**VOC**	**Total HAPs**	**CO_2**	**Methane**	**Total CO_2e**
Dan River Interconnect #1 & Meter Station	Rockingham, NC	NA	0.68	0.03	0.34	65.6	1,837.2
Dan River Interconnect #2 & Meter Station	Rockingham, NC	NA	0.68	0.03	0.34	65.6	1,837.2
Total			**2.9**	**0.13**	**1.61**	**282.7**	**7,916.4**

NA indicates that the pollutant emissions are not calculated using that parameter.
Emissions of NOx, CO, SO_2, PM_{10}, or $PM_{2.5}$ are not expected from the operation of the Amendment Project sources. Sources of emissions are limited to natural gas pipeline and interconnect leaks, venting, and blowdown events.
Mountain Valley August 8, 2025 Table 9.2-1. FERC Accession Number 20250808-5160.

Operational emissions for the certificated Project are presented in table 4.11-5 of the FEIS. The Amendment Project would result in a decrease in operational emissions compared to the certificated Project in the area of the Lambert Compressor Station, due to the removal of the facility. Emissions from the pipeline would be relatively similar to the certificated Project, and there would be a slight increase in emissions in the areas of the proposed interconnects and meter stations. However, all emissions would be minor. Furthermore, combined operational emissions for the Amendment Project would result in a reduction of 9.9 tons per year of VOC, 4.6 tons per year of total HAPs, and 122,910.6 tons of CO_2e per year as compared to the certificated Project.[126] Based on the above, we conclude that there would not be significant effects on air quality due to the Amendment Project.

8.0 Noise

Construction and operation of the Project are expected to generate noise impacts. We require that construction activities that could occur during nighttime hours should be performed with the goal that the activity contribute noise at a level at or below a day-night average sound level (L_{dn}) of 55 decibels on the A weighted scale (dBA) and 48.6 dBA equivalent sound level (L_{eq}). The USEPA has indicated that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. We have adopted this criterion and use it to evaluate potential Project-related noise impacts at noise sensitive areas (NSA). We also require that during Project operation, the noise attributable to any new compressor station, compressor engine, or meter station during full-load operation not exceed an L_{dn} of 55 dBA at any NSA. In general, a person's threshold of perception for a perceivable change in loudness on the A-weighted sound level is about 3 dBA, whereas a 6 dBA change is clearly noticeable, and a 9 dBA change is perceived as either twice or half as loud.

As discussed in the FEIS (section 4.11.2.2), Virginia and North Carolina do not have state regulations that would limit noise from construction or operation of the Amendment Project. While Rockingham County has a nuisance-based regulation, Pittsylvania County has a numerical-based noise ordinance.[127] The Pittsylvania County ordinance contains an exemption

126 Differences between FEIS table 4.11-5 (at 4-185) and table 9 in this EA.

127 Sounds levels in Pittsylvania County are limited to 52 Leq dBA at residential and agricultural property lines from 10:00 p.m. to 7:00 a.m.

for sound generated by construction provided such sound is limited between the hours of 7:00 a.m. and 10:00 p.m.

Mountain Valley also conducted baseline noise surveys at nighttime construction areas. The noise survey results for the nighttime construction areas are summarized in tables A-9 and A-10 of appendix A, and indicate that existing ambient background noise levels range from 43.5 to 49.5 dBA L_{dn}.

8.1.1 Construction Noise Effects

Construction activities for the Amendment Project would generally be limited to daylight hours except at 2 railroad crossings (at MP 5.6 and 25.7), the Sandy River and Dan River HDDs, and at 18 conventional bore crossings of waterbodies and/or wetlands. Refer to section 4.11.2.3 of the FEIS for a discussion of noise impacts and mitigation for general pipeline construction.

As previously mentioned, for certain activities, such as HDD crossings and conventional bores, Mountain Valley is proposing nighttime work. Mountain Valley conducted construction noise assessments for the proposed nighttime conventional bores and the two HDD crossings to predict the sound level contributions at the NSAs within 0.5 mile. NSAs outside of this distance are not discussed further. The two nighttime railroad conventional bores do not have any NSAs within 0.5 mile, and thus we would not anticipate significant noise impacts.

Where nighttime noise is predicted to exceed the Commission's noise threshold at the two proposed HDD crossings, Mountain Valley has committed to mitigation measures that would decrease noise levels below the 55 dBA L_{dn} (48.6 dBA L_{eq}). Mountain Valley would coordinate with affected and adjacent landowners regarding nighttime construction activities. The results of the modeling for the two HDD locations where nighttime activities would occur, and have NSA's within 0.5 mile, are summarized below.

HDD Crossings – Sandy River and Dan River

The new Sandy River HDD would be located at MP 18.1 and the Dan River HDD would be located at MP 30.8 along the Amendment Project route. For each waterbody, excavation of the HDD pits is anticipated to occur 12 hours per day (daytime only) for 6 days total. HDD operations would run 24 hours per day for a total of 26 days at the Sandy River HDD and 31 days at the Dan River HDD.

Predicted sound levels during HDD operations would exceed 48.6 dBA L_{eq}, however, with mitigation, the predicted nighttime sound levels during HDD operations would be lower than 48.6 dBA L_{eq} for all NSAs (table 10). To reduce nighttime sound levels, Mountain Valley would install temporary barriers of varying heights based upon the site-specific modeled conditions around the HDD. Additionally, Mountain Valley would reduce nighttime vacuum truck activity from 5 trucks to 1 truck and house drill rig engines, trash pumps, generator, and slurry pumps within small enclosures. With these mitigation measures, the noise model predicts that sound levels at the Sandy River and Dan River HDDs would be lower than 48.6 dBA L_{eq} during nighttime boring operations at all surrounding NSAs (see figures B-3 and B-4 in appendix B).

Table 10 Predicted Sound Levels During HDD Operations 24-Hour Construction Activities (Mitigated)									
HDD	NSA	Approximate Distance from the Crossing (feet)	Direction to NSA from Crossing	Predicted Sound Level 24-Hour Construction, dBA [a]		Construction Plus Ambient, dBA		Temporary Increase in Sound Level, dBA	
				Night	L_{dn} [b]	Night	L_{dn}	Night	L_{dn}
Sandy River HDD	1	1,320	WSW	46.1	52.5	47.5	53.9	5.7	5.5
	2	1,100	W	46.4	52.8	47.4	53.9	6.8	6.6
	3	650	NNW	48.0	54.4	48.7	55.2	8.1	7.9
	4	1,850	SW	48.0	54.4	48.5	54.9	9.4	9.2
Dan River HDD	1	1,850	SSW	48.1	54.5	49.2	55.7	6.3	6.2
	2	2,290	W	48.2	54.6	49.3	55.8	6.4	6.3
	3	1,200	NNW	48.4	54.8	48.9	55.3	9.7	9.5

[a] Insect, bird, and passing vehicle noise was removed

[b] L_{dn} was obtained by adding 6.4 dB to the predicted sound levels due to nighttime construction.

Mountain Valley February 3, 2025 Application Resource Report 9 at 9-23 and 9-32. FERC Accession Number 20250203-5192. Mountain Valley July 15, 2025 Environmental Information Request Response at 97. FERC Accession Number 20250715-5108.

Conventional Bore Crossings

Mountain Valley is proposing to conduct 24-hour conventional bore crossings at 18 locations (table 11). Conventional boring at each location is expected to last a few days. Predicted sound levels during 24-hour conventional bore operations would exceed 48.6 dBA L_{eq} at 13 locations (MPs 0.4, 0.8, 2.0, 4.3, 16.1, 17.4, 21.4, 22.5, 24.0, 24.4, 24.6, 26.9, and 27.2) without mitigation. At this time, Mountain Valley has not proposed mitigation for these 13 locations. In addition, Mountain Valley's *Nighttime Construction Noise Mitigation Plan* does not include the 24-hour conventional bore crossings at these 18 locations. Therefore, **we recommend that the following measure be included as an environmental condition in the Commission's Order**:

- **Prior to construction, Mountain Valley shall file with the Secretary, for review and written approval by the Director of OEP, or the Director's designee, mitigation measures to reduce nighttime noise levels at all 24-hour conventional bores to less than 48.6 dBA L_{eq}. Mountain Valley shall also revise its *Nighttime Construction Noise Mitigation Plan* to include all 24-hour conventional bore locations.**

Table 11 Predicted Sound Levels During Conventional Bore Operations 24-Hour Construction Activities (Unmitigated)									
Conventional Bore	NSA	Approximate Distance from the Bore (feet)	Direction to NSA from Crossing	Predicted Sound Level 24-Hour Construction, dBA [a]		Construction Plus Ambient, dBA		Temporary Increase in Sound Level, dBA	
				Night	L_{dn} [b]	Night	L_{dn}	Night	L_{dn}
0.4	1	2,625	W	50.6	57.0	50.9	57.3	11.9	11.9

Table 11 Predicted Sound Levels During Conventional Bore Operations 24-Hour Construction Activities (Unmitigated)									
Conventional Bore	NSA	Approximate Distance from the Bore (feet)	Direction to NSA from Crossing	Predicted Sound Level 24-Hour Construction, dBA [a]		Construction Plus Ambient, dBA		Temporary Increase in Sound Level, dBA	
				Night	L_{dn} [b]	Night	L_{dn}	Night	L_{dn}
0.8	1	1,210	NW	56.2	62.6	56.3	62.7	17.3	17.3
	2	885	S	57.7	64.1	57.8	64.2	18.8	18.8
2.0	1	1,905	E	55.8	62.2	55.9	62.3	16.9	16.9
4.3	1	1,310	N	50.4	56.8	50.7	57.1	11.7	11.7
	2	665	N	64.0	70.4	64.0	70.4	25.0	25.0
	3	1,120	W	54.9	61.3	55.0	61.4	16.0	16.0
	4	1,520	W	56.0	62.4	56.1	62.5	17.1	17.1
	5	1,790	S	54.4	60.8	54.5	60.9	15.5	15.5
5.3	1	2,275	E	33.2	39.6	40.0	46.4	1.0	1.0
11.5	1	2,220	NE	46.0	52.4	47.1	53.6	6.5	6.3
	2	1,835	E	48.2	54.6	48.9	55.3	8.3	8.0
	3	1,930	SE	48.3	54.7	49.0	55.4	8.4	8.1
	4	2,250	NE	45.6	52.0	46.8	53.3	6.2	6.0
16.1	1	1,175	SSW	51.8	58.2	52.1	58.5	11.5	11.2
	2	1,950	WSW	53.0	59.4	53.2	59.7	12.6	12.4
	3	2,215	WNW	49.8	56.2	50.3	56.7	9.7	9.4
	4	1,910	NNW	53.2	59.6	53.4	59.8	12.8	12.5
17.4	1	615	NNW	63.5	69.9	63.5	69.9	22.9	22.6
	2	680	N	56.7	63.1	56.8	63.2	16.2	15.9
	3	1,660	ENE	47.9	54.3	48.6	55.1	8.0	7.8
	4	1,905	ESE	48.1	54.5	48.8	55.3	8.2	8.0
	5	1,950	S	47.9	54.3	48.6	55.1	8.0	7.8
21.4	1	1,750	NE	52.1	58.5	52.4	58.8	11.8	11.5
	2	715	SE	59.1	65.5	59.2	65.6	18.6	18.3
	3	1,530	S	50.1	56.5	50.6	57.0	10.0	9.7
22.5	1	215	E	75.9	82.3	75.9	82.3	36.7	38.8
	2	355	WNW	67.7	74.1	67.7	74.1	28.5	30.6
24.0	1	1,290	WSW	55.4	61.8	55.5	61.9	16.3	18.4
	2	1,905	W	46.2	52.6	47.0	53.1	7.8	9.6
24.4	1	1,080	NE	50.2	56.6	50.5	56.8	11.3	13.3
	2	1,520	E	48.7	55.1	49.2	55.4	10.0	11.9
	3	920	SW	56.4	62.8	56.5	62.9	17.3	19.4
24.6	1	1,220	W	55.0	61.4	55.1	61.5	15.9	18.0
	2	1,615	NW	48.4	54.8	48.9	55.1	9.7	11.6
	3	1,720	N	48.0	54.4	48.5	54.7	9.3	11.3
26.5	1	2,015	S	47.6	54.0	48.2	54.4	9.0	10.9

