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March 4, 2021

By Email and US Mail

Mr. David K. Paylor
Director, Virginia Department of Environmental Quality
1111 E. Main Street, Suite 1400
Richmond, Virginia 23219

Re: Water Quality Certification Request

Dear Mr. Paylor:

Mountain Valley Pipeline, LLC (“Mountain Valley”) respectfully submits this request for water quality certification in accordance with 40 C.F.R. § 121.5.

A. Identity of Project Proponent¹

The project proponent is Mountain Valley Pipeline, LLC, which is joint venture of EQM Midstream Partners, LP; NextEra Capital Holdings, Inc.; Con Edison Transmission, Inc.; WGL Midstream; and RGC Midstream, LLC. EQM Midstream Partners will operate the pipeline and own a significant interest in the joint venture.

For the purpose of this certification request, the designated point of contact for Mountain Valley is:

Robert J. Cooper
Senior Vice President,
MVP Construction and Engineering
rcooper@equitransmidstream.com

B. Identity of the Proposed Project²

The Mountain Valley Pipeline Project (“Project”) is an approximately 303-mile, 42-inch diameter natural gas pipeline, proposed to provide timely, cost-effective access to the growing demand for natural gas for use by local distribution companies, industrial users, and power generation utilities in the Mid-Atlantic and southeastern markets, as well as potential markets in the Appalachian region. The project will extend from the existing Equitrans, L.P. transmission system near Mobley in Wetzel County, West Virginia, to Transcontinental Gas Pipe Line Company, LLC’s Zone 5 compressor station 165 in Pittsylvania County, Virginia. In Virginia, the pipeline will consist of

¹ 40 C.F.R. § 121.5(b)(1).

² 40 C.F.R. § 121.5(b)(2).

approximately 106 miles of 42-inch diameter pipeline and associated ancillary facilities. Construction activities will be located in Craig, Franklin, Giles, Montgomery, Pittsylvania, and Roanoke counties. Additionally, approximately 60 miles of access roads in Virginia are anticipated for use in the overall project. This includes both existing roads and construction of new roads, as necessary.

As the Department is aware, construction on the Project commenced in March 2018 and is now substantially complete. Mountain Valley now holds all material approval necessary to proceed with construction in the upland areas. Obtaining authorization to complete the remaining stream and wetland crossings will allow Mountain Valley to expeditiously complete construction, restore the right-of-way, and commence the transport and supply of natural gas. The best environmental outcome for water quality in the vicinity of the Project is for construction to be completed as soon as possible.

C. Applicable Federal Permit³

Certification is requested in connection with an application submitted jointly to the Huntington, Pittsburgh, and Norfolk Districts of the U.S. Army Corps of Engineers (USACE) on February 19, 2021, for permit authorization under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act to impact streams and wetlands in Virginia and West Virginia (“USACE Individual Permit Application”).

In accordance the Joint Permit Application (JPA) procedures outlined in the State Water Control Board’s (Board) regulations, the USACE Individual Permit Application was provided to the Department.⁴ That application is incorporated by reference into this request.

D. Location and Nature of Discharge⁵

This certification request applies to the proposed discharge of dredged and fill material associated with Project construction in streams and wetlands subject to the USACE’s jurisdiction at various locations in Giles, Craig, Montgomery, Franklin, Roanoke, and Pittsylvania Counties. Mountain Valley previously submitted a JPA to the Department, USACE, and Virginia Marine Resources Commission on September 11, 2017. That application included 97% of the stream and wetland impacts included in this application. Those discharges were in compliance with the water quality certification issued by the Board on April 7, 2017, and were authorized by a Nationwide Permit 12 (NWP12) verification issued by the USACE Norfolk District to Mountain Valley on December 26, 2017 (modified January 23, 2018). Under the State Water Control Board’s regulations,⁶ the discharges included in this request were therefore authorized by a Virginia Water Protection (VWP) permit.

³ 40 C.F.R. § 121.5(b)(3).

⁴ 9VAC25-210-80(A).

⁵ 40 C.F.R. § 121.5(b)(4).

⁶ 9VAC25-210-130(J).

Prior to submitting this request, Mountain Valley undertook a renewed evaluation of opportunities to avoid and minimize its aquatic impacts to the extent practicable in accordance with the USACE and VWP permit regulations. Through that process, Mountain Valley has identified dozens of additional stream and wetland impacts that can be avoided.

There are a few minor impacts in this application that were not included in the 2017 JPA due to minor shifts in the Project alignment made in early 2018. However, those minor alignment shifts and associated impacts are not new to the Department, as they were included in the erosion and sediment control plans reviewed and approved by the Department at that time. More specifically, this application includes seven temporary stream impacts, seven temporary wetland impacts, and two permanent wetland impacts (totaling 0.04 acres) that were not included in the 2017 application.⁷ On balance, this application includes 57 fewer stream impacts and 24 fewer wetland impacts than were included in the 2017 JPA (in addition to numerous impacts that have been reduced in size).

In short, the discharges included in this request are almost exclusively a *subset* of the aquatic impacts previously reviewed and authorized by the State Water Control Board and the Department. Mountain Valley has undertaken an exhaustive effort to avoid and minimize aquatic impacts to the extent practicable. Detailed information on the location and nature of discharges that are subject to this renewed request are included in the USACE Individual Permit Application. Please refer specifically to Tables B-1 and B-2 in VADEQ 401 Water Quality Certification Information and Virginia Water Protection Permit Application section of the application package.

E. Methods to Monitor and Manage Discharges⁸

Mountain Valley is subject to the most comprehensive oversight and compliance program ever implemented for a construction project in the Commonwealth. Prior to the commencement of construction, Mountain Valley worked with the Department to develop an unprecedented level of oversight. For example, Mountain Valley committed to an increased erosion and sediment control inspection frequency (all controls inspected at least every four days) and an accelerated deadline to repair ineffective controls (within 24 hours, as compared to the seven-day deadline in Department's VPDES Construction General Permit). In addition to regular inspections by Mountain Valley's environmental inspectors, Department staff, and FERC staff, Mountain Valley entered into a Memorandum of Agreement with the Department to fully fund (\$6.7 million) third-party inspectors contracted by the Department to provide additional daily inspections of the project. In December 2019, Mountain Valley entered into a Consent Decree with the Department to resolve alleged violations that occurred in the early stages of Project construction.⁹ The Consent Decree mandated the implementation of a compliance program that added another, unparalleled layer of oversight and transparency for Project construction going forward.

The monitoring requirements are summarized as follows:

⁷ The impacts that were not included in the 2017 JPA are specifically identified in Attachment A.

⁸ 40 C.F.R. § 121.5(b)(5).

⁹ None of the alleged violations related to the installation of stream or wetland crossings.

- All Project activities, including stream and wetland crossings, are subject to regular inspection and monitoring by Department staff, the Department's third-party inspection contractor, Federal Energy Regulatory Commission (FERC), and, where applicable, the U.S. Forest Service. All inspection and compliance reports generated by the Department and its third-party inspection contractor are posted online for public review.
- As required by the Department, Mountain Valley created a comprehensive and transparent "punchlist" system to consolidate all erosion and sediment control maintenance and repair issues identified by the Department's staff and third-party contract inspectors, Mountain Valley's environmental inspection staff, and FERC inspectors.¹⁰ The punchlist system is used by Mountain Valley to direct its environmental maintenance crews on a daily basis and to verify that all issues flagged by any of the various inspectors are addressed within the required timeframes. Department staff have access to the punchlist system, which provides another tool to monitor Mountain Valley's compliance with its water quality protection obligations.
- As required by the Department, Mountain Valley will provide at least 48-hours advance notice to the Department before commencing any stream or wetland crossing activities. This notice facilitates the Department's inspection and monitoring of such activities.
- As required by the Department, Mountain Valley has engaged a third-party Environmental Auditor to monitor all stream and wetland crossing activities. Within fourteen days after the completion of each stream and wetland crossing, the Environmental Auditor will submit a written report to the Department. Mountain Valley will post the reports on its website for public review.
- As documented in the Project's Department-approved Annual Standards and Specifications, all stream and wetland crossing activities are subject to oversight, inspection, and compliance monitoring by the Project's Environmental Inspectors. Each of Mountain Valley's Environmental Inspectors holds certifications from the Department as a "Project inspector for ESC" and "Project inspector for SWM" in accordance with 9 VAC 25-850-40.
- The Department has partnered with the U.S. Geological Survey to provide continuous instream turbidity monitoring of a representative sampling of streams crossed by the Project.

¹⁰ Temporary erosion and sediment controls measures are constantly degraded as they perform their intended functions. For example, every time it rains on the right-of-way, sediment will collect in sediment traps and behind silt fences, thereby reducing a portion of their functional capacity. The controls require a system of continuous maintenance and repair to remain effective. The system relies on frequent, regular inspections (at least once every four days) to identify when and where to dispatch maintenance and repair crews. Inspection reports that identify "deficiencies" do not necessarily reflect violations or poor implementation by Mountain Valley; that is how the system is intended to function.

- Mountain Valley is implementing the Upland Construction Water Quality Monitoring Plan approved by the Department. The purpose of that monitoring plan is to “generate representative monitoring data that will provide assurance that the approved erosion and sediment controls and other similar water quality control measures are effective.”
- As directed by the U.S. Fish and Wildlife Service in the September 4, 2020, Biological Opinion and Incidental Take Statement, Mountain Valley will conduct continuous instream turbidity monitoring of select streams with sensitive and endangered species crossed by the Project.