Table 11 Predicted Sound Levels During Conventional Bore Operations 24-Hour Construction Activities (Unmitigated)									
Conventional Bore	NSA	Approximate Distance from the Bore (feet)	Direction to NSA from Crossing	Predicted Sound Level 24-Hour Construction, dBA [a]		Construction Plus Ambient, dBA		Temporary Increase in Sound Level, dBA	
				Night	L_{dn} [b]	Night	L_{dn}	Night	L_{dn}
26.9	1	1,955	E	48.6	55.0	49.1	55.3	9.9	11.8
	2	1,300	S	52.7	59.1	52.9	59.2	13.7	15.7
27.2	1	830	E	53.8	60.2	53.9	60.3	14.7	16.8
	2	2,065	WSW	46.5	52.9	47.2	53.4	8.0	9.9
28.0	1	1,905	NE	48.0	54.4	48.4	55.2	10.8	7.7

[a] Insect, bird, and passing vehicle noise was removed.
[b] Ldn was obtained by adding 6.4 dB to the predicted sound levels due to nighttime construction.
Mountain Valley September 3, 2025 Environmental Information Request Response Attachment 1. FERC Accession Number 20250903-5011.
24-hour conventional boring activities would be conducted at MP 28.2 however, no NSAs are within 0.5 mile.

See section 4.11.2.3 of the FEIS for additional information regarding noise impacts from blasting. Mountain Valley would adhere to its *General Blasting Plan* (which was revised for the Amendment Project). As highlighted in the *General Blasting Plan*, Mountain Valley would conduct noise and vibration assessments for residences and historical structures that could be impacted by blasting. The results of these assessments would be maintained by Mountain Valley and Mountain Valley would coordinate with affected landowners regarding any findings.

Conclusion

Construction noise would be heard by members of the public and residents near to the construction areas. However, construction noise is typically temporary and localized. With implementation of the measures proposed by the Mountain Valley, and our recommendation, construction noise impacts, including 24-hour HDD and conventional boring activities, would be minimized or mitigated to the extent practicable. Therefore, we conclude that the noise associated with construction of the Amendment Project would not result in a significant impact on the local noise environment and residents.

8.1.2 Operational Noise Impacts

As discussed in the FEIS (section 4.11.2.3), noise from the interconnects would be generated mainly by flow control valves installed at each interconnect. For the Amendment Project, operational noise impacts in the area of the Lambert Compressor Station and Lambert Interconnect would be reduced due to removal of the Lambert Compressor Station.

According to Mountain Valley, blowdown events at the interconnects would be rare events under emergency conditions. The increase in sound would be for the life of the Amendment Project. Table 12 shows the predicted operational noise levels at the nearest NSAs; operations of the interconnects would not exceed the FERC noise criterion of 55 dBA. However, the combined noise level of the Dan River Interconnect #1 and the Dan River Interconnect #2

would be 53.0 L_{dn} which is close to our noise criterion. Therefore, **we recommend that the following measure be included as an environmental condition in the Commission's Order**:

- **Mountain Valley shall file a noise survey with the Secretary no later than 60 days after placing the Dan River Interconnect #1 and the Dan River Interconnect #2 into service. If a full flow rate noise survey at the station's maximum design capacity is not possible, Mountain Valley shall provide an interim survey at the maximum possible flow rate and provide the full flow rate survey within 6 months. If the noise attributable to the operation of the Dan River Interconnects #1 and #2 exceeds an L_{dn} of 55 dBA at any nearby NSA, Mountain Valley shall file a report on what changes are needed and shall install additional noise controls to meet the level within 1 year of the in-service date. Mountain Valley shall confirm compliance with this requirement by filing a second noise survey with the Secretary no later than 60 days after it installs the additional noise controls.**

Table 12
Estimated Noise Levels at Nearby Noise Sensitive Areas due to Operation of the Interconnects (Meter Stations)

Facility	NSA Distance (feet) and Direction from Facility		Sound Levels (dBA)			
			Ambient Noise Level (L_{dn})	Facility Noise (L_{dn})	Facility + Ambient (L_{dn})	Increase Over Ambient (dBA)
Lambert Interconnect	NSA 1	2,830 WSW	45.4	26.0	45.4	0.0
	NSA 2	2,180 NW	47.1	31.7	47.2	0.1
LN 3600 Interconnect	NSA 1	1,650 NNW	47.5	30.0	47.6	0.1
Dan River Interconnect #1	NSA 1	480 SSE[a]	49.5	50.7	53.2	3.7
	NSA 2	930 SSW[a]	49.5	42.5	50.3	0.8
Dan River Interconnect #2	NSA 1	480 SSE[a]	49.5	49.1	52.3	2.8
	NSA 2	930 SSW[a]	49.5	43.0	50.4	0.9
Combined Dan River Interconnect #1 and #2[c]	NSA 1	480 SSE[a]	49.5	53.0	54.6	5.1
	NSA 2	930 SSW[a]	49.5	45.8	51.0	1.5

[a] Distances refer to the center of the two interconnects since they are adjacent to each other.
[b] Ldn was obtained by adding 6.4 dB to the predicted sound levels to account for continuous 24-hour operation.
[c] FERC Staff performed logarithmic addition at each NSA to calculate the additive sound levels at the Dan River Interconnects.
Mountain Valley February 3, 2025 Application Resource Report 9 at 9-34. FERC Accession Number 20250203-5192.

Based on the noise analysis above and our recommendation, we conclude that the noise associated with operation of the Amendment Project would not result in a significant effect on the local noise environment and residents.

9.0 Socioeconomics

Socioeconomic factors for the Amendment Project would be similar to the those described for the certificated Project as described in the FEIS (section 4.9) while accounting for the reduced scale of the Amendment Project as described in section A.4. According to Mountain

Valley, the Amendment Project would require an estimated four permanent jobs to operate and maintain; thus, we conclude that socioeconomic impacts would be less than significant.

10.0 Reliability and Safety

The transportation of natural gas by pipeline involves some incremental risk to the public due to the potential for an accidental release of natural gas. The greatest hazard is a fire or explosion following a major pipeline rupture. Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard.

10.1 Safety Standards

DOT is mandated to prescribe minimum safety standards to protect against risks posed by natural gas facilities as indicated in section A.5,[128] and as discussed in section 4.12.1 of the FEIS.

Federal pipeline safety regulations define area classifications, based on population density near pipeline facilities, and specify more rigorous safety requirements for populated areas. The class locations unit is an area that extends 220 yards on either side of the centerline or any continuous 1-mile length of pipeline.[129] Table 13 provides a summary of class locations crossed by the Amendment Project. No Class 4 areas would be crossed.

Table 13
DOT Classifications along the Amendment Project

DOT Classification	Begin MP	End MP	County, State	Approximate Length (miles)
1	0.00	2.96	Pittsylvania, VA	3.0
2	2.96	3.42	Pittsylvania, VA	0.46
1	3.42	3.58	Pittsylvania, VA	0.16
2	3.58	3.77	Pittsylvania, VA	0.20
1	3.77	3.87	Pittsylvania, VA	0.09
2	3.87	4.29	Pittsylvania, VA	0.43
3	4.29	4.37	Pittsylvania, VA	0.08
2	4.37	4.47	Pittsylvania, VA	0.09
1	4.47	10.13	Pittsylvania, VA	5.7
2	10.13	10.94	Pittsylvania, VA	0.81
1	10.94	13.12	Pittsylvania, VA	2.2
2	13.12	13.71	Pittsylvania, VA	0.59
1	13.71	15.94	Pittsylvania, VA	2.23
2	15.94	17.06	Pittsylvania, VA	1.1
1	17.06	18.42	Pittsylvania, VA	1.4
2	18.42	18.63	Pittsylvania, VA	0.21

[128] Pipeline Safety Statutes in Title 49 United States Code Chapter 601.
[129] See 49 CFR 192 for the class location definitions.

Table 13 DOT Classifications along the Amendment Project				
DOT Classification	**Begin MP**	**End MP**	**County, State**	**Approximate Length (miles)**
1	18.63	18.89	Pittsylvania, VA	0.26
2	18.89	19.11	Pittsylvania, VA	0.23
1	19.11	19.15	Pittsylvania, VA	0.04
2	19.15	20.16	Pittsylvania, VA	1.0
3	20.16	20.20	Pittsylvania, VA	0.04
2	20.20	20.61	Pittsylvania, VA	0.41
1	20.61	30.84	~6.2 in Pittsylvania, VA ~4.03 in Rockingham, NC	10.2
2	30.84	31.29	Rockingham, NC	0.45
Source: Mountain Valley, September 3, 2025, Environmental Information Request at 53, FERC Accession Number 20250903-5011.				

We received comments about the potential effects of a pipeline rupture and natural gas ignition and Mountain Valley's requests to increase the operating capacity and size of the pipeline. As discussed in section 4.12.1 of the FEIS, it should be noted that if a pipeline rupture does occur, the natural gas does not necessarily ignite. However, the DOT has published rules that define high consequence areas (HCAs) where a gas pipeline accident could do considerable harm to people and their property and requires an Integrity Management Program (IMP) to minimize the potential for an accident. This definition satisfies, in part, the Congressional mandate for the DOT to prescribe standards that establish criteria for identifying each gas pipeline facility in a high-density population area. The two ways that an HCA can be identified are discussed in section 4.12.1 of the FEIS. Table 14 lists the HCAs and moderate consequence areas (MCAs) for the Amendment Project, which have been determined based on the relationship of the pipeline centerline to nearby structures.

The potential impact radius (PIR) for the proposed 30-inch-diameter pipeline with a MAOP of 1,440 pounds per square inch gauge (psig) is 785 feet.[130]

Table 14 Location of High Consequence Areas and Moderate Consequence Areas for the Amendment Project			
County	**Begin MP**	**End MP**	**Length (mile)**
High Consequence Areas			
Pittsylvania County, VA	4.28	4.92	0.65
Pittsylvania County, VA	20.02	20.66	0.64
Pittsylvania County, VA	23.88	24.51	0.64
		Amendment Project Total	**1.9**
Moderate Consequence Areas			
Pittsylvania, VA	3.09	3.67	0.58

130 Mountain Valley February 3, 2025 Application Resource Report 11 at 11-3. FERC Accession Number 20250203-5192.

Table 14 Location of High Consequence Areas and Moderate Consequence Areas for the Amendment Project			
County	**Begin MP**	**End MP**	**Length (mile)**
Pittsylvania, VA	4.26	4.28	0.02
Pittsylvania, VA	4.92	5.02	0.09
Pittsylvania, VA	7.42	7.94	0.52
Pittsylvania, VA	10.31	11.29	0.99
Pittsylvania, VA	13.41	14.14	0.72
Pittsylvania, VA	15.00	15.53	0.53
Pittsylvania, VA	16.08	16.61	0.54
Pittsylvania, VA	19.31	20.02	0.71
Pittsylvania, VA	20.66	20.96	0.31
Rockingham, NC	30.90	31.36	0.46
		Amendment Project Total	**5.5**
Source: Mountain Valley, February 3, 2025, Application Resource Report 11 at 11-3, FERC Accession Number 20250203-5192. Mountain Valley, August 8, 2025, supplemental filing table 11.2-3 of Attachment G-3, FERC Accession Number 20250808-5160.			

10.2 Facility Design

The Amendment Project facilities would be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR Part 192 and other applicable federal and state regulations. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. The DOT specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion.

10.3 Emergencies

The DOT prescribes the minimum standards for operating and maintaining pipeline and aboveground natural gas facilities, including the requirement to establish a written plan governing these activities as outlined in section 4.12.1 of the FEIS. Mountain Valley would provide the appropriate training to local emergency service personnel before the Amendment Project is placed in service.

We received comments regarding the safety of collocated pipelines (such as the existing Transco pipelines and the proposed SSE Project). It is common practice for natural gas pipelines to be located adjacent to one another (as is the case for the existing Transco pipelines). Pipelines must be at least a foot from any underground structure, however; companies usually want their pipelines to be 25 feet from another pipeline.

With continued compliance with DOT safety standards, operation, and maintenance requirements, we conclude that Amendment Project facilities would represent a minimum increase in risk to the public.

10.4 Polychlorinated Biphenyls

From approximately 1950 to the early 1970s, polychlorinated biphenyls (PCB)-containing compounds were used by some interstate natural gas transmission companies as a lubricant, hydraulic fluid, or sealant for turbines and air compressors. As part of normal operation, PCBs could leak or blow by pressure seals and enter the transmission pipeline. PCBs may also be present in natural gas pipelines due to the historical practice of oil fogging, performed in the late 1940s through 1960s (USEPA, 2004). Older pipeline segments and associated facilities in operation at the time that PCBs were employed in the natural gas transmission industry may be contaminated with PCBs at levels requiring abandonment and disposal procedures consistent with USEPA's regulations found in 40 CFR Part 761.

According to Mountain Valley[131], proposed Amendment Project interconnections[132] with existing pipeline systems could encounter PCBs in excess of 50 ppm in the existing systems or the soils immediately surrounding the interconnections. Mountain Valley would enter into a Transmission Interconnect Agreement prior to connecting with an existing pipeline system. The Transmission Interconnect Agreement would include an Environmental Responsibility clause which would address responsibility in the event a hazardous substance, such as PCBs, are encountered at the interconnect site. In addition, if a pipeline interconnect requires Mountain Valley to remove or abandon existing pipeline facilities that could be contaminated with PCBs, Mountain Valley would complete the work in accordance with USEPA regulations 40 CFR 761. The potentially PCB-contaminated components would be sampled for PCBs. Should contaminated media be discovered during construction, Mountain Valley would follow all applicable federal, state, and local regulations. Based on the Project scope of activities, and Mountain Valley's proposed PCB detection and disposal measures, we conclude that if PCB levels exceed hazardous waste concentration thresholds on any portion of the Project facilities, the contamination would be properly managed.

11.0 Cumulative Effects

Cumulative effects represent the incremental effects of a proposed action (Amendment Project) when added to other past, present, or reasonably foreseeable future actions (projects), regardless of the agency or party undertaking such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over time. In this analysis, we generally consider the effects of past projects within the region as part of the affected environment (environmental baseline) which was described and evaluated in the preceding environmental analysis. However, present effects of past actions that are relevant and useful were also considered.

For a cumulative effect to occur, another project(s) must affect the same resource(s) as the proposed action. Effects often vary in extent and duration. For example, a project's effect on cultural resource sites is localized in nature, with some exceptions, and typically does not affect other sites whereas a project's effect on air quality could be measured over a relatively large

---

131 Mountain Valley February 3, 2025 Application Resource Report 12 at 12-1 and 12-2. FERC Accession Number 20250203-5192.

132 The Lambert Interconnect (MP .0), the LN 3600 Interconnect (28.9), the Dan River Interconnect #1 (MP 31.3) and the Dan River Interconnect #2 (MP 31.3).

distance. We account for this variation by considering resource-specific geographic scopes. Within each geographic scope, other projects' effects when combined with those of the proposed action could result in a cumulative effect. The geographic scope varies depending on the resource affected and the magnitude of the effect. Table 15 summarizes the resource-specific geographic boundaries considered in this cumulative effects analysis. Actions occurring outside these boundaries were generally not evaluated because their potential to contribute to a cumulative effect diminishes with increasing distance from the Amendment Project.

As described in the environmental analysis section of this EA, constructing and operating the Amendment Project would temporarily and permanently effect the environment. The Amendment Project would affect geology, soils, water resources, wetlands, fisheries, wildlife, vegetation, cultural resources, land use, socioeconomics, air quality (during construction), and noise (during construction and operation).

Table 15
Geographic Scopes for Cumulative Impact Analysis

Environmental Resource	Geographic Scope	Justification
Geologic Resources and Soils	Construction workspace	Because impacts on geologic resources are unlikely to extend beyond the project workspaces, cumulative effects are assessed within the Amendment Project workspaces.
Groundwater; Surface Water and Wetlands	HUC-12 watersheds crossed by the Amendment Project	Surface water effects occur at the crossing location of a waterbody that includes in-water construction and some distance downstream. HUC-12 watersheds have defined boundaries of water flow that create a common hydrologic setting for assessing cumulative effects.
Fisheries, Vegetation, Wildlife, and Special Status Species	HUC-12 watersheds crossed by the Amendment Project	Effects on biological resources can be assessed at the watershed level as watersheds provide a natural boundary that accommodates wildlife habitat, seed dispersal, and ecosystem characteristics in the Amendment Project area.
Cultural Resources	Amendment Project APE	The Amendment Project's effects on cultural resources would be limited to the APE, which is the area within which other actions may contribute to cumulative impacts.
Land Use, Recreation and Visual Resources	Within 1 mile of construction workspaces	Special land uses, recreation areas, and planned development are assessed within 1 mile of the Amendment Project.
Air Quality – Construction	0.25-mile radius of the Amendment Project construction workspaces during construction	Air quality construction impacts can occur within 0.25 mile of the activity from the use of construction equipment. Cumulative effects are assessed within this buffer.
Noise – Construction	0.25-mile radius of Amendment Project construction workspaces, except 0.5 mile of HDD drilling rigs	Noise impacts can occur within 0.25 mile of construction equipment and within 0.5 mile of the action from HDD installation. Cumulative effects are assessed within this buffer.

Table 15 Geographic Scopes for Cumulative Impact Analysis		
Environmental Resource	**Geographic Scope**	**Justification**
Noise – Operations	Other facilities that would impact any NSAs located within 1 mile of a noise emitting permanent aboveground facility	FERC guidance specifies that noise impacts are assessed within 1 mile of noise emitting permanent aboveground facilities. Cumulative effects are assessed for NSAs within this buffer.

11.1 Projects Identified within the Geographic Scope

Table A-11 in appendix A identifies 56 past, present, and reasonably foreseeable future actions within the geographic scope of the Amendment Project that are considered in our cumulative impacts analysis, including detailed project descriptions, mapping, estimated construction timeframes when available, distance to the proposed Amendment Project, and resources potentially cumulatively affected. The scope of the cumulative effects assessment depends in part on the availability of information about other projects. For this assessment, other projects were identified through information provided by Mountain Valley, Transco, publicly available data, internet searches, and consultation with various agencies. For some projects, we were unable to obtain quantitative information (e.g., project planning stage, size), and in these cases our analysis relies on qualitative information.

Out of all the projects mentioned in table A-11 of appendix A, the Amendment Project's overlapping timeline of anticipated construction and acreage of shared and adjacent workspace with Transco's SSE Project would have the highest potential for cumulative effects. Due to this, and given that we received a number of comments specifically concerned with interactions between these two projects, potential cumulative effects of the Amendment Project and the SSE Project are discussed in detail in table 16 below. The SSE Project's Eden Loop would include 30.8 miles of new 42-inch-diameter pipeline in Pittsylvania County, Virginia, and Rockingham County, North Carolina and a new compressor station in Rockingham County, North Carolina. The SSE Project's Eden Loop pipeline segment would be collocated with Transco's existing Mainline System and the Amendment Project. Proposed construction of the SSE Project would overlap with the Amendment Project's planned construction schedule.

Potential cumulative effects by resource are discussed in table 16.