The management requirements are summarized as follows:

- Mountain Valley commits that it will comply with all permit conditions and requirements that were previously imposed on the discharges covered by this request—including the NWP12 General Conditions, Norfolk District’s Regional Condition, NWP12 verification special conditions, and the Board’s conditional water quality certification.¹¹ Those conditions were summarized in a letter to the Department dated June 15, 2018.¹²
- Mountain Valley will perform fish and mussel relocations at perennial streams that will be open-cut. All fish and mussel relocations will be supervised by qualified, professional biologists. This measure was recommended by the Virginia Department of Wildlife Resources (formerly, Virginia Department of Game and Inland Fisheries) and adopted as an enforceable requirement by FERC.¹³
- Construction in and adjacent to waterbodies that may affect federally listed endangered or threatened species will be conducted in accordance with the reasonable and prudent measures, monitoring and reporting requirements, and other terms and conditions specified in the Biological Opinion.
- In addition to the requirements noted above, all activities in streams and wetlands, including post-construction restoration and monitoring, will be conducted in accordance with the measures prescribed in the Department-approved Annual Standards and Specifications (AS&S) and Erosion and Sediment Control Plans (ESC Plans). As the Department is aware, the AS&S outline procedures and practices that will be implemented for stream and wetland crossings.¹⁴ The ESC Plans document the site-specific erosion and

¹¹ For clarity, this commitment includes all substantive conditions and requirements for conducting stream and wetland crossings. It does not include purely procedural requirements that apply specifically to NWPs and which are irrelevant to individual permits, such as requirements to submit pre-construction notification for coverage under an NWP.

¹² Attachment B (voluminous attachments omitted).

¹³ FERC, Mountain Valley Project and Equitrans Expansion Project Final Environmental Impact Statement § 4.6.2.7; Certificate Order, Mountain Valley Pipeline, LLC, 161 FERC ¶ 61,043 App’x C (2017) (Environmental Condition 1).

¹⁴ Refer specifically to Sections 4.1, 4.2.6, 4.2.7, and 5.2.2 of the AS&S on file with the Department.

sediment control measures that will be implemented at each stream and wetland crossing in compliance with the Erosion and Sediment Control Regulations.¹⁵

Please refer to Section 5.0 of the USACE Individual Permit Application for additional information and details on the monitoring, management, and other mitigation measures that will be implemented for the discharges included in this request.

F. Other Approvals¹⁶

A list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the Project is included in the application. Please refer to Table 9 of the USACE Individual Permit Application.

G. Prefiling Meeting Request¹⁷

A prefiling meeting request was submitted to the Department on January 26, 2021.¹⁸ A virtual prefiling meeting attended by representatives from the Department and Mountain Valley was held on February 3, 2021.

H. Certification Statement¹⁹

The undersigned states as follows: “The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.”

I. Request for Timely Action²⁰

The undersigned makes the following request: “The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.”

In support of this request for timely action, Mountain Valley reiterates that the stream and wetland crossings included in this application have been subject to numerous site-specific and cumulative-impact reviews by the Department and Board. The determination that was reached, and reaffirmed several times, is that the monitoring, management, and mitigation measures for the Project are protective of water quality. The only relevant circumstances that have changed since the Department and Board initially made that determination in 2017 is that there are now *fewer* stream and wetland impacts, and those impacts are subject to a *greater* level of monitoring and oversight. The relevant previous reviews and determinations are summarized below for reference.

¹⁵ 9 VAC 25-840. Refer specifically to Minimum Standards 12, 13, and 15, which impose requirements for waterbody crossings. 9 VAC 25-840-40.12, .13 & .15.

¹⁶ 40 C.F.R. § 121.5(b)(6).

¹⁷ 40 C.F.R. § 121.5(b)(7).

¹⁸ A copy of the prefiling meeting request letter is included as Attachment C.

¹⁹ 40 C.F.R. § 121.5(b)(8).

²⁰ 40 C.F.R. § 121.5(b)(9).

- On December 22, 2016, the Department submitted comments to FERC on behalf of itself and other Commonwealth agencies in response to FERC's Draft Environmental Impact Statement. The Department stated that it "reviewed numerous environmental considerations of the Project including many relevant to the protection of water quality" and that this early review helped inform later actions with respect to the Project.²¹
- On April 7, 2017, after a public and notice and comment process, the Board issued a letter to the USACE stating, "[T]he State Water Control Board . . . has (i) examined the NWP's, the Norfolk District Regional Conditions, and (ii) other decision documents provided by the Corps to base its certification. Accordingly, the Board finds that there is a reasonable assurance that the activities permitted under the Corps' NWP program, including the Norfolk District Regional Conditions, will be conducted in a manner which will not violate applicable water quality standards, provided permittees comply with all applicable Section 401 conditions."²² The Board conditionally certified NWP 12, adding three conditions to bring it in line with the VWP regulations. On December 26, 2017, the USACE Norfolk District issued a letter to Mountain Valley verifying that the Project satisfied all of the NWP 12 conditions certified by the Board to be protective of water quality.²³ Because NWP 12 treats each crossing as a "single and complete project,"²⁴ the USACE's verification reflects its determination that *each* stream and wetland crossing could be completed in compliance with the 48 permit conditions.
- On June 20, 2017, the Department approved Mountain Valley's AS&S after an *18-month review process*, finding that the AS&S "meet Virginia's legal and technical requirements" for "both erosion and sediment control and stormwater management."²⁵ As noted above, the AS&S outline required practices and procedures that Mountain Valley must follow for stream and wetland crossings.
- On December 7, 2017, the Board voted unanimously to issue 401 Water Quality Certification No. 17-01 ("Upland 401 Certification") to Mountain Valley.²⁶ This certification was issued through a comprehensive public process that included a 50-day public comment period (July 3, 2017 to August 22, 2017) and three public hearings (August 8, 2017 in Radford, August 9, 2017 in Chatham, and December 6 & 7, 2017 in Richmond). The Department characterized the process as going "above and beyond any historical evaluations of necessary water quality protections related to pipeline construction."²⁷

²¹ Memorandum from Department to Board, *Proposed 401 Water Quality Certification*, Att. C at C-2 (Nov. 9, 2017) ("*Upland 401 Memo*") (Attachment D (excerpt)).

²² Letter from James J. Golden (DEQ) to Col. Jason E. Kelly (USACE Norfolk District) (Apr. 7, 2017) (Attachment E (excerpt)).

²³ Letter from William T. Walker (USACE Norfolk District) to Robert Cooper (Mountain Valley) (Dec. 26, 2017). Minor technical corrections were made and the verification letter was reissued on January 23, 2018. Both letters are included in Attachment F.

²⁴ 33 C.F.R. § 330.2(i).

²⁵ *Upland 401 Memo*, Att. A at A-10.

²⁶ Attachment G.

²⁷ *Upland 401 Memo*, Att. C at C-3.

Although the conditions in the Upland 401 Certification apply specifically to upland construction activities, the Department clarified that it was “just one portion of a larger regulatory scheme for ensuring that water quality is protected during construction of this Project.”²⁸ This statement is reflected in the Upland 401 Certification’s conclusion: “The additional conditions contained in . . . this Certification along with the requirements imposed by the VWP regulation, the Corps Section 404 permitting requirements, and prior regulatory actions associated with the approval and requirements of the June 2017 Annual Standards and Specifications, and the April 7, 2017 Section 401 Water Quality Certification of the Corps Nationwide Permit 12 provide reasonable assurance that water quality standards will not be violated.”²⁹ Thus, the Board’s water quality certification determination was based on a comprehensive and cumulative review of Project activities, including the stream and wetland impacts included in the present water quality certification request.³⁰

- On March 26, 2018, the Department approved the Project’s ESC Plans and Stormwater Management (SWM) Plans. The letter states that the Department “reviewed approximately 100 revised plan sets over the past nine months.”³¹ The total number of revisions reflects a deliberative and iterative process that included 11 in-person work sessions and 17 teleconference meetings between Mountain Valley staff and consultants and Department staff and consultants.³² In the course of that exhaustive review, the Department invested a total of over 2,000 hours of staff time and 4,500 hours of time by the Department’s third-party engineering consultant.³³ The plans were reviewed for compliance with, among other things, the stream and wetland crossing requirements in the Project’s AS&S and the requirements in Board’s Erosion and Sediment Control Regulation applicable to waterbody crossings. Thus, as the Department explained to the Board, the plan-review process included a *site-specific technical review of every stream and wetland crossing*.³⁴
- In response to a December 20, 2017, request from the Board, the Department conducted a detailed review of the “adequacy” of four key water quality protection documents for the Project: Mountain Valley’s AS&S, ESC Plans, SWM Plans, and Karst Mitigation Plan. The Department issued a written report to the Board on March 26, 2018, and presented its

²⁸ Upland 401 Memo, Att. A at A-14

²⁹ Upland 401 Certification at 8 (emphasis added).

³⁰ The U.S. Court of Appeals for the Fourth Circuit reviewed the Board’s decision and found no reason to disturb it in an opinion issued August 1, 2018. *Sierra Club v. State Water Control Board*, 898 F.3d 383 (4th Cir. 2018). The court’s opinion is discussed further in Appendix B to the USACE Individual Permit Application.

³¹ Letter from Jaime B. Robb (DEQ) to Brian Clauto (Mountain Valley) (Mar. 26, 2018) (Attachment H) (emphasis added).