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
Geology	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	No mineral resources were identified within 0.25 mile of the Amendment Project; therefore, we conclude cumulative effects on mineral resources would not occur. Cumulative effects on geology could occur where other actions occur within the Amendment Project workspace. 15 projects may overlap with the Amendment Project which may cause cumulative effects on geology. Impacts on geology from overlapping projects could include the installation of aboveground facilities and impervious surfaces, and construction activities such as clearing, grading, trench excavation, boring/HDD installations, and backfilling. Construction and restoration of the of the Transco Southside Reliability and Enhancement and Mountain Vally Pipeline Projects are expected to be completed before construction of the Amendment Project is scheduled to start. The collocated Amendment Project and SSE Project's Eden Loop would cross slopes that exceed 30 percent for about 0.1 mile and cross about 0.6 mile of side slopes greater than 30 percent. Both Mountain Valley and Transco would implement erosion and surface/groundwater control measures as well as best management practices to avoid overweighing slopes during construction. Mountain Valley and Transco would also conduct ongoing monitoring during construction and operation to identify and address any slope stability issues. No other actions within the geographic scope would overlap with construction where slopes are greater than 30 percent or other areas of identified geologic hazard. Based on this assessment, we conclude that the Project, when considered in combination with other projects in the geographic scope, would not result in significant cumulative effects on geological resources.
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available.	
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new).	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact.	
	Transco Spray Meter Station	0.93 acre of impact for construction	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact	
	Lumen Fiber Optic Replacement	0.85 acre of footprint.	
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
Soils	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	Cumulative effects on soil resources could occur where other actions occur within or adjacent to Amendment Project workspace. The Transco Southside Reliability Enhancement and Mountain Valley Pipeline Projects are within the geographic scope of analysis for soils; however, construction and restoration are expected to be complete, before construction of the Amendment Project is scheduled to start. Construction and restoration of the SSE Project and the Amendment Project could occur concurrently, however, effects on soils would be individually and collectively temporary and highly localized given that both projects would be required to implement our Plan and Procedures (or equivalent measures). The 8 non-jurisdictional facilities associated with the Amendment Project (detailed in appendix A) are also within the geographic scope of analysis for soils; however, the area affected would be small in scale (ranging from 48 feet to 612 feet in length with varying right-of-way widths) and would occur following construction of the Amendment Project. The Transco Spray Meter Station and Lumen Fiber Optic Replacement projects are expected to be completed prior to construction of the Amendment Project. Construction of the MEC Transmission Project could occur concurrently with the Amendment Project but would affect less than 2 acres. While Amendment Project effects and the effects of other actions within the geographic scope (see appendix A) could contribute to cumulative effects on soil resources, these effects would be individually and collectively temporary and highly localized given that all projects are expected to implement soil conservation and restoration measures to prevent erosion and stabilize disturbed areas pursuant to FERC- and state-NPDES permitting requirements, as applicable. Therefore, although soils would be temporarily disturbed from the combination of these projects
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available.	
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new).	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact.	
	Transco Spray Meter Station	0.93 acre of impact for construction	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Lumen Fiber Optic Replacement	0.85 acre of footprint.	occurring within similar timeframes and adjacent workspaces, cumulative effects on soils would be minor and temporary, lasting until restoration/stabilization of project workspaces. Permanent cumulative effects on soils could occur due to soil compaction and the conversion of soils classified as farmland at permanent aboveground facilities. Compaction would be highly localized and resulting cumulative impacts would be negligible. Operation of the Amendment Project would permanently convert approximately 3.3 acres of prime farmland to industrial use at aboveground facilities and groundbeds. Construction would impact more acres of prime farmland soils, but those areas would be restored following construction. The cumulative effect of this conversion would not be significant when compared to the available farmland soils in the affected counties (768,528 total [NRCS USDA, 2024]). Other actions in the geographic scope have similar or smaller footprints and therefore would not likely contribute a significant cumulative effect on farmland soils in the affected counties. As FERC-regulated projects, SSE, Southside Reliability Enhancement, and the Mountain Valley Pipeline projects would be required to return soils and agricultural land in temporary workspaces and the pipeline right-of-way to preconstruction conditions. Areas that were previously used for agriculture would be able to be farmed after restoration is complete. Because most effects on prime farmland soils would be temporary and the permanent impacts would be a small percentage of available designated farmland, we conclude that a small but not significant cumulative effect on these resources would occur.
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	
Water Resources (Groundwater,	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	Groundwater: The Amendment Project would result in negligible cumulative effects on groundwater resources as no withdrawal of groundwater is proposed except as necessary for trench dewatering. The Amendment

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
Surface Water, and Wetlands)		27.5 acres of construction impacts on wetlands 10.7 acres of operation impacts on wetlands	Project would create impervious surfaces at new aboveground facility sites. The proposed Amendment Project HDDs may intercept the water table; however, with Mountain Valley's mitigation measures (refer to section B.3.1), we do not expect the Amendment Project's minor effects on groundwater resources to result in significant cumulative effects on groundwater quality, or withdrawal and depletion. The types of effects on groundwater resources from the construction and operation of other projects within the geographic scope would be similar to the Amendment Project (e.g., changes in near-surface hydrology from excavation dewatering, the addition of impervious surfaces at aboveground facilities). Table A-12 in appendix A lists the acreage of construction workspace for the Amendment Project within each HUC-12 watershed that would be crossed as well as the total acreage of the watershed. The same information is provided in table A-12 in appendix A for the other projects in the geographic scope. Based on the footprint of the effects relative to the size of the affected HUC-12 watersheds, resulting effects are anticipated to be minor and highly localized and would not result in a significant cumulative effect on groundwater resources. There could be a cumulative effect if multiple projects affected the same groundwater source (aquifer, well, or spring) through spills of hazardous substances or temporary increased turbidity from trench dewatering; however, the projects identified would involve shallow ground disturbance and proponents would be required to implement spill prevention and immediate remediation plans if a spill of hazardous substances were to occur. We conclude that construction and
	East Tennessee System Alignment Project	35.3 acres of construction impact. 28.8 acres of impact for operations (new). No impacts on wetlands.	
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available. 14.00 acres of wetland impact for construction. 1.39 acres of operational impact on wetlands (new). 2.82 acres of impact on waterbodies during construction. 0.08 acres of impact on waterbodies during operation.	
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new). No impacts on streams or wetlands	
	Balico Pittsylvania Power Plant	Information Not Available	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact. 2.6 acres of construction wetland impacts and 1.0 acre of operation wetland impacts in Pittsylvania County.	operation of the Amendment Project, in consideration with the other projects listed in appendix A, would not result in significant cumulative effects on groundwater quality or supply. Water Resources/Wetlands: The geographic scope established for surface water and wetlands is the HUC-12 watersheds crossed by the Amendment Project. Construction activities within the geographic scope could result in cumulative effects including increases in turbidity and sedimentation and lowering of dissolved oxygen levels. Inadvertent spills could also be detrimental to water quality. These effects would be the greatest during and immediately following concurrent construction of the proposed Amendment Project and other projects within the HUC-12 watershed. Effects on surface waters within the HUC-12 would be temporary and localized to the time of crossing. As the SSE project poses the greatest potential for cumulative effects, the magnitude of effects would depend on the specific timeframe of crossing the same waterbodies. Depending on the type of wetlands crossed, cumulative effects from wetlands within any one HUC-12 watershed crossed by both the SSE and the Amendment Project, may have short- to long-term effects on wetland resources. The majority of the Amendment (64%) and SSE (98.3%) Projects would be constructed within or adjacent to existing maintained rights-of-way. Mountain Valley would further minimize effects on wetlands by implementing the construction and mitigation measures outlined in its Procedures and by adhering to applicable permit requirements. Direct effects from construction projects involving clearing, grading, or excavation on sites larger than one acre would be required to obtain appropriate state NPDES stormwater construction permits which would specify
	Transco Spray Meter Station	0.93 acre of impact for construction No stream or wetland impacts for construction	
	Route 311 Connector Road Project (Route 311 and Oak Hill Road)-VDOT (0311-071-835, P101)	0.16 acre of construction impacts. 0.39 acre of operation impacts.	
	VDOT- Berry Hill Rd Connector Project (NAO-2020-00567)	350 acres (includes stream, wetland and dredging impacts). 0.16 acre of construction impact to streams with 0.39 acre of permanent impacts. 0.40 acre of construction impact to wetlands with 0.36 acre of operational impacts.	
	City of Danville Moorefield Bridge Road Improvements	Information Not Available	
	City of Danville Route 29/703 Intersection Upgrades	Information Not Available	
	SGR25 VP Resurfacing Projects/VDOT	Information Not Available	
	Bridge Replacement Over Pumpkin Creek	Information Not Available	
	Piney Forest Corridor Study	Information Not Available	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	SR 2066 (Kings Highway) Intersection Improvement Project	Information Not Available	the types of erosion and sediment controls, BMPs, and conservation practices required. With appropriate BMPs in place, indirect effects on waterbodies and wetlands would be minimized. We conclude that the Amendment Project may contribute minor cumulative effects on surface waters and wetlands when combined with the other projects discussed above that are constructed within similar timeframes as the Amendment Project within the same HUC-12 watershed, but cumulative effects would be less than significant.
	SR 1747 (East Stadium Drive) Sidewalk Construction Project	Information Not Available	
	Cherrystone Creek Dams Rehabilitation Project	57-feet high x 780-feet long (Cherrystone A); 68-feet high x 400-feet long (Cherrystone B).	
	Dominion Michaux Solar Project	900 acres Information not available for stream and wetland impacts.	
	Strata Solar- Battery Storage Facility	55-megawatt built on a 3.5-to-4-acre concrete pad of the 85- acre lot Information not available for stream and wetland impacts	
	Strata Solar-Berry Hill Solar Project	800 acres Information not available for stream and wetland impacts.	
	Energix Renewables Axton Solar Project	130 acres Information not available for stream and wetland impacts.	
	Southside Investing, LLC Mixed-Use Project	600-acres Information not available for stream and wetland impacts.	
	Hopewell Solar Project	1,400 acres with 900 acres covered in solar panels Information not available for stream and wetland impacts.	
	Pittsylvania County Jail	33 acres Information not available for stream and wetland impacts.	
	Recurrent Energy/AEP Blue Ridge Solar Project	1,400 acres Information not available for stream and wetland impacts.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact Construction and operational (ROW) 0.02 acre of wetland impact and 0.04 acre of stream impact	
	Cross Creek Subdivision Phase II Extension	Information Not Available	
	Maplewood Solar Substation and Switchyard & Maplewood Solar Main PV Area	Information Not Available	
	Blue Ridge Solar Parts I and II	Information Not Available	
	Tightsqueeze Development	Information Not Available	
	New Branch for URW Community Federal Credit Union	Information Not Available	
	VDOT Halifax 6029 071 845 UPC 118783	Information Not Available	
	J&J Truck Sales	Information Not Available	
	Irish Road Solar	Information Not Available	
	Berry Hill 138 kV Extension	Information Not Available	
	Brosville 138 kV Station and Line Extension	Information Not Available	
	Berry Hill Commerce Centre	Information Not Available	
	Southern Virginia Solar	Information Not Available	
	Berry Hill 138 kV Substation	Information Not Available	
	Berry Hill Mega Site Project	3,528 acres prepared for commercial projects. Phase 1: 204 sf of graded area. Other phases unknown at this time. 36,135 linear of permanent impacts on streams and 21.07 acres of permanent wetland impacts	
	Southern Virginia Megasite at Berry Hill Phase III	Information Not Available	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Proposed Tractor Supply	10.21 acres Information not available for stream and wetland impacts.	
	Monroe Solar Site	Information Not Available	
	Solid Waste Landfill Cell "C2" (L24-02-05603)	5.4 acres Information not available for stream and wetland impacts.	
	Landfill Office Building (L24-10-05750 and S24-12-33025)	3.9 acres Information not available for stream and wetland impacts.	
	Climax Road Widening	Information Not Available	
	Stony Mill Road (Route 869/Tunstall High Road (Route 869)	0.4 acre Information not available for stream and wetland impacts.	
	Lumen Fiber Optic Replacement	0.85 acre of footprint. No impacts on streams or wetlands are proposed.	
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	
Fisheries, Vegetation, Wildlife, and Special Status Species	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact. 27.5 acres of construction impacts on wetlands 10.7 acres of operation impacts on wetlands	The geographic scope established for fisheries, vegetation, wildlife, and threatened and endangered species is the HUC-12 watersheds crossed by the Amendment Project. Factors contributing to cumulative effects on fisheries would be similar to those contributing to effects on surface waters discussed above, primarily increases in turbidity and sedimentation and decreases in dissolved oxygen levels. The Amendment Project and the SSE Project's Eden Loop would cross the Dan River and the Sandy River, which have warmwater fisheries. Both projects would cross these rivers using the HDD method to avoid instream disturbance to aquatic species of
	East Tennessee System Alignment Project	35.3 acres of construction impact. 28.8 acres of impact for operations (new). No impacts on wetlands.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available. 14.00 acres of wetland impact for construction. 1.39 acres of operational impact on wetlands (new). 2.82 acres of impact on waterbodies during construction. 0.08 acres of impact on waterbodies during operation.	concern. The HDD crossing method may result in inadvertent returns. To mitigate the effects of inadvertent returns to aquatic resources, Mountain Valley would implement its HDD Contingency Plan. The effects on fisheries from the Amendment Project along with other projects in the same temporal scope would be commensurate with changes in surface water quality as described above. Some of the other projects in the geographic scope with the greatest potential for cumulative effects would be other pipeline projects, transportation facility actions, and residential/commercial/ industrial developments. However, with implementation of standard erosion and sediment control practices, these projects would have minor, temporary cumulative effects on fisheries. Cumulative effects on vegetation are expected to include long-term conversion of vegetated communities within new rights-of-way, introduction of non-native plants and/or noxious weeds, an increase in impervious surfaces, habitat fragmentation, or an altered vegetative structure. Projects with permanent aboveground facilities (such as industrial developments, and roads) would permanently affect plant communities. In comparison, buried utilities, which allow for restoration of vegetation following construction, may eventually have a similar plant community or vegetative status (crops or grasslands) restored. Cumulative effects on forest communities may also be expected for sections of the Amendment Project that are not collocated with the proposed Eden Loop from the creation of smaller forested tracts. The collocation of the Amendment and SSE Projects with the existing Transco pipelines would lead to cumulative effects on vegetation including forested tracts. Cumulative effects on vegetation resulting from other projects, considered along with the Amendment Project are expected to be minor, considering the area affected within the geographic scope, as compared to the large amount of similar communities remaining in each
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new). No impacts on streams or wetlands	
	Balico Pittsylvania Power Plant	Information Not Available	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact. 2.6 acres of construction wetland impacts and 1.0 acre of operation wetland impacts in Pittsylvania County.	
	Transco Spray Meter Station	0.93 acre of impact for construction No stream or wetland impacts for construction	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Route 311 Connector Road Project (Route 311 and Oak Hill Road)- VDOT (0311-071-835, P101)	0.16 acre of construction impacts. 0.39 acre of operation impacts.	watershed (affected HUC-12 watersheds total approximately 203,824 acres in size). Mountain Valley would restore temporarily disturbed areas in accordance with its Plan and minimize the potential introduction of non-native invasive species through its Exotic and Invasive Species Control Plan. Transco would have similar plans for the SSE Project. Where construction schedules overlap between the Amendment Project and the other projects within the geographic scope, increased noise, lighting, and human activity could disturb wildlife. Overlapping construction timelines would disturb for wildlife, thus increasing potential for cumulative effects. Even construction that does not overlap can have cumulative effects if habitat is not allowed to reestablish or takes years (or decades in the case of forested habitats) to reestablish. Constructing the Amendment Project would result in habitat fragmentation and "edge" effects. However, we conclude that effects on non-special status wildlife species would not result in long-term or significant population-level effects given the stability of local populations and the abundance of available adjacent habitat. While noise from the Amendment Project is not likely to directly affect wildlife beyond the geographic scope for cumulative noise effects, an overall increase in noise associated with projects throughout the HUC-12 watershed could limit the available habitat not affected by noise to which disturbed wildlife can relocate. Wildlife that cannot relocate away from noise-emitting sources could be adversely affected by increasing stress levels and masking auditory cues necessary to avoid predation or hunt prey and find mates. In general, however, most of the wildlife inhabiting the affected watersheds, as these projects are situated in an agricultural / rural landscape, are human commensal species or individuals that have otherwise become habituated to
	VDOT- Berry Hill Rd Connector Project (NAO-2020-00567)	350 acres (includes stream, wetland and dredging impacts). 0.16 acre of construction impact to streams with 0.39 acre of permanent impacts. 0.40 acre of construction impact to wetlands with 0.36 acre of operational impacts.	
	City of Danville Moorefield Bridge Road Improvements	Information Not Available	
	City of Danville Route 29/703 Intersection Upgrades	Information Not Available	
	SGR25 VP Resurfacing Projects/VDOT	Information Not Available	
	Bridge Replacement Over Pumpkin Creek	Information Not Available	
	Piney Forest Corridor Study	Information Not Available	
	SR 2066 (Kings Highway) Intersection Improvement Project	Information Not Available	
	SR 1747 (East Stadium Drive) Sidewalk Construction Project	Information Not Available	
	Cherrystone Creek Dams Rehabilitation Project	57-feet high x 780-feet long (Cherrystone A); 68-feet high x 400-feet long (Cherrystone B).	
	Dominion Michaux Solar Project	900 acres Information not available for stream and wetland impacts.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Strata Solar- Battery Storage Facility	55-megawatt built on a 3.5-to-4-acre concrete pad of the 85- acre lot Information not available for stream and wetland impacts	human activity. The Amendment Project, when combined with the other projects in the geographic scope, would result in minor temporary cumulative effects on wildlife due to habitat loss and increased noise, light, and human activity. Cumulative effects for threatened and endangered species and other special status species would be similar to the effects discussed above. Additionally, all projects with a federal nexus are required to comply with Section 7 of the ESA to ensure actions would not adversely affect or jeopardize the continued existence of a federally protected species. Mountain Valley would implement the measures outlined in its Plan and Procedures to minimize the Amendment Project's contribution to these potential cumulative effects. Based on our assessment of the expected cumulative effects of the projects considered, and on the presence of similar habitat within the HUC-12 watersheds, we conclude that cumulative effects on fisheries, vegetation, and wildlife would not be significant.
	Strata Solar-Berry Hill Solar Project	800 acres Information not available for stream and wetland impacts.	
	Energix Renewables Axton Solar Project	130 acres Information not available for stream and wetland impacts.	
	Southside Investing, LLC Mixed-Use Project	600-acres Information not available for stream and wetland impacts.	
	Hopewell Solar Project	1,400 acres with 900 acres covered in solar panels Information not available for stream and wetland impacts.	
	Pittsylvania County Jail	33 acres Information not available for stream and wetland impacts.	
	Recurrent Energy/AEP Blue Ridge Solar Project	1,400 acres Information not available for stream and wetland impacts.	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact Construction and operational (ROW) 0.02 acre of wetland impact and 0.04 acre of stream impact	
	Cross Creek Subdivision Phase II Extension	Information Not Available	
	Maplewood Solar Substation and Switchyard & Maplewood Solar Main PV Area	Information Not Available	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Blue Ridge Solar Parts I and II	Information Not Available	
	Tightsqueeze Development	Information Not Available	
	New Branch for URW Community Federal Credit Union	Information Not Available	
	VDOT Halifax 6029 071 845 UPC 118783	Information Not Available	
	J&J Truck Sales	Information Not Available	
	Irish Road Solar	Information Not Available	
	Berry Hill 138 kV Extension	Information Not Available	
	Brosville 138 kV Station and Line Extension	Information Not Available	
	Berry Hill Commerce Centre	Information Not Available	
	Southern Virginia Solar	Information Not Available	
	Berry Hill 138 kV Substation	Information Not Available	
	Berry Hill Mega Site Project	3,528 acres prepared for commercial projects. Phase 1: 204 sf of graded area. Other phases unknown at this time. 36,135 linear of permanent impacts on streams and 21.07 acres of permanent wetland impacts	
	Southern Virginia Megasite at Berry Hill Phase III	Information Not Available	
	Proposed Tractor Supply	10.21 acres Information not available for stream and wetland impacts.	
	Monroe Solar Site	Information Not Available	
	Solid Waste Landfill Cell “C2” (L24-02-05603)	5.4 acres Information not available for stream and wetland impacts.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Landfill Office Building (L24-10-05750 and S24-12-33025)	3.9 acres Information not available for stream and wetland impacts.	
	Climax Road Widening	Information Not Available	
	Stony Mill Road (Route 869/Tunstall High Road (Route 869)	0.4 acre Information not available for stream and wetland impacts.	
	Lumen Fiber Optic Replacement	0.85 acre of footprint. No impacts on streams or wetlands are proposed.	
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	
Cultural Resources	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	The currently proposed projects that are defined as federal actions would have to comply with Section 106 of the NHPA. The federal agencies that would manage those projects must follow the regulatory requirements of 36 CFR 800. Under those regulations, the lead federal agency, in consultation with the SHPO, would identify historic properties in the APE, assess potential effects, and resolve adverse effects through an agreement document that outlines a treatment plan. Non-federal actions would need to comply with any mitigation measures that may be required by the SHPOs of the affected states. Given these requirements, we conclude that the Amendment Project, in addition to other projects within the geographic scope, would not result in significant cumulative effects on historic properties.
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new).	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact.	
	Transco Spray Meter Station	0.93 acre of impact for construction	
	City of Danville Route 29/703 Intersection Upgrades	Information Not Available	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact	
	Tightsqueeze Development	Information Not Available	
	New Branch for URW Community Federal Credit Union	Information Not Available	
	VDOT Halifax 6029 071 845 UPC 118783	Information Not Available	
	J&J Truck Sales	Information Not Available	
	Berry Hill 138 kV Substation	Information Not Available	
	Berry Hill Mega Site Project	3,528 acres prepared for commercial projects. Phase 1: 204 sf of graded area. Other phases unknown at this time.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Southern Virginia Megasite at Berry Hill Phase III – Waterline Extension	Information Not Available	
	Landfill Office Building (L24-10-05750 and S24-12-33025)	3.9 acres	
	Stony Mill Road (Route 869/Tunstall High Road (Route 869)	0.4 acre	
	Lumen Fiber Optic Replacement	0.85 acre of footprint.	
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	
Land Use and Visual Resources	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	The geographic scope for land use is the area within 1 mile of construction workspaces. The projects involving work on and additions to existing compressor or meter stations and road improvement projects would not result in changes to land use. Other projects such as intersection upgrades and commercial developments