³² Memorandum from Department to Board, *Report to the Board on the Supplemental Karst Evaluation Plan, Annual Standards and Specifications, and Erosion and Sediment Control and Stormwater Management Plans*, at 7–8 (Mar. 26, 2018) (“March 2018 Memo”) (Attachment I (attachments omitted)).

³³ Department Director’s Report to the Board (Apr. 12, 2018) (“April 2018 Report”) (Attachment J).

³⁴ This explanation was provided to the Board at a public meeting on August 21, 2018. A more detailed description of that meeting, as well as the Department’s presentation and a transcript, are provided in Attachments B, B-2, and B-3 to the USACE Individual Permit Application. Note that this review included the handful of aquatic impacts that were not in the 2017 JPA.

findings at a meeting on April 12, 2018.³⁵ The Department concluded its review of the documents by stating that “the oversight process for MVP has been more rigorous than any other pipeline in Virginia history.”³⁶

- At its April 2018 meeting, the Board tasked the Department with initiating a public review process to reevaluate the NWP 12 verification and the Board’s water quality certification for the same. The review encompassed both an evaluation of the protectiveness of NWP 12 *generally*, as well as a Project- and site-specific review of the NWP 12 verification issued to Mountain Valley. The Department hosted a 45-day public comment that generated 2,543 public comments, including 327 comments that provided “crossing specific technical information.”³⁷ For the general comparison of NWP 12 and the VWP permit program, the Department conducted a detailed comparison of the conditions imposed through the Project’s NWP 12 verification and the Board’s VWP permit regulations. The Department found that of the 46 conditions imposed through NWP 12, only two differ from the VWP permit program. However, those additional two requirements were adopted for the Project. This allowed the Department to conclude: “For linear projects (all roads and all types of utility projects), both programs have *substantially identical* permitting requirements.”³⁸ The Department also addressed the Board’s question about whether the use of NWP 12 allowed the Project’s stream and wetland crossings to evade a site-specific or “stream-by-stream” technical review. In addition to the stream-by-stream review the USACE must conduct to verify each impact as a “single and complete project” under NWP 12, the Department explained the detailed, site-specific technical review it conducted in the process of reviewing and approving the ESC Plans.³⁹ Regarding the protectiveness of the NWP 12 and 401 certifications for individual waterbodies crossed by the Project, the Department concluded: “*No new, crossing-specific information supports conclusion that NWP12 is not protective of any specific wetland and/or stream.*”⁴⁰ Following the Department’s presentation of its conclusions at a meeting of the Board on August 21, 2018, the floor was opened for additional public comment. The Board took no action to amend or modify the 401 certification with respect to Mountain Valley’s NWP 12 verification.
- At its August 2018 meeting, the Board directed the Department to Virginia Department of Mines, Minerals, and Energy’s (DMME) erosion and sediment control protocols—which were suggested to be more protective of water quality and more applicable to construction in mountainous terrain—to determine if they should be applied to the Project in lieu of the Board’s regulations and the approved ESC Plans. The Department presented its conclusions to the Board at a meeting on September 20, 2018. The Department reported that it hosted two meetings with DMME staff to compare the agencies’ respective erosion and sediment control requirements. The Department and DMME jointly “concluded there

³⁵ March 2018 Memo; April 2018 Report.

³⁶ March 2018 Memo at 11.

³⁷ Davenport Presentation to Board (Aug. 21, 2018), included as Attachment B-2 to the Individual Permit Application.

³⁸ Davis Presentation to Board (Aug. 21, 2018) (Attachment K).

³⁹ Robb Presentation to Board (Aug. 21, 2018) (Attachment L).

⁴⁰ Davenport Presentation to Board (emphasis added).


is nothing missing from DEQ requirements for ESC and SWM that are found in DMME requirements.”⁴¹

- The Department and Board continue to exercise regular oversight and regulation of the Project. The Department and its third-party contractor have conducted regular inspections of the Project right-of-way, as well as targeted inspections in response to any complaints received from the public, continuously since April 2018.⁴² The Department receives regular reports from Mountain Valley’s Environmental Auditor and monitors the punchlist system. All ESC Plan changes are submitted to the Department for approval or, in the case of minor enhancements or additions to existing controls, made available for the Department’s review. In response to a request from the Board on April 15, 2019, the Department provides a detailed report on the status of Mountain Valley construction and compliance at every regular meeting of the Board.

* * *

Mountain Valley reiterates that the stream and wetland impacts included in this request have been thoroughly and repeatedly reviewed by the Department and the Board over the past five years. The only material differences between this request and previous reviews are that (1) the Project’s stream and wetland impacts have been *reduced* and (2) the applicable monitoring and mitigation requirements have been *increased*. Accordingly, Mountain Valley respectfully submits that the Board and the Department have all necessary information to grant this certification request within a reasonable period of time.

Sincerely,

Respectfully submitted,
MOUNTAIN VALLEY PIPELINE, LLC
by and through its operator,
EQM Gathering Opco, LLC
By: 
Todd Normane
Deputy General Counsel

cc: Melanie Davenport, DEQ
David Davis, DEQ
Steven Hardwick, DEQ
Todd Miller, USACE Norfolk

⁴¹ Mountain Valley does not have a clean copy of the Department’s September 20, 2018, presentation. Presumably, the Department has a copy on file.

⁴² At the December 9, 2020, Board meeting, the Department reported that, since April 2018, it has completed (i) 634 regular inspections, (ii) 40 “formal” inspections, and (iii) 307 public complaint investigation inspections.

Mr. David K. Paylor

March 4, 2021

Page 11

Michael Hatten, USACE Huntington

Scott Hans, USACE Pittsburgh

LIST OF ATTACHMENTS

- A. Stream and Wetland Impacts that Were Not Included in 2017 Application
- B. MVP NWP 12 Comment Letter to DEQ (Jun. 15, 2018)
- C. MVP Pre-Filing Meeting Request (Jan. 26, 2021)
- D. DEQ Upland 401 Certification Memo to Board (Nov. 9, 2017) (attachments E & F omitted)
- E. DEQ 401 Certification Letter to USACE (Dec. 26, 2017) (excerpt)
- F. MVP NWP 12 Verification Letters (Dec. 26, 2017 & Jan. 23, 2018)
- G. Upland 401 Certification (Dec. 8, 2017)
- H. ESC and SWM Plan Approval Letter (Mar. 26, 2018)
- I. DEQ Plan Review Memo to Board (Mar. 26, 2018) (attachments omitted)
- J. DEQ Presentation to Board (Apr. 12, 2018)
- K. DEQ Presentation Board (Davis) (Aug. 21, 2018)
- L. DEQ Presentation Board (Robb) (Aug. 21, 2018)

Attachment A

Stream and Wetland Impacts that Were Not Included in 2017 Application

Virginia Stream Impacts Added Since 2017
Individual Permit Application
Mountain Valley Pipeline Project

Stream ID	NHD Stream Name ¹	County	Latitude ²	Longitude ²	Flow Regime	Water Type ³	Stream Designation ⁴	HUC 8	Impact Type	Temporary Impact (linear ft)	Permanent Impact (linear ft)	Temporary Impact Area (square feet) ⁵	Permanent Impact Area (square feet) ⁵	Temporary Fill (cubic yard) ⁶	Permanent Fill (cubic yard) ⁷	Figure
S-PA07	UNT to Sinking Creek	Giles	37.323533	-80.555257	Intermittent	RPW	-	05050002	Pipeline ROW	115	-	231	-	85	-	4-555
S-U18-EPH	UNT to Sinking Creek	Giles	37.322737	-80.552396	Ephemeral	NRPW	-	05050002	Pipeline ROW	74	-	444	-	164	-	4-555
S-CD12b	UNT to South Fork Roanoke River	Montgomery	37.229764	-80.201144	Perennial	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	122	-	13	-	4-631
S-EF57	UNT to Bottom Creek	Roanoke	37.181736	-80.148948	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Temporary Access Road	42	-	335	-	37	-	4-645
S-EF55	UNT to Bottom Creek	Roanoke	37.181506	-80.149497	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	33	-	266	-	98	-	4-645
S-EF34b	UNT to Bottom Creek	Roanoke	37.181385	-80.149140	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	81	-	810	-	300	-	4-645
S-DD4-Braid-1	UNT to Mill Creek	Pittsylvania	36.871651	-79.404061	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010105	Pipeline ROW	67	-	401	-	149	-	4-775

Notes:

- 1
- For identified streams without a NHD (National Hydrography Dataset) name, the identified stream was given the name, "Unidentified Tributary (UNT)", of the first named receiving waterbody
- 2
- In decimal degrees
- 3
- RPW = Relatively Permanent Waters
- NRPW = Non-Relatively Permanent Waters
- 4
- See Section 1.9.2 and Section 4.2 for more information
- 5
- Impact square feet are rounded to the nearest whole number.
- 6
- Temporary fill discharge into waters of the U.S. Cubic yards are rounded to the nearest whole number.
- 7
- Permanent fill associated with the construction of Permanent access road and facilities. Cubic yards are rounded to the nearest whole number.