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available.	would result in land use changes. However, most effects on land use from the Amendment Project and the other projects in the geographic scope would be temporary. Therefore, we conclude that the Project, when considered with other projects within the geographic scope, would not contribute significant cumulative effects on land use. Visual effects for pipelines would be reduced over time as vegetation recovers after construction is complete. In addition, the effects would be similar to Transco's nearby existing right-of-way. However, the collocation of the Amendment and SSE Projects with the existing Transco pipelines would lead to a permanent visual cumulative effect due to the permanent right-of-way. Five projects have construction schedules that would overlap with the Amendment Project. The presence of construction equipment and vehicles on-site and traveling along roadways could result in temporary cumulative effects for some viewers. Three projects consist of work at existing facilities or existing roads or overhead electric transmission lines and therefore, long-term cumulative effects on visual resources would be minor. We conclude that the Amendment Project would contribute to cumulative effects on visual resources when combined with the other projects discussed above where permanent aboveground facilities are constructed and due to a wider right-of-way corridor.
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new).	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact.	
	Transco Spray Meter Station	0.93 acre of impact for construction	
	City of Danville Route 29/703 Intersection Upgrades	Information Not Available	
	Strata Solar- Battery Storage Facility	55-megawatt built on a 3.5-to-4-acre concrete pad of the 85- acre lot	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Hopewell Solar Project	1,400 acres with 900 acres covered in solar panels	
	Pittsylvania County Jail	33 acres	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact	
	New Branch for URW Community Federal Credit Union	Information Not Available	
	VDOT Halifax 6029 071 845 UPC 118783	Information Not Available	
	J&J Truck Sales	Information Not Available	
	Berry Hill 138 kV Substation	Information Not Available	
	Berry Hill Mega Site Project	3,528 acres prepared for commercial projects. Phase 1: 204 sf of graded area. Other phases unknown at this time.	
	Southern Virginia Megasite at Berry Hill Phase III – Waterline Extension	Information Not Available	
	Landfill Office Building (L24-10-05750 and S24-12-33025)	3.9 acres	
	Stony Mill Road (Route 869/Tunstall High Road (Route 869)	0.4 acre	
	Lumen Fiber Optic Replacement	0.85 acre of footprint.	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	
Air Quality	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	The geographic scope for construction air quality is 0.25 mile around the Amendment Project. Three projects (including the SSE Project) identified within the geographic scope could potentially be under construction at the same time as the Amendment Project. If the projects are under construction at the same time as the Amendment Project they could temporarily increase air quality effects due to emissions from the combustion engines used to power construction equipment, vehicle emissions traveling to and from the construction sites, and fugitive emission dust resulting from equipment movement on dirt roads and earth-disturbing activities. Both counties where the Amendment Project would be located are in attainment. The Amendment Project's contribution to cumulative emissions would be temporary and would not significantly affect local or regional air quality.
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available.	
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new).	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact.	
	Transco Spray Meter Station	0.93 acre of impact for construction	
	Strata Solar- Battery Storage Facility	55-megawatt built on a 3.5-to-4-acre concrete pad of the 85- acre lot	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Hopewell Solar Project	1,400 acres with 900 acres covered in solar panels	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact	
	New Branch for URW Community Federal Credit Union	Information Not Available	
	VDOT Halifax 6029 071 845 UPC 118783	Information Not Available	
	J&J Truck Sales	Information Not Available	
	Berry Hill 138 kV Substation	Information Not Available	
	Southern Virginia Megasite at Berry Hill Phase III – Waterline Extension	Information Not Available	
	Landfill Office Building (L24-10-05750 and S24-12-33025)	3.9 acres	
	Lumen Fiber Optic Replacement	0.85 acre of footprint.	
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	
Noise	Transco SSE Project Eden Loop	745.9 acres of construction impact. 224.4 acres of operational impact.	Three projects (including the SSE Project) identified within the geographic scope could potentially be under construction at the same time as the Amendment Project. Noise levels resulting from construction activities of the Amendment Project and the other projects in the geographic scope would vary over time and would depend on the nature of the construction activity, the number and type of equipment operating, and the distance between sources and receptors. The level of cumulative effects would likely depend on the overlap in construction periods for the other projects

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Enbridge T15 Reliability Project	Action is currently in the permitting phase; therefore, impact totals may be subject to change. As of February 2025, Action proposes: 823 acres of construction impact. Total acres of operational impact is not available.	identified within the geographic scope. Based on the transient nature of pipeline construction and construction noise mitigation measures Mountain Valley would employ, the Amendment Project would not result in significant construction noise effects on local residents, but could contribute minor cumulative effects on noise if construction periods overlap. The geographic scope for construction noise is 1.0 mile around compressor station and meter station sites. During operation, the Amendment Project would be required to comply with FERC noise regulations in 18 CFR 157.206[d][5], which require that the noise attributable to any noise emitting permanent aboveground facilities during full-load operation not exceed a day-night average sound level of 55 dBA at NSAs. 14 projects are within the geographic scope for operation noise effects. Of these, only the new facilities operated by the SSE and Enbridge T15 Reliability Projects are likely to produce operational noise. Transco would also be required to meet our noise criteria. Based on the projected noise levels, Mountain Valley's proposed noise mitigation measures, and our recommendation for noise surveys, we conclude that the noise from operation of the Amendment Project when combined with noise from operation of other projects would not result in significant cumulative noise effects.
	Transco Southside Reliability Enhancement Project	122.48 acres of construction impact. 59.92 acres of impact for operations (new).	
	Mountain Valley Pipeline Project	6,362.5 acres of construction impact. 2,187.3 acres of operational impact.	
	Transco Spray Meter Station	0.93 acre of impact for construction.	
	Strata Solar- Battery Storage Facility	55-megawatt built on a 3.5-to-4-acre concrete pad of the 85- acre lot	

Table 16 Summary Table of Cumulative Effects			
Resource	**Other actions within geographic scope**	**Effects of other actions**	**Cumulative Effects Analysis and Conclusions**
	Hopewell Solar Project	1,400 acres with 900 acres covered in solar panels.	
	Mecklenburg Electric Cooperative (MEC) Transmission Project Infrastructure	1.53 acre of construction impact and 1.53 acre of operational impact	
	New Branch for URW Community Federal Credit Union	Information Not Available	
	VDOT Halifax 6029 071 845 UPC 118783	Information Not Available	
	J&J Truck Sales	Information Not Available	
	Berry Hill 138 kV Substation	Information Not Available	
	Southern Virginia Megasite at Berry Hill Phase III – Waterline Extension	Information Not Available	
	Landfill Office Building (L24-10-05750 and S24-12-33025)	3.9 acres	
	Lumen Fiber Optic Replacement	0.85 acre of footprint.	
	8 Amendment Project non-jurisdictional facilities	Ranging from 48 feet to 612 feet in length with varying right-of-way widths.	

12.0 Climate Change

We received comments regarding the Amendment Project's impact on climate change. Specifically, the GHG emissions from the Amendment Project, as well as exploration, production, transport, and downstream end use combustion emissions from natural gas. Our discussion here is limited to construction and operational emissions of the Amendment Project, and the incremental increase in downstream emissions resulting from the Amendment Project.

Climate change is the variation in the Earth's climate (including temperature, precipitation, humidity, wind, and other meteorological variables) over time. Climate change is driven by accumulation of GHGs in the atmosphere due to the increased consumption of fossil fuels (e.g., coal, petroleum, and natural gas) since the early beginnings of the industrial age and accelerating in the mid- to late-20th century.[133] The GHGs produced by fossil-fuel combustion are CO_2, CH_4, and N_2O.

In 2017 and 2018, the U.S. Global Change Research Program[134] (USGCRP) issued its *Climate Science Special Report: Fourth National Climate Assessment* Volumes I and II.[135] This report and the recently released report by the Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*, state that climate change has resulted in a wide range of impacts across every region of the country and the globe. Those impacts extend beyond atmospheric climate change alone and include changes to water resources, agriculture, ecosystems, human health, and ocean systems.[136] According to the Fourth Assessment Report, the United States and the world are warming; global sea level is rising, and oceans are acidifying; and certain weather events are becoming more frequent and more severe.[137] These impacts have accelerated throughout the end of the 20th and into the 21st Century.[138]

GHG emissions do not result in proportional local and immediate impacts; it is the combined concentration in the atmosphere that affects the global climate system. Fundamentally, global impacts feedback to local and regional climate change impacts. Thus, the geographic scope for analysis of GHG emissions is global, rather than local or regional. For

---

133 Intergovernmental Panel on Climate Change, United Nations, Summary for Policymakers of Climate Change 2021: The Physical Science Basis (Valerie Masson-Delmotte et al., eds.) (2021), https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf (IPCC Report) at SPM-5. Other forces contribute to climate change, such as agriculture, forest clearing, and other anthropogenically driven sources.

134 The U.S. Global Change Research Program was comprised of representatives from 13 federal departments and agencies and issued reports every 4 years that described the state of the science relating to climate change and the effects of climate change on different regions of the U.S. and on various societal and environmental sectors, such as water resources, agriculture, energy use, and human health.

135 USGCRP, Climate Science Special Report, Fourth National Climate Assessment | Volume I (Donald J. Wuebbles et al. eds) (2017) (USGCRP Report Volume I) available at https://repository.library.noaa.gov/view/noaa/19486; U.S. Global Change Research Program, Fourth National Climate Assessment, Volume II Impacts, Risks, And Adaptation In The United States (David Reidmiller et al., eds.), (2018) (USGCRP Report Volume II); available at https://repository.library.noaa.gov/view/noaa/19487.

136 IPCC Report at SPM-5 to SPM-10.

137 USGCRP Report Volume II at 73-75.

138 *See, e.g.*, USGCRP Report Volume II at 99 (describing accelerating flooding rates in Atlantic and Gulf Coast cities).

example, a project 1 mile away emitting 1 ton of GHGs would contribute to climate change in a similar manner as a project 2,000 miles distant also emitting 1 ton of GHGs.

Climate change is a global phenomenon; however, for this analysis we focus on the existing and potential climate change impacts in the general Amendment Project area. The USGCRP's Fourth Assessment Report notes the following observations of environmental impacts are attributed to climate change in the Southeast region of the United States (which includes the Amendment Project area)[139]:

- the near decade of 2010 through 2017 has been warmer than any previous decade since 1920 for average daily maximum and average daily minimum temperature;
- since 1960, there have been lower numbers of days above 95°F compared to the pre-1960 period but during the 2010's the number of nights above 75°F has been nearly double the average over 1901 – 1960. The length of the freeze-free season was 1.5 weeks longer on average in the 2010s compared to any other historical period on record;
- number of days with 3 or more inches of rain has been historically high over the past 25 years. The 1990s, 2000s and 2010s rank first, third and second, respectively in number of events; and
- summers have been either increasingly dry or extremely wet, depending on location.

The USGCRP's Fourth Assessment Report notes the following projections of climate change impacts in the Southeast with high or very high level of confidence[140]:

- climate models project nighttime temperatures above 75°F and daytime maximum temperatures above 95°F will become the summer norm. Nights above 80°F and days above 100°F, which are now relatively rare, would become common;
- lowland coastal areas are expected to receive less rainfall on average but experience more frequent intense rainfall events followed by longer drought periods; and
- tropical storms and hurricanes may become more intense.

It should be noted that while the impacts described above taken individually may be manageable for certain communities, the impacts of compound extreme events (such as simultaneous heat and drought, wildfires associated with hot and dry conditions, or flooding associated with high precipitation on top of saturated soils) can be greater than the sum of the parts.[141]

The GHG emissions associated with construction of the Amendment Project were identified and quantified in section B.7 above. Emissions of GHGs are typically expressed in terms of CO_2e. Construction of the Amendment Project may result in emissions of about 61,728

139 USGCRP Report Volume I and II.
140 USGCRP Report Volume II.
141 USGCRP Report Volume II.

tons (55,999 metric tons) of CO_2e.[142] In subsequent years, operation of the Project could result in 7,916 tons per year (7,181 metric tons per year) of CO_2e.[143] Regarding downstream emissions, we estimate that the Amendment Project would result in an additional 250,000 equivalent Dth/d of subscribed capacity for the shipper, Duke Energy Carolinas (serving North Carolina).[144] We estimate the incremental downstream GHG emissions assuming 100 percent utilization of the additional subscribed capacity of 250,000 equivalent Dth/d would result in 4.8 million metric tons per year of CO_2e emissions. We note that this represents an upper bound estimate of end-use combustion that could result from the additional subscribed natural gas transported by the Amendment Project. This estimate assumes that the maximum subscribed capacity is transported 365 days per year.

Construction of the Amendment Project would increase the atmospheric concentration of GHGs in combination with past, current, and future emissions from other sources globally and contribute incrementally to future climate change impacts. To assess impacts on climate change associated with the Amendment Project, Commission staff considered whether it could identify discrete physical impacts resulting from the Amendment Project's GHG emissions or compare the Amendment Project's GHG emission to established targets designed to combat climate change.

To date, Commission staff have not identified a methodology to attribute discrete, quantifiable, physical effects on the environment resulting from a Project's incremental contribution to GHGs. Without the ability to determine discrete resource impacts, Commission staff are unable to assess the Amendment Project's contribution to climate change through any objective analysis of physical impact attributable to the Amendment Project. Additionally, Commission staff have not been able to find an established threshold for determining the Project's significance when compared to established GHG reduction targets at the state or federal level. Ultimately, this EA is not characterizing the Project's GHG emissions as significant or insignificant.[145] However, as we have done in prior NEPA analyses, we disclose the Project's GHG emissions in comparison to national and state GHG emission inventories.

---

142 Mountain Valley September 3, 2025 Environmental Information Request Response at 1. FERC Accession Number 20250903-5011.

143 Reported operational emissions are limited to maintenance and testing blowdowns and fugitive emissions. There are no new stationary sources of operational emissions associated with the Amendment Project.

144 The Certificated Project was designed to provide up to 375,000 dekatherms per day of firm transportation service, with 300,000 subscribed to the Public Service Company of North Carolina, Inc (PSNC)(June 18, 2020 Order Issuing Certificate); the Amendment Project proposes 550,000 dekatherms per day of firm transportation service, with 300,000 Dth/d subscribed to PSNC (same as the Certificated Project) and 250,000 Dth/d subscribed to Duke Energy Carolinas (Duke). We assume Duke would utilize the Amendment Project's capacity in North Carolina. As noted in the application, Duke provided testimony to the North Carolina Utilities Commission, identifying the 250,000 Dth/d from the Amendment Project as being needed to support its generation fleet and three combined cycles included in its "Carbon Plan Integrated Resource Plan" to ensure reliable operation of generation to displace coal usage and achieve overall fleet carbon emission reductions consistent with North Carolina law (Mountain Valley February 3, 2025 Application; FERC Accession Number 20250203-5192).

145 *See e.g.*, *Driftwood Pipeline LLC*, 183 FERC ¶ 61,049, at P 63 (2023) ("…there currently are no accepted tools or methods for the Commission to use to determine significance, therefore the Commission is not herein characterizing these emissions as significant or insignificant.)

To provide context of the Amendment Project's GHG emissions on a national level, we compare the Amendment Project's construction GHG emissions to the total current GHG emissions inventory for the United States as a whole. At a national level, 5,489 million metric tons of CO_2e were emitted in 2022 (inclusive of CO_2e sources and sinks).[146] Construction emissions from the Project could potentially increase CO_2e emissions based on the national 2022 levels by 0.001 percent.[147] In subsequent years, Project operation including downstream emissions could potentially increase emissions nationally by 0.09 percent.

To provide context on a state level, we compare the Amendment Project's GHG emissions to the state emission inventories. The Amendment Project's construction would occur in Virginia and North Carolina. At a state level, Virginia energy related CO_2 emissions in 2023 were 94.6 million metric tons (inclusive of CO_2 sources and sinks).[148] North Carolina energy related CO_2 emissions in 2023 were 111.4 million metric tons (inclusive of CO_2 sources and sinks).[149] Project construction in Virginia and North Carolina could potentially increase CO_2 emissions based on statewide 2023 levels by 0.05 percent in Virginia and 0.009 percent in North Carolina. Operational emissions in Virginia could potentially increase CO_2 emissions based on the 2023 state emissions by 0.0005 percent. For North Carolina, operational and downstream could potentially increase CO_2 emissions based on the 2023 state emissions by 4.3 percent.

When states have GHG emission reduction targets, we typically compare the project's operational and downstream GHG emissions to those state goals to provide additional context.[150] Virginia enacted a statutory target to achieve net-zero GHG emissions across all sectors by 2045, which was enacted in 2020.[151] North Carolina set a target in 2022 to reduce greenhouse gas emissions 50% below 2005 levels by 2030 and achieve net-zero emissions as soon as possible, no later than 2050.[152] Operational and downstream emissions would represent 6.3 percent of North Carolina's 2030 projected GHG emission level.

---

146 USEPA 2024. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022 at ES-5 (Table ES-2). Available at: https://www.epa.gov/system/files/documents/2024-04/us-ghg-inventory-2024-chapter-executive-summary_04-16-2024.pdf. Accessed: July 2025.

147 We conservatively assume all construction emissions would occur in a single calendar year; however, we acknowledge the proposal is to begin pipeline construction in early 2027 and continue to a target in-service date of mid-2028.

148 U.S. Energy Information Administration. 2025. Total CO2 emissions from energy consumption, per capita CO2 emissions, and carbon intensities, ranked by state, 2023. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_co2_capita.html&sid=US. Accessed July 2025.

149 U.S. Energy Information Administration. 2025. Total CO2 emissions from energy consumption, per capita CO2 emissions, and carbon intensities, ranked by state, 2023. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_co2_capita.html&sid=US. Accessed July 2025.

150 We reviewed the U.S. State Greenhouse Emission Targets site for individual state requirements at: https://www.c2es.org/document/greenhouse-gas-emissions-targets/.

151 No contextual comparisons are provided for net-zero targets.

152 In 2005, the EIA total CO_2 estimate from energy consumption in North Carolina was 154.1 million metric tons; therefore, we consider the 2030 target set in 2022 to be 77.1 million metric tons.

SECTION C – ALTERNATIVES

We considered and/or evaluated alternatives to the Amendment Project to determine if they would be reasonable and preferrable to the proposed action while meeting the project objective. We did not receive any comments from stakeholders regarding route alternatives, nor did FERC staff identify any alternative routes. As such, route alternatives are not considered further in this EA. The alternatives considered and/or evaluated include the no-action alternative, a system alternative, and aboveground facility alternatives.

1.0 No Action Alternative

NEPA requires the Commission to consider and evaluate the No-Action Alternative. In instances involving federal decisions on proposals for projects, no-action would mean the proposed activity would not take place and the resulting environmental effects from taking the No-Action Alternative provides a benchmark for decisionmakers to compare the magnitude of environmental effects of the proposed activity and alternatives. We have prepared this EA to inform the Commission and stakeholders about the expected impacts that would occur if the Project were constructed and operated. The Commission would ultimately determine the Project need and could choose the No-Action Alternative.

If the no-action alternative is chosen by the Commission and the Amendment Project does not take place, the environmental impacts associated with the proposed activity, as described in this EA, would not occur. Although none of the impacts associated with the Amendment Project would occur, the Amendment Project objectives would not be met. However, the certificated Project, as described in the FEIS, would remain authorized and Mountain Valley could choose to proceed in accordance with the Commission's 2020 Order. Mountain Valley could file an application for another modified Project or could decide not to build the certificated Project at all.

2.0 Evaluation Process

The criteria used for selecting a potentially environmentally preferable alternative are: (1) the ability to meet the Amendment Project's objectives; (2) technical and economic feasibility and practicality; and (3) whether it provides a significant environmental advantage over the proposed Amendment Project. Alternatives that would not meet the Amendment Project's objective or would not be feasible were not brought forward to the next level of review (i.e., the third evaluation criterion).

Our evaluation of the identified alternatives is based on Project-specific information provided by the applicant; publicly available information; and our expertise and experience regarding the construction of natural gas transmission facilities and their potential impacts on the environment.

Through environmental comparison and application of our professional judgement, each alternative is considered to a point where it becomes clear if the alternative could or could not meet the three evaluation criteria. Our environmental analysis and this evaluation consider quantitative data (e.g., acreage, mileage). Ultimately, an alternative that results in equal or minor

advantages in terms of environmental impact would not compel us to shift the impacts from the current set of landowners to a new set of landowners.

3.0 System Alternatives

System alternatives are alternatives to the proposed action that would make use other existing, modified, or proposed natural gas pipeline systems or existing compression to meet the stated purpose and need for a proposed project. Pipeline system alternatives involve the transportation of the equivalent amount of incremental natural gas volumes by the expansion of existing pipeline systems or by the construction and operation of other new pipeline systems.