Virginia Wetland Impacts Added Since 2017
Individual Permit Application
Mountain Valley Pipeline Project

Wetland ID	County	USACE District	Latitude ¹	Longitude ¹	Cowardin Class ²	USACE Water Type ³	HUC 8	Impact Type	Temporary Impacts (square feet) ⁴	Permanent Conversion Impacts (square feet) ⁴	Permanent Fill Impacts (square feet) ⁴	Temporary Fill (cubic yards) ⁵	Permanent Fill (cubic yards) ⁶	Figure
W-C12-PEM	Montgomery	Norfolk	37.257265	-80.281667	PEM	RPWWD	03010101	Pipeline ROW	8,999	-	-	3,333	-	4-609
W-KL58	Montgomery	Norfolk	37.229183	-80.203106	PEM	RPWWD	03010101	Permanent Access Road	-	-	1,707	-	190	4-631
W-HS02	Roanoke	Norfolk	37.157427	-80.133413	PEM	RPWWD	03010101	Pipeline ROW	12,602	-	-	4,668	-	4-652
W-B25-PEM-4	Roanoke	Norfolk	37.128942	-80.133774	PEM	RPWWD	03010101	Timber Mat Crossing	405	-	-	45	-	4-659
W-B25-PEM-1	Roanoke	Norfolk	37.128449	-80.132802	PEM	RPWWD	03010101	Timber Mat Crossing	610	-	-	68	-	4-659
W-B25-PEM-2	Roanoke	Norfolk	37.128436	-80.132646	PEM	RPWWD	03010101	Timber Mat Crossing	209	-	-	78	-	4-659
W-D4	Franklin	Norfolk	37.122629	-80.076102	PEM	RPWWN	03010101	Permanent Access Road	135	-	-	15	-	4-667
W-D4	Franklin	Norfolk	37.122625	-80.076071	PEM	RPWWN	03010101	Permanent Access Road	-	-	39	-	4	4-667
W-A12-PEM	Franklin	Norfolk	37.031643	-79.788111	PEM	RPWWD	03010101	Pipeline ROW	2,836	-	-	1,050	-	4-720

Notes:

- 1
- In decimal degrees.
- 2
- PEM = Palustrine Emergent
- 3
- RPWWD = Wetlands directly abutting Relatively Permanent Waters (RPWs) that flow directly or indirectly into Traditional Navigable Waterways (TNWs)
- RPWWN = Wetlands adjacent but not directly abutting RPWs that flow directly or indirectly into TNWs
- 4
- Construction of access roads will not result in impacts to tidal wetlands or wetlands adjacent to tidal waters. Construction, maintenance, or expansion of substation facilities will not result in discharges to non-tidal wetlands adjacent to tidal waters of the United States.
- Impact square feet are rounded to the nearest whole number.
- 5
- Temporary fill discharge into waters of the U.S. Cubic yards are rounded to the nearest whole number.
- 6
- Permanent fill associated with the construction of permanent access road and facilities. Cubic yards are rounded to the nearest whole number.

Attachment B

MVP NWP 12 Comment Letter to DEQ (Jun. 15, 2018)



June 15, 2018

By Email (NWP12InfoOnMVP@deq.virginia.gov) and Hand Delivery

Ms. Ann Regn
Director, Public Information and Outreach
Virginia Department of Environmental Quality
1111 East Main Street
Richmond, Virginia 23218

Re: Mountain Valley Pipeline's Response to the "State Water Control Board Request for Technical Information on Specific Wetland and/or Stream Crossings"

Dear Ms. Regn:

Mountain Valley Pipeline (MVP) submits these technical comments to the Virginia Department of Environmental Quality (DEQ) relating to each stream and wetland crossing for the Project in response to the public notice issued on April 30, 2018, titled "State Water Control Board Request for Technical Information on Specific Wetland and/or Stream Crossings." These comments explain how the Nationwide Permit 12 (NWP 12) authorization issued to MVP on December 26, 2017 addresses all relevant water quality concerns associated with each individual Project stream and wetland crossing and detail how the permit's requirements were applied specifically in each instance.

The NWP 12 authorization for this Project—operating in conjunction with all other federal, state, and local approvals—reflects and reinforces the finding in the Board's April 2017 Clean Water Act (CWA) § 401 Certification that there is reasonable assurance that NWP 12 is protective of water quality the Commonwealth's streams and wetlands. The notion advanced by some Project opponents that an additional and duplicative review of the Project's stream and wetland crossings is necessary at this late hour is a groundless attempt to halt active construction of a Project that has met all federal and state requirements for approval.

These comments present a detailed summary of the review process and environmentally protective requirements that have been applied by the Corps and DEQ to each stream and wetland crossing as a "complete and independent project" under NWP 12. This discussion is accompanied by an Appendix covering every stream and wetland impacted by the Project and detailing how these criteria were applied to each. Additionally, to provide much-needed perspective, these comments review other development and infrastructure projects in the Commonwealth with substantially greater stream and wetland impacts that have been reviewed, approved, and constructed under the same permitting program (albeit with less overall scrutiny than this Project).

I. HUNDREDS OF CONSTRUCTION, DEVELOPMENT, AND INFRASTRUCTURE PROJECTS AUTHORIZED UNDER THE SAME (OR LESSER) PERMITTING REQUIREMENTS EACH YEAR IN THE COMMONWEALTH EVIDENCE THAT THE NWP REQUIREMENTS ARE SUFFICIENT

Hundreds of construction and infrastructure projects are successfully completed each year in the Commonwealth under NWPs and/or Virginia Water Protection (VWP) general permits. The Corps and DEQ have an abundance of experience regulating projects large and small under these permits and are well aware of how their requirements and conditions function in practice to minimize impacts to streams and wetlands. The question raised in the public notice is whether those conditions also are sufficient for the stream and wetland crossings for this Project. To supplement the crossing-specific comments in this letter, this section reviews the Project's stream and wetland impacts cumulatively in comparison to other projects that are covered by the same permits.

Following sound mitigation principles and the Corps' 404(b) Guidelines, MVP applied a rigorous route selection refinement process to ensure that the project would avoid stream and wetland impacts to the maximum extent practicable. As a result, MVP's total stream and wetland impacts are modest in comparison to many other projects constructed in Virginia in recent years. Throughout the 103 miles of the Project's pipeline right-of-way in Virginia, in addition to miles of temporary and permanent access roads, those stream and wetland impact totals have been minimized to the following.¹

MVP's Total Stream and Wetland Impacts

Total permanent stream impact:	478 linear feet
Total permanent wetland impact (loss):	0.02 acres
Total wetland conversion impact:	4.21 acres
Total temporary stream impact:	28,677 linear feet
Total temporary wetland impact:	4.77 acres

MVP submitted requests to the Corps and DEQ for information on other projects authorized by NWP 12 and/or VWP general permits to provide a basis of comparison for the Project's impacts. The data received from the Corps and DEQ demonstrate that the size and scope of MVP's aquatic impacts are minimal compared to the hundreds of other projects in Virginia regulated under the NWP and the VWP programs every year.

Thousands of projects in Virginia have been permitted and constructed under the Corps' NWP program in the past five years (2013-2017). Not including MVP or the Atlantic Coast Pipeline, the number of "single and complete" projects are as follows.

¹ Data summarized here is from DEQ public notice website, except the total wetland conversion impact. A minor technical correction was made by MVP and approved by the Corps on January 23, 2018. That correction resulted in a minor increase in authorized wetland conversion impacts from 4.19 to 4.21 acres.

Projects Utilizing NWP in Virginia (2013–2017)

NWP 12: 1,371
All NWPs: 4,780

Hundreds of the projects permitted under NWP 12 involved the installation of buried utilities across streams and wetlands, including water lines, sanitary sewers, broadband cables, and natural gas distribution and transmission lines. The NWP program is a mature regulatory program with proven capability and protectiveness.

DEQ's database provided even more information that is useful for putting MVP's total stream and wetland impacts in perspective. DEQ's database did not include projects that obtained VWP general permit coverage by rule because they qualified for coverage under an NWP that had a preexisting 401 certifications from the Board.² Thus, the total number of projects covered under NWPs and VWP general permits in Virginia is substantially higher than is reflected in the DEQ data discussed in this section. Nevertheless, even among DEQ's subset of projects in the database, it is evident that MVP represents a tiny percentage of the total stream and wetland impacts authorized by NWP and VWP general permits each year.

Projects Utilizing VWP General Permits (2013–May 2018)

Total VWP General Permits: 1,344
Total Permanent Wetland Impacts: 721 acres
Total Permanent Stream Impacts: 274,467 linear feet

Only 508 of the projects in DEQ's database were linear projects like MVP that have dispersed stream and wetland crossings with only a fraction of their total impacts in each affected watershed. The vast majority of the projects are non-linear, meaning their aquatic impacts generally will be concentrated within a single watershed. Furthermore, many of these projects have total stream and wetland impacts that individually exceed those of the MVP Project.

Projects Utilizing VWP General Permits
with Permanent Impacts *Greater than MVP*

705 (wetland impacts)
142 (stream impacts)

None of the projects with permanent impacts comparable to or greater than MVP were subjected to the same degree of searching scrutiny applied to MVP, and yet they all received authorization under the NWP and VWP permit programs.³ Most of them have been constructed without incident.

Credit must be given to the Corps, and its counterparts in DEQ's VWP program, for developing and overseeing the complementary NWP and VWP permit programs so that they function efficiently, effectively, and largely unnoticed. The inescapable conclusion is that the NWP

² 9 VAC 25-210-130(J).

³ The data received from the Corps did not allow MVP to identify the total and individual stream and wetland impacts.

program (including the Board's CWA § 401 Certifications and VWP requirements) has proven to be more than capable of protecting the Commonwealth's streams and wetlands for thousands of projects of all types. As detailed in the following section and the stream- and wetland-crossing specific Appendix, MVP has satisfied all of the requirements for authorization under NWP 12, and, by extension, coverage under a VWP general permit. That fact, supported by experience from thousands of projects, is conclusive evidence that the requirements applicable to the Project through NWP 12 are sufficient to protect streams and wetlands. It also buttresses the Board's April 2017 CWA § 401 Certification finding that NWP 12's conditions provide reasonable assurance that projects such as MVP will be constructed in a manner that is protective of the Commonwealth's water quality standards.

II. EACH OF THE PROJECT'S STREAM AND WETLAND IMPACTS IS A "SINGLE AND COMPLETE PROJECT" THAT MUST COMPLY WITH DOZENS OF WATER QUALITY PROTECTION REQUIREMENTS

NWP 12 authorization for a linear project is not a blanket approval for the collective impacts of the entire project. Rather, each stream and wetland impact at a separate and distinct location is considered a "single and complete project."⁴ As single and complete projects, each stream and wetland impact is independently addressed by the Corps for compliance with each requirement of the permit.⁵ The list of requirements is extensive. Each of the Project's crossings is subject to over 50 requirements related to the minimization of aquatic impacts and/or the protection of water quality. These requirements are found in:

- NWP General Conditions;
- NWP 12 Conditions;
- Norfolk District Regional General Conditions;
- Norfolk District Regional NWP 12 Conditions;
- Board's Conditional CWA § 401 Certification of NWP 12; and
- Special Conditions imposed in the NWP verification letter.

Furthermore, NWP General Condition 12 requires appropriate erosion and sediment controls, which was satisfied in this case by DEQ's approval of the Project Specific Standards and Specifications (PSS&S) and DEQ's site-specific review and approval of the erosion and sediment control and stormwater management measures to be employed for each crossing. Thus, each stream and wetland crossed by the Project was reviewed by the Corps and DEQ for compliance with a bevy of requirements developed to ensure that water quality is protected.

The review requirements and conditions applicable to each of the Project's stream and wetland crossings are summarized in this section below. An analysis of each stream and wetland crossed by the Project is provided in the Appendix to demonstrate how each crossing subject to the NWP 12 authorization satisfies all of the water protection conditions made applicable through the permit.

⁴ 82 Fed. Reg. 1860, 1986 (NWP 12 Note 2), 1999 (NWP General Condition 15) (Jan. 6, 2017).

⁵ *Id.* at 2004–05.

A. District Engineer's Decision

The Corps' NWP's prescribe the determinations made as part of verifying that the Project is authorized under NWP 12.⁶ Having made these determinations, the Corps issued a verification letter issued to MVP on December 26, 2017. Congress committed this determination to the Corps of Engineers⁷ and the District Engineer's judgment is entitled to deference.

1. Corps' Determination that Adverse Impacts Are Minimal

The District Engineer "determine[s] whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects."⁸ For linear projects like MVP, this determination includes "an evaluation of the individual crossings of waters of the United States."⁹ The adverse environmental effects analysis considers water quality, including impacts the aquatic resource functions, degree and duration of loss, and the "importance of the aquatic resource functions to the region (e.g., watershed and ecoregion)."¹⁰

2. Corps' Determination that the Activity Is In the Public Interest

The District Engineer determines that authorizing the activity is not "contrary to the public interest."¹¹ As with the minimal adverse impact determination, this determination includes individual stream crossings and the cumulative effects of the project.¹²

3. Corps' Determination that Each Crossing Satisfies All "Terms and Conditions" of the NWP's

As noted above, the NWP's further specify that the District Engineer determine that the Project's crossings "individually satisfy the terms and conditions of the NWP(s)."¹³

B. NWP General Conditions (GC)

The NWP's include 32 General Conditions that all projects must satisfy.¹⁴ Nineteen of those conditions are relevant to this Project and related to the protection of water quality.

1. GC 2: Disruption of Aquatic Life Movement Must Be Minimized

GC 2 prohibits activities that "may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody."¹⁵ It further specifies that waterbody crossings must be construed to "maintain low flows to sustain the movement of those aquatic

⁶ 82 Fed. Reg. at 2004.

⁷ 33 U.S.C. § 1344(e).

⁸ 82 Fed. Reg. at 2004.

⁹ *Id.*

¹⁰ *Id.* at 2005.

¹¹ 82 Fed. Reg. at 2004-05.

¹² *Id.*

¹³ *Id.* (emphasis added).

¹⁴ *Id.* at 1998-2004.

¹⁵ *Id.* at 1998.

species” through the use of bridges, depressed culverts, bottomless culverts, or other appropriately designed and constructed means.

2. GC 3: Construction in Spawning Areas Must Be Avoided

GC 3 requires that aquatic life spawning areas be avoided during spawning season to the maximum extent practicable and prohibits activities that “that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area.”¹⁶

3. GC 6: Materials Used for Construction Must Be Suitable and Non-Toxic

GC 6 prohibits the use of any unsuitable or toxic construction materials in streams and wetlands.¹⁷

4. GC 7: Crossings May Not Be in Proximity to Public Water Supply Intakes

NWPs generally may not be used to authorize any crossings in the “proximity of a public water supply intake.”¹⁸ In its latest reissuance of the NWPs, the Corps considered and rejected comments suggesting that utility projects seeking coverage under NWP 12 be prohibited in the water source protection areas or same watersheds as public water supply intakes. Instead, the Corps emphasized that the District Engineer must review NWP 12 applications closely for compliance with this condition and exercise expert discretion to restrict or limit such activities when appropriate.¹⁹

5. GC 9: Water Flows Must Be Properly Managed

GC 9 prescribes that the pre-construction course, condition, and capacity of open waters be maintained to the maximum extent practicable and that crossing activities may “not restrict or impede the passage of normal or high flows.”²⁰

6. GC 10: Activity Must Comply with Floodplain Management Standards

GC 10 mandates that any fill activity within a 100-year floodplain comply with applicable floodplain management requirements.²¹

7. GC 11: Use of Heavy Equipment in Wetlands Must Minimize Soil Disturbance

GC 11 prescribes that appropriate measures be taken for any heavy equipment that will operate in wetlands.²² Equipment must employ suitable measures to minimize wetland soil disturbance, such

¹⁶ *Id.*

¹⁷ *Id.* at 1998–99.

¹⁸ *Id.* at 1999.

¹⁹ *Id.* at 1949.

²⁰ *Id.* at 1999.

²¹ *Id.*

²² *Id.*

as placing equipment on mats.

8. GC 12: Appropriate Erosion and Sediment Controls Must Be Used

Construction activities authorized by NWP must employ appropriate erosion and sediment controls.²³ GC 12 also mandates that disturbed areas must be stabilized as soon as practicable. As will be discussed further below, this condition was satisfied primarily through DEQ's review and approval of the Project's plans for each stream and wetland crossing.

9. GC 13: Temporary Fills Must Be Removed and Areas Restored

GC 13 requires that all temporary fills must be completely removed, that affected areas returned to pre-construction elevations, and that the area be appropriately revegetated.

10. GC 14: Authorized Structures and Fills Must Be Properly Maintained

GC 14 provides that any structure or fill placed in a waterbody under an NWP authorization must be properly maintained "to ensure public safety and compliance with applicable NWP general conditions."²⁴ The Corps clarified that for natural gas pipelines that are not under its direct regulatory authority, this condition is intended to work in conjunction with other regulatory requirements imposed by the Federal Energy Regulatory Commission (FERC) and the Pipelines and Hazardous Materials Safety Administration within their respective authorities.²⁵

11. GC 15: Each Crossing Must Be a Single and Complete Project

GC 15 requires that each activity authorized by the NWP (i.e., each crossing) be a single and complete project.²⁶

12. GC 16: Adverse Impacts to Wild and Scenic Rivers Must Be Avoided

Pursuant to GC 16, activities authorized by an NWP may not adversely affect any Wild and Scenic River designation or study status.²⁷ The Project crosses no such waters.

13. GC 18: Endangered Species Act Consultation Is Required If Project "May Affect" Any Listed Species

GC 18 mandates that the U.S. Fish and Wildlife Service (or National Marine Fisheries Service, as appropriate) be consulted if the proposed activity "may affect" a federally listed threatened or endangered species or its critical habitat.²⁸ "No activity is authorized under any NWP which 'may affect' a listed species or critical habitat, unless ESA section 7 consultation addressing the effects

²³ *Id.*

²⁴ *Id.*

²⁵ Corps, Decision Document, Nationwide Permit 12, at 7-8 (Dec. 21, 2016).

²⁶ 82 Fed. Reg. at 1999; *see also* 33 C.F.R. § 330.2(i).

²⁷ 82 Fed. Reg. at 1999.

²⁸ *Id.*; *see also* Regional General Conditions 4 and 5.

of the proposed activity has been completed.”²⁹ Section 7 consultation for the Project was completed on November 21, 2017 and resulted in a number of conditions, including time-of-year restrictions on instream work, to protect listed species.³⁰

14. GC 22: Critical Resource Waters Must Be Avoided

NWP 12 may not be used to impact any waterbody (or its adjacent wetland) that has been designated as a critical resource water.³¹ The Project crosses no such waters.

15. GC 23: Adverse Aquatic Impacts Must Be Appropriately Mitigated

GC 23 outlines the mitigation requirements for projects authorized under NWPs.³² Onsite project activities for each individual crossing must be designed to avoid and minimize both permanent and temporary adverse effects to waters to the maximum extent practicable. The District Engineer determines what mitigation measures, including compensatory mitigation, will be required to ensure that the “individual and cumulative adverse environmental effects are no more than minimal.”³³ As discussed below, MVP submitted, and the Corps approved, a Compensatory Mitigation Plan for the Project.

16. GC 25: CWA § 401 Water Quality Certification Must Be Obtained or Waived

Under GC 25 (and 33 U.S.C. § 1341(a)), the Corps may not issue an NWP authorization unless the State has issued or waived CWA § 401 certification.³⁴ The Board issued a conditional certification for NWP 12 on April 7, 2017.³⁵

17. GC 27: All Regional Conditions and CWA § 401 Certification Conditions Must Be Adhered To

GC 27 mandates that projects comply with all Regional Conditions and conditions imposed by a State in a CWA § 401 certification.³⁶ Relevant conditions are addressed in these comments.

18. GC 30: Applicant Must Certification Compliance with All Permit Conditions and Mitigation Requirements

Pursuant to GC 30, MVP must submit a certification to the Corps upon completion of the Project verifying that it has complied with all applicable permit conditions for its stream and wetland crossings and obtained all necessary mitigation.³⁷

²⁹ 82 Fed. Reg. at 1999.

³⁰ Waters subject to these restrictions are identified in the Appendix.

³¹ *Id.* at 2001.

³² *Id.*; *see also* Regional General Condition 10.

³³ 82 Fed. Reg. at 2001.

³⁴ *Id.* at 2002.

³⁵ A State may not unilaterally withdraw or modify a certification after it has been issued. 33 C.F.R. § 330.4(c)(7); *see also* Corps Reg. Guid. Ltr. 87-03.

³⁶ *Id.*

³⁷ *Id.*

19. GC 32: Applicant Must Provide Pre-Construction Notification With Detailed Information on Project, Aquatic Impacts, and Mitigation

For projects, like MVP, that trigger a pre-construction notification requirement, GC 32 outlines a lengthy list of information that must be submitted to the Corps for review.³⁸ Under this condition, detailed information on the project location, aquatic resource impacts, and proposed mitigation must be submitted to allow the Corps to make the necessary determinations. This information was included in the Joint Permit Application MVP submitted to the Corps, DEQ, and VMRC.

C. NWP 12 Permit Conditions

NWP 12 imposes additional conditions that apply to each stream and wetland crossing. The conditions applicable to this Project and relevant to water quality protection are as follows.

1. Wetland Loss Cannot Exceed 0.5 Acre

NWP 12 cannot be used if any single wetland crossing will result in a loss greater than 0.5 acre.³⁹ For comparison, the total area of wetland loss for all of the Project's crossings in Virginia is less than 0.02 acre.⁴⁰

2. Pre-Construction Contours in Waters Must Be Restored

NWP 12 states, "There must be no change in pre-construction contours of waters of the United States."⁴¹ This means that the contours of all streambeds must be restored to their pre-construction conditions.

3. Temporarily Sidecast Material During Trench Excavation Must Be Protected from Loss

This condition requires that any material that is temporarily sidecast into waters during trench excavation must be protected so that the material is not dispersed by flowing water or other forces.⁴² The use of dry-ditch waterbody crossing methods by MVP means that temporarily sidecast materials will not be exposed to flowing water or other erosive forces.

4. Wetland Topsoil Should Be Replaced During Trench Backfilling

Wetland topsoil removed for trench excavation should be replaced when the trench is backfilled.⁴³

³⁸ *Id.* at 2003. The Norfolk District's Regional Conditions and the Joint Permit Application require additional information beyond what GC 32 requires.

³⁹ *Id.* at 1985.

⁴⁰ Refer to "Field Wetland Impacts Jurisdictional" and "Wetland Impacts" tables in DEQ's Public Notice.

⁴¹ 82 Fed. Reg. at 1985.

⁴² *Id.*; *see also* NWP 12 Regional Condition 3.b.ii and MVP's approved Project Specific Standards and Specifications (PSS&S).

⁴³ 82 Fed. Reg. at 1985. MVP's procedures for segregating and replacing topsoil in wetlands and other sensitive areas are outlined in Section 2.4.1 of the PSS&S.

5. Trench May Not Create a French Drain Effect

NWP 12 requires that the trench be constructed in a manner that does not create a “french drain effect” that could dewater streams and wetlands.⁴⁴

6. Stream Banks and Exposed Slopes Must Be Stabilized

NWP 12 requires, “Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.”⁴⁵

7. Access Road Widths Must Be Minimized

Any access roads that cross streams or wetlands must be no larger than the “minimum width necessary.”⁴⁶

8. Appropriate Measures Must Be Taken to Maintain Normal Downstream Surface Flows and Avoid Flooding

To minimize impacts, projects must be constructed using appropriate measures to maintain normal downstream surface flows and avoid flooding.⁴⁷ For temporary road surfaces (e.g., geotextile fabric or gravel roads) at grade, the road surface must be “as near as possible to pre-construction contours and elevations.” Access roads above existing grade must be bridged or culverted. For trenching activities, cofferdams or other measures must be employed to maintain downstream flow around the site.

9. Temporary Access Roads Must Be Removed and Restored

All temporary access roads through streams or wetlands must be removed and the area restored upon completion of project construction.⁴⁸

D. Norfolk District Regional Conditions (RGC)

The Corps’ Norfolk District imposes numerous additional conditions on projects that utilize NWPs within the district’s jurisdiction.⁴⁹ More than a dozen of those conditions are applicable to the Project and relevant to the protection of water quality.

⁴⁴ 82 Fed. Reg. at 1985. MVP’s use of trench plugs and other measures to prevent this effect is addressed in Section 5.1 of the PSS&S.

⁴⁵ 82 Fed. Reg. at 1985. Stream bank and slope stabilization are further addressed in Section 5.1 of the PSS&S.

⁴⁶ 82 Fed. Reg. at 1986.

⁴⁷ *Id.*

⁴⁸ *Id.* (NWP 12 Note 4).

⁴⁹ See Norfolk District Regional Conditions for the 2017 Nationwide Permits (NWPs) Applicable in Virginia (Including Northern Virginia Military Installations within Baltimore District’s Area of Responsibility).

1. RGC 6: District Engineer Review and Time-of-Year Restrictions for Work in Designated Trout Waters

RGC 6 refers to the time-of-year restrictions recommended by the Virginia Department of Game and Inland Fisheries for crossings of trout waters.⁵⁰

2. RGC 7: Invasive Plant Species May Not Be Used for Revegetation

RGC 7 prohibits the use of any plant species identified as invasive by the Virginia Department of Conservation and Recreation (DCR) for revegetation activities. MVP's revegetation seed mixes use native species and have been developed in consultation with the Wildlife Habitat Council, U.S. Fish and Wildlife Service, U.S. Forest Service, DCR, and DEQ.

3. RGC 8: Culverts in Streams Must Be Countersunk

RGC 8 includes detailed specifications for the construction and replacement of culverts in streams and other waters. Of particular relevance, new culverts must be countersunk below the natural stream bottom to benefit aquatic organisms in the stream.

4. RGC 10: Mitigation Plan Must Be Submitted

RGC 10 provides that a mitigation plan must be submitted if any of the "single and complete projects" will result in the loss of more than 0.10 acre of wetlands or 300 linear feet of streams. Although none of the Project's stream or wetland crossings exceeds these thresholds, MVP submitted a comprehensive Compensatory Mitigation Plan to the Corps to address stream and wetland impacts.⁵¹

5. RGC 11: Temporary Impacts Must Be Restored

Supplementing General Condition 13, RGC 11 outlines additional measures that must be taken to restore temporary impacts. Such impacts must be restored within 12 months, natural contours must be restored, and wetland soils must loosened and revegetated. Note that this requirement is largely superseded by Special Condition 4, which requires "immediate" restoration.

E. Norfolk District Regional Conditions for NWP 12 (RC12)

The Corps' Norfolk District also imposes additional relevant conditions on the use of NWP 12 that are applicable to the Project.

1. Access Road Impacts Must Be Less Than 1/3 Acre

Further lowering the general half-acre impact restriction on NWP 12, RC12.1 provides that no

⁵⁰ Section 5.1 of the PSS&S and the FERC Certificate also refer to time-of-year restrictions for trout streams and other waterbody types.

⁵¹ The Corps accepted MVP's proposed Compensatory Mitigation Plan. It is referenced in Special Condition 1 in the NWP 12 authorization letter.

access road may impact greater than one-third acre of waters.

2. Delineation and Classification of all Waters Within the Corridor

RC12.3.a requires an applicant to provide a map of the entire corridor that includes a delineation of all streams and wetlands. The Cowardin classification of each water also must be provided.

3. Alternatives Analysis Required for All Crossings

Although normally required only for individual CWA § 404 permit applications, RC12.3.b requires applicants for NWP 12 coverage in the Norfolk District to submit a detailed alternatives analysis covering each proposed crossing. Among other things, the analysis must demonstrate that wetland impacts have been avoided to the maximum extent practicable. MVP's alternatives analysis was submitted to the Corps in September 2017.

4. Crossings Must Be Direct or Perpendicular to Streams

RC12.3.b.i mandates that utility crossings of streams must be direct and reasonably perpendicular to the stream to minimize impacts.

5. Wetland Grading and Grubbing Must Be Minimized

Absent express approval from the Corps, RC12.3.b.iii restricts grubbing in wetlands to a project's permanent easement. In temporary construction easement areas, wetland vegetation must be cut at or above the ground surface to allow more rapid restoration.

6. Compensatory Mitigation for Permanent Wetland Conversions

Consistent with the requirements of VWP program, RC12.3.b.vi provides that the District Engineer may require compensatory mitigation for permanent conversion of wetland types (e.g., forested to emergent) within the utility corridor. MVP's Compensatory Mitigation Plan includes mitigation for conversion impacts.

7. Minimum Pipeline Burial Depths Under Waterbodies

RC12.4 specifies that the depth of pipelines buried under waters generally must be at least six feet below Federal Navigation Channels and three feet below other subaqueous areas.

8. Temporarily Stockpiled Excavated Material Must Be Managed and Stored Appropriately

RC12.5 outlines several requirements for the management of excavated material during construction in streams and wetlands. Whenever possible, the material must be placed in upland areas. If excavated material must be stockpiled within a wetland area, it must be placed on a semi-permeable surface (e.g., filter cloth or timber mat) and stabilized to prevent soil loss to the waterway. The material must be backfilled into the trench to restore it to the original contour and

any excess material must be removed from the wetland.

9. Required Measures to Protect Anadromous Fish

RC12.6 imposes a consultation requirement and time-of-year restrictions for any work in designated anadromous fish areas. The Project does not affect any such areas.

10. Inadvertent Return Plan Required for Horizontal Directional Drills

RC12.9 requires an applicant to develop a plan to prevent, contain, and clean up any sediment or other materials released by inadvertent returns from horizontal directional drills. MVP will perform only one such crossing in Virginia (Pigg River). A plan has been developed and submitted to the appropriate agencies (FERC, Corps, DEQ).

F. Board NWP 12 CWA § 401 Certification Findings and Conditions

On April 7, 2017, the Board issued a conditional CWA § 401 Certification finding that the requirements of NWP 12 provide reasonable assurance that water quality will be protected for stream and wetland crossings that comply with the permit's requirements (as detailed in this comment letter). The Board's conditional Certification includes one relevant finding and two additional conditions related to water quality.

1. Finding that NWP Conditions Meet the Requirements of the VWP Regulations

The CWA § 401 Certification included an affirmative statement that the Board determined that the conditions for the certified permits, including NWP 12, meet all of the requirements of the Board's VWP regulation. This finding evidences that the conditions imposed through the NWP General Conditions, NWP 12 conditions, and Norfolk Regional Conditions are no less stringent than the requirements that would apply to each stream and wetland crossing under the VWP regulations.

2. Activity May Not Be Associated with a Surface Water Withdrawal or Transport of Non-Potable Raw Surface Water

The Board's conditional certification of NWP 12 excludes any activities that are associated with surface water withdrawals or the transportation of non-potable raw surface water. Although the condition does not apply to withdrawals for hydrostatic testing, MVP committed to obtaining all of its water for hydrostatic testing and other purposes from municipal water supplies to avoid instream impacts associated with large-volume withdrawals.

3. Compensatory Mitigation Must Be Consistent with the Virginia Code

The Board's second condition for NWP 12 is that "any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44.15:23 A through C."

G. MVP NWP 12 Verification Letter Special Conditions (SC)

The Corps' December 26, 2017 verification letter to MVP includes nine Special Conditions, most of which are relevant to the protection of water quality.

1. SC 1: Must Submit Compensatory Mitigation Documentation to Corps

As discussed previously, MVP submitted, and the Corps approved, a Compensatory Mitigation Plan for stream and wetland impacts. SC 1 requires MVP to provide purchase bills of sale for its compensatory mitigation credit purchases prior to any impacts.

2. SC 2: Waterbodies Must Be Flagged in Field

SC 2 requires MVP to "ensure that all waters and wetlands are flagged in the field prior to any construction to prevent accidental impact to resources not necessary for construction."

3. SC 3: Temporary Stream Construction Entrances Must Be Removed

SC 3 requires MVP to remove all temporary stream construction entrances "immediately upon completion of the project."

4. SC 4: Stream Banks, Riparian Areas, and Wetlands Must Be Restored

SC 4 provides that all stream banks, riparian areas, and wetlands disturbed by the Project must be restored to pre-construction contours, stabilized, and re-seeded "immediately upon project completion at each crossing." This requirement supersedes Regional Condition 12, which requires that such restoration activities occur within 12 months.

5. SC 7: As-Built Plans Must Be Provided to Corps

SC 7 requires that MVP submit as-built plans to the Corps upon completion of the Project, which will facilitate the Corps' evaluation of MVP's compliance with the authorized impacts.

6. SC 8: Limits of Disturbance in Waters Restricted to 75' Wide

Mirroring Condition 2.b of the Board's December 8, 2017 Water Quality Certification for MVP, SC 8 requires that the construction limits of disturbance (i.e., the construction right-of-way) width be reduced from 125' to 75' for all stream and wetland crossings. In order to "limit impacts to the aquatic resource," this condition mandates that the narrowed right-of-way extend 50' on both sides of all crossings.

7. SC 9: Post-Construction Inspection and Report Required

SC 9 imposes post-construction monitoring and reporting requirements for each stream and wetland crossing. Inspections must be performed one month after the authorized work is completed and again at the end of the first full growing season. The inspection must verify that all excess fill has been removed and that pre-construction conditions and contours have been restored, as well

as assess the status of vegetative growth in the impacted areas. Inspection reports must be filed with the Corps.

8. Compliance with Virginia Marine Resources Commission Permit Requirement

The Corps' verification was conditioned on MVP obtaining any required permits from the Virginia Marine Resources Commission (VMRC). Eighteen of the largest streams crossed by the Project in Virginia are within VMRC's concurrent jurisdiction. VMRC conducted its own independent review of those 18 crossings and issued a permit to MVP on January 25, 2018.

H. Board/DEQ-Imposed Conditions Made Applicable through General Condition 12

As discussed above, NWP General Condition 12 requires that appropriate erosion and sediment control measures be employed for any stream or wetland crossing authorized under an NWP. In a memorandum provided to the Board for its December 7, 2017 meeting, DEQ stated:

To qualify for coverage under Nationwide Permit 12 (NWP 12), the pipeline developers must comply with numerous General Conditions applicable to each nationwide permit including General Condition 12. This condition requires that appropriate soil erosion and sediment controls be used during the construction. General Condition 12 ties in the requirements and practices of the VESC program and regulations. Each stream crossing during the construction phase is subject to both federal and state oversight.⁵²

There are a number of stream- and wetland-specific requirements imposed by the Board's regulations or DEQ approvals, and made applicable through General Condition 12, that further bolster the protectiveness of NWP 12 for this Project.

1. DEQ Review and Approval of the Project's Erosion and Sediment Control and Stormwater Management Plans

DEQ required that MVP submit site-specific erosion and sediment control and stormwater management plans documenting the best management practices that would be employed for every square foot of the Project's limits of disturbance—and that includes every stream and wetland crossing. As the Board was informed at its April 12, 2018 meeting, this monumental and unprecedented plan review process entailed more than 4,500 hours of review by DEQ's engineering contractor and over 2,000 hours of DEQ staff time. Through this process, DEQ conducted a thorough review of the measures that would be employed by MVP at every stream and wetland crossing, before, during, and after construction, to minimize erosion and sedimentation impacts.

⁵² DEQ, Memorandum on Proposed 401 Water Quality Certification, Mountain Valley Pipeline, LLC, Certification No. 17-001, Att. A: Basis for Determination, at A-14 (Nov. 9, 2017).

2. DEQ Review and Approval of Stream Crossing Methods and Specifications

DEQ reviewed and approved the methods and specifications MVP will use for all stream and wetland crossings.⁵³ Except for a few streams that will be bored due to specific conditions, all stream crossings will be constructed using dry-ditch open cut methods to minimize the potential for downstream sedimentation and turbidity.

3. Time-of-Year Restrictions on Instream Work to Protect Trout and other Sensitive Species

MVP's Project Specific Standards and Specifications (PSS&S), which were approved by DEQ in June 2017, outline the time-of-year restrictions that MVP will adhere to for all instream work in coldwater and warmwater fisheries; natural and stockable trout streams; and streams containing sensitive species (i.e., Roanoke Logperch, Orange-fin madtom, Atlantic pigtoe, James Spiny mussel, Green floater, and Yellow lampmussel).⁵⁴

4. Crossings to Be Made During Low Flow Conditions

To minimize aquatic impacts, the PSS&S provide that stream and wetland crossings will be conducted during low flow conditions wherever feasible.⁵⁵

5. Crossings Will Be Treated as Separate Construction Entities to Be Completed by Specialized Crews

To ensure that stream and wetlands crossings are completed properly, they will be treated as separate construction entities to be constructed by specialized crews.⁵⁶

6. Crossings to Be Completed as Quickly as Possible

To minimize the duration of stream and wetland disturbance, crossings will be completed as quickly as possible.⁵⁷ This means that once grubbing and grading commence, all steps of the process will proceed on consecutive days until construction is complete and the crossing area is restored.

7. Crossing of Streams and Wetlands with Heavy Equipment Will Be Minimized

The PSS&S outline various measures that will be employed to minimize impacts from heavy equipment crossing of streams and wetlands, including restrictions on the type and number of crossings that may be made and mandatory use of equipment bridges.⁵⁸

⁵³ PSS&S §§ 5.1, 5.2

⁵⁴ *Id.* § 5.1

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

8. Equipment Operating in Wetlands Will Be Placed on Mats to Minimize Soil Disturbance and Compaction

When heavy equipment must operate in wetlands to complete pipeline crossings, the equipment will be placed on mats and other suitable methods may be employed to minimize soil disturbance and compaction.⁵⁹

9. Streambed Substrate and Wetland Topsoil to Be Replaced

During excavation of the pipeline trench, the top one foot of wetland topsoil (unless saturated) or streambed substrate will be segregated and stockpiled separately from the remainder of the trench excavation material to be replaced after construction.⁶⁰ This measure will provide a native seedbank and substrate to facilitate restoration.

10. Staging Areas Will Be Located Outside of Buffer Areas

Construction staging areas for stream and wetland areas will be located outside of buffer areas.⁶¹ Likewise, no refueling (except 5-gallon cans needed to refuel water pumps), hazardous materials storage, or equipment maintenance or parking will be permitted within 100' of a stream or wetland.

11. Spoil Piles to Be Protected from Soil Loss in Waterbodies

All spoil piles for stream and wetland crossings will be placed at least 10' from the edge of streams or wetlands, with sediment barriers placed between the piles and the waterbody.⁶²

12. Pipeline Will Employ Pipe Weights as Necessary to Ensure Negative Buoyancy

Where the pipeline is installed beneath streams and wetlands, pipe weights (e.g., saddle bags filled with clean gravel or other suitable material) will be used as necessary to ensure that the pipe has negative buoyancy.⁶³

13. Trench Breakers Will Be Used to Avoid Stream and Wetland Dewatering

Consistent with NWP 12's prohibition on the creation of a "french drain effect" by the pipeline trench, trench breakers/plugs (e.g., concrete-filled sacks) will be installed at waterbody crossings.⁶⁴ These features also serve the purpose of preventing accumulated stormwater from flowing through the trench into streams and wetlands.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

14. Enhanced Measures to Be Employed in TMDL Waters

In waters with total maximum daily loads (TMDLs) for relevant pollutants of concerns (e.g., sediment, nutrients), the Project will employ a suite of additional protective measures.⁶⁵ These measures include identification of the impaired waterbody in the applicable Stormwater Pollution Prevention Plan to facilitate additional measures as needed, increased soil stabilization measures for disturbed areas, restrictions on the use fertilizers, and increased BMP inspection frequency.⁶⁶

15. Sediment Barriers Will Remain at Edge of Streams until the Streambanks Successfully Revegetate

To minimize short-term post-construction sediment increases, temporary sediment barriers will be maintained at the edge of streams until the streambanks have successfully revegetated.⁶⁷

16. Contingency Plan Must Be Developed in Consultation with DEQ for Any Horizontal Directional Drill Crossings

Similar to NC12.9, a plan must be developed in consultation with DEQ for any stream that will be crossed by means of horizontal directional drilling.⁶⁸ Only one waterbody in Virginia, the Pigg River, will be crossed with this method.

III. PROJECT IMPACTS WERE SUBJECTED TO MULTIPLE CUMULATIVE IMPACTS REVIEWS

In addition to the individual crossing-specific analyses discussed above, several relevant cumulative impacts reviews were conducted.

A. Corps Conducted a Cumulative Impact Review for NWP 12

The Corps reissued NWP 12 in January 2017. The permit was developed for and intended to be suitable for use for the construction of interstate natural gas transmission pipelines regulated by the Federal Energy Regulatory Commission. This was expressly acknowledged in the permit's Decision Document and considered in its environmental impacts analysis.⁶⁹ In that analysis, the Corps reviewed the various requirements that would apply to projects seeking coverage under the permit. Those requirements include preconstruction notification and information submission requirements for larger projects; standard and regional permit conditions designed to minimize impacts and ensure compliance with the 404(b) Guidelines; CWA § 401 certifications reviews and resulting state-imposed requirements to ensure compliance with water quality standards; and the judgment and discretion of District Engineers to impose additional requirements where they are necessary. In consideration of these safeguards, the Corps concluded that issuing NWP 12 is in the public interest and that "the activities authorized by this NWP will result in no more than minimal

⁶⁵ *Id.* §§ 2.0, 4.5, 5.1.

⁶⁶ Subsequent to the approval of the PSS&S, MVP elected to utilize the BMP inspection frequency for TMDL waters for all parts of the Project.

⁶⁷ PSS&S § 5.1

⁶⁸ *Id.* § 5.2.1

⁶⁹ Corps, Decision Document, Nationwide Permit 12 at 7-8 (Dec. 21, 2016).

individual and cumulative adverse effects on the aquatic environment.”⁷⁰

B. FERC Conducted a Cumulative Impact Review for the Project in the Final Environmental Impact Statement

In accordance with the National Environmental Policy Act, FERC conducted a cumulative impacts analysis for the Project which is summarized in the Final Environmental Impact Statement issued in June 2017. FERC concluded that the cumulative impacts of the Project on surface waters, after consideration of avoidance, minimization, and mitigation measures, “would not be significant.”⁷¹ As a cooperating agency,⁷² the Norfolk District is entitled to rely on the findings in the Final Environmental Impact Statement.⁷³

C. The Corps Norfolk District Conducted a Cumulative Impact Review for the NWP 12 Verification Issued to MVP

“In reviewing the PCN [pre-construction notice] for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects.”⁷⁴ For linear projects in particular, the Corps must consider each stream and wetland crossing individually, “as well as the cumulative effects caused by all of the crossings authorized by the NWP.”⁷⁵ The Corps’ expert determination that MVP’s application complied with this (and all other permit) requirements is entitled to deference.

IV. MVP’S NWP 12 AUTHORIZATION IS PROTECTIVE OF EACH AND EVERY STREAM AND WETLAND CROSSED BY THE PROJECT AND ALL OF THEM CUMULATIVELY

There should be no serious question that the NWP 12 verification issued to MVP is sufficiently protective of Virginia’s streams and wetlands. Nor is there reason to doubt the Board’s reasonable assurance finding in the April 2017 CWA § 401 Certification that the Commonwealth’s water quality standards will be maintained. As the review of those requirements Section II above demonstrates, they leave no stone unturned with respect to potential adverse effects that could come within the purview of CWA § 404 or the VWP permit programs. MVP’s NWP 12 authorization included numerous conditions to ensure each crossing will be conducted in a manner that:

⁷⁰ *Id.* at 79.

⁷¹ FERC, Mountain Valley Project and Equitrans Expansion Project Final Environmental Impact Statement, at 5-16 (June 2017).

⁷² *Id.* at 1-16.

⁷³ 40 C.F.R. § 1506.3.

⁷⁴ 82 Fed. Reg. at 2004 (emphasis added).

⁷⁵ *Id.* at 2004–05.

- *Protects aquatic life, including threatened/endangered species (e.g., Roanoke logperch);*⁷⁶
- *Controls erosion and sedimentation other downstream impacts;*⁷⁷
- *Prescribes safe equipment and material usage and storage practices;*⁷⁸
- *Minimizes the footprint of the impact;*⁷⁹
- *Preserves instream flows and wetland hydrology during and after construction;*⁸⁰
- *Prevents potential flooding impacts;*⁸¹
- *Avoids impacts to public water supplies;*⁸²
- *Facilitates the expeditious and successful restoration of impacted areas;*⁸³
- *Compensates for unavoidable impacts;*⁸⁴ and
- *Provides for oversight and compliance verification.*⁸⁵

To summarize, there unquestionably is reasonable assurance that the Project's NWP 12 authorization is protective of water quality. First, the Corps verified that each stream and wetland crossing meets all of the applicable requirements—and this review was supplemented by the crossing-specific review conducted by DEQ for the erosion and sediment and stormwater management measures to be employed for every stream and wetland impact. The manner in which those requirements apply to every Project stream and wetland crossing is detailed in the Appendix. Second, the Corps review process entailed an adverse effects determination for each crossing individually, as well as for all of them cumulatively. These determinations are within the Corps' expert judgment and there is no reason to question them. Indeed, the Board "raised no specific areas of concern and provided no technical information that NWP 12 was insufficient" when it voted to authorize this public comment period.⁸⁶ Third, the Corps and DEQ have ample experience overseeing the NWP and comparable VWP permit programs for thousands of projects around the Commonwealth with impacts that collectively—and in many cases individually—dwarf MVP. The example set by those projects provides conclusive proof that the NWP permit requirements are sufficiently protective of stream and wetland resources.

Any suggestion that the multiple layers of crossing-specific and cumulative reviews—or the dozens of relevant NWP 12 conditions discussed in the previous sections—are insufficient for the Project to proceed is groundless. There is no potential adverse impact that this NWP 12 authorization process left unreviewed or unaddressed. There is no provision of the Board's VWP regulations that has not been fulfilled, as evidenced by the fact the Board certified that the NWP 12 conditions (including the Regional Conditions) meet the requirements of the VWP regulations. There is no theoretical "stream-by-stream" review that could be conducted that would not be duplicative of the work that has already been done by the Corps, DEQ, FERC, VMRC, and the public (through multiple rounds of public hearing and comment). In sum, there is no technical

⁷⁶ E.g., GC 2-3, GC 18, RGC 6.

⁷⁷ E.g., GC 12, PSS&S (applicable via GC 12)).

⁷⁸ E.g., GC 11, RC12.5, SC 2, PSS&S (applicable via GC 12).

⁷⁹ E.g., GC 23, NWP