The Commission does not plan, design, build, or operate infrastructure; it evaluates applications for infrastructure. The Commission may either approve, approve with modifications to minimize impacts, or deny an application. Should the Commission determine that another system alternative is preferred, it could not compel the alternative system operator to plan, design, build and operate the alternative, nor could it compel the project proponent to carry out the alternative. Thus, our selection of a system alternative as the preferred alternative would be the same as recommending the Commission deny approval of the proposed Project, rather than approving the system alternative.

3.1 Transco System Alternative

We considered the Transco System Alternative based on comments filed by Transco as detailed below. Transco operates major pipeline systems in the southeastern and mid-Atlantic portions of the United States including natural gas supplies delivered into North Carolina. The Amendment Project would be generally parallel with the existing Transco pipelines at 16 segments for more than one-half of the Amendment Project's length, for approximately 18.1 miles.[153] Transco filed an application for its proposed SSE Project as described in section A.4. The SSE Project's Eden Loop would involve approximately 54.9 miles of new 42-inch diameter pipeline located along Transco's existing Mainline, similar to the Amendment Project, in Pittsylvania County, Virginia and Rockingham County, North Carolina, and then extending further into North Carolina. In addition to the approximately 18.1 miles of parallel (i.e., both projects would follow similar pathways through Virginia and North Carolina and may be located on opposite sides of the existing Transco pipeline) infrastructure noted above, the Amendment Project would be collocated (i.e., abutting, both projects are located on the same side of the existing Transco pipeline with potential to overlap) with the proposed SSE Project for approximately 1.9 miles[154], with the Amendment Project and the SSE Project located on the same side next to the Transco Mainline.

Transco filed a motion to intervene in the Amendment Project and provided comments in a March 2025 filing.[155] Among other comments, including some regarding diversification of natural gas supplies, Transco re-iterated statements in its application for the SSE Project that "the only modification needed for SSE to accommodate MVP's volumes would be the removal of the

---

153 Mountain Valley July 15, 2025 Resource Report 1 at page 8. FERC Accession Number 20250715-5108.

154 Mountain Valley July 15, 2025 Resource Report 10 at page 111. FERC Accession Number 20250715-5108.

155 Transco March 11, 2025 . FERC Accession Number 20250311-5234.

proposed cap on incremental horsepower at Transco Station 165." Transco asserted that removal of the proposed cap would allow the SSE Project to "accommodate the Southgate volumes with virtually no incremental environmental impact by utilizing Transco's existing footprint."

Mountain Valley filed an answer[156] to Transco's motion to intervene, also in March 2025, addressing Transco's comments indicating the importance of diversification of natural gas supply into the region and stating that the presence and support filed in the docket of foundation shippers [i.e., Duke Energy Carolinas, LLC (Duke)[157] and Public Service Company of North Carolina (PSNC) [158]] "should be determinative in establishing market need."

FERC staff issued an environmental information request to Transco in June 2025[159] regarding Transco's claim "that the SSE Project could be readily modified to accommodate Southgate's 550,000 Dth/d in addition to SSE's capacity of 1,596,000 Dth/d." Further, the environmental information request sought the hydraulic model supporting the claim and confirmation that Transco had existing meter stations corresponding to the Amendment Project proposed delivery points in Rockingham County, North Carolina. Transco responded in July 2025 by submitting[160] its hydraulic flow model and drawing files as well as confirming that it had existing meter stations that corresponded to the Amendment Project's delivery points. FERC staff engineers evaluated Transco's hydraulic flow model and drawing files and concluded that Transco would be capable of accommodating the Amendment Project's capacity of 550,000 Dth/d. Transco further clarified that it would be able to "provide capacity for both SSE and MVP Southgate to PSNC via the Dan River Meter Station" by adding "meter tubes and regulation at the existing Duke Eden Meter Station" and that "work could be completed in SSE's current workspace."

Mountain Valley responded to Transco's July 2025 filing with a July 2025 filing[161] stating "regardless of whether Transco could accommodate Amendment Project volumes on its system with modifications to its proposed SSEP, that should not affect the Commission's analysis of the need for the Amendment Project." Mountain Valley stated that it was already a Certificate holder, it has binding long-term agreements demonstrating need, and the Amendment Project would provide supply alternatives thereby increasing competition, flexibility, and reliability. Further, Mountain Valley indicated that foundation shippers expressed the need for diversification of supply provided by an entity other than Transco and filed comments in support of the Amendment Project. Finally, Mountain Valley stated that the Amendment Project would alleviate supply constraints, such as during extreme winter weather and that the Amendment Project would offer a "delivery pressure that is several times greater than the minimum pressure guarantee in Transco's Gas Tariff."

Based on the information provided by Transco and Mountain Valley, as well as FERC staff's analyses, from an environmental perspective, we conclude that the Transco System Alternative could potentially meet the Amendment Project's objectives; however, staff's analysis

---

156 Mountain Valley March 26, 2025 Comments. FERC Accession Number 20250326-5176.
157 Duke Energy Carolinas, LLC (Duke) March 10, 2025 FERC Accession Number 20250310-5163.
158 Public Service Company of North Carolina March 20, 2025 FERC Accession Number 20250320-5221.
159 Federal Energy Regulatory Commission. June 26, 2025 FERC Accession Number 20250626-3079.
160 Transco July 7, 2025. FERC Accession Number 20250707-5194.
161 Mountain Valley July 11, 2025 at page 1. FERC Accession Number 20250711-5108.

here does not consider non-environmental aspects of the project objectives, such as supply diversity and other market issues, which could affect the ultimate viability of the system alternative. We conclude the Transco System Alternative would be technically and economically feasible and practical. Further, we conclude that the Transco System Alternative would provide an environmental advantage over the proposed Amendment Project because the SSE Project could supply both its own customers and Mountain Valley's customers with a single pipeline instead of two separate and similar pipelines, thereby significantly reducing environmental effects. In its decision process, the Commission will assess the viability and appropriateness of the Transco System Alternative based on consideration of both environmental and non-environmental factors, including the non-environmental factors stated by Mountain Valley as summarized above.

4.0 Conclusion

After reviewing the alternatives to the Amendment Project, we conclude that except for the Transco System Alternative as discussed above, none of the other alternatives would satisfy the evaluation criteria. As previously mentioned, we note that the resource impacts associated with the Amendment Project are less than those of the Southgate Project that was certificated in 2020. Ultimately, the Commission will make a determination (based on all factors considered, both environmental and non-environmental) whether the proposed Amendment Project is in the public convenience and necessity, and whether, on balance, the benefits that the Amendment Project would provide and its less-than-significant environmental effects outweigh the potential environmental benefits of the system alternative proffered by Transco.

SECTION D – STAFF'S CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this EA, we have determined that if Mountain Valley constructs and operates the Amendment Project in accordance with its application and supplements, approval of the Amendment Project would result in fewer environmental effects than the certificated Project and would not constitute a major federal action significantly affecting the quality of the human environment. We recommend that the Commission's Order contain a finding of no significant impact and include the mitigation measures listed below as conditions in any Certificate the Commission may issue. In addition, all applicable environmental conditions of the Commission's June 18, 2020 Order for the Southgate Project in Docket No. CP19-14-000, not repeated here, apply to the amended facilities.

1. Mountain Valley shall follow the construction procedures and mitigation measures described in its amendment application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Mountain Valley must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary;

    b. justify each modification relative to site-specific conditions;

    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

    d. receive approval in writing from the Director of OEP, or the Director's designee, **before using that modification**.

2. The Director of OEP, or the Director's designee, has delegated authority to address any requests for approvals or authorizations necessary to carry out the conditions of the Order, and take whatever steps are necessary to ensure the protection of environmental resources during construction of the Amendment Project. This authority shall allow:

    a. the modification of conditions of the Order;

    b. stop-work authority; and

    c. the imposition of any additional measures deemed necessary to ensure continued compliance with the intent of the conditions of the Order as well as the avoidance or mitigation of unforeseen adverse environmental effects resulting from Amendment Project construction and operation.

3. The authorized facility locations shall be as shown in the EA, as supplemented by filed alignment sheets. **As soon as they are available, and before the start of construction**, Mountain Valley shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

    Mountain Valley's exercise of eminent domain authority granted under NGA section 7(h) in any condemnation proceedings related to the Order must be consistent with these authorized facilities and locations. Mountain Valley's right of eminent domain granted

under NGA section 7(h) does not authorize it to increase the size of its natural gas pipeline or facilities to accommodate future needs or to acquire a right-of-way for a pipeline to transport a commodity other than natural gas.

4. **Within 5 days of receipt of a water quality certification issued by the VADEQ and the NCDEQ**, Mountain Valley shall file the complete certification, including all conditions. All conditions attached to the water quality certification constitute mandatory conditions of the Certificate Order. **Prior to construction**, Mountain Valley shall file, for review and written approval of the Director of OEP, or the Director's designee, any revisions to its project design necessary to comply with the water quality certification conditions.

5. Mountain Valley shall comply with all applicable environmental conditions in the Appendix of the Commission's June 18, 2020 Order for the Southgate Project in Docket No. CP19-14-000.

6. **Prior to construction**, Mountain Valley shall file with the Secretary, for review and written approval by the Director of OEP, or the Director's designee, its updated E&SC Plan.

7. **Prior to construction**, Mountain Valley shall file with the Secretary, correspondence from the applicable state agencies regarding whether they approve the installation of slope breakers across the full width of the construction right-of-way.

8. **Prior to construction**, Mountain Valley shall file with the Secretary, for review and written approval by the Director of OEP, or the Director's designee, an updated *Mountain Valley Southgate Pipeline Stream Burial Recommendations*. The revised document shall resolve all discrepancies with the waterbody crossing table, utilize Mountain Valley's waterbody IDs, and clarify whether Mountain Valley would implement Geosyntec's recommendations.

9. **Prior to construction**, Mountain Valley shall file with the Secretary, for review and written approval by the Director of OEP, or the Director's designee, mitigation measures to reduce nighttime noise levels at all 24-hour conventional bores to less than 48.6 dBA L_{eq}. Mountain Valley shall also revise its *Nighttime Construction Noise Mitigation Plan* to include all 24-hour conventional bore locations.

10. Mountain Valley shall file a noise survey with the Secretary **no later than 60 days** after placing the Dan River Interconnect #1 and the Dan River Interconnect #2 into service. If a full flow rate noise survey at the station's maximum design capacity is not possible, Mountain Valley shall provide an interim survey at the maximum possible flow rate and provide the full flow rate survey **within 6 months**. If the noise attributable to the operation of the Dan River Interconnects #1 and #2 exceeds an L_{dn} of 55 dBA at any nearby NSA, Mountain Valley shall file a report on what changes are needed and shall install additional noise controls to meet the level **within 1 year** of the in-service date. Mountain Valley shall confirm compliance with this requirement by filing a second noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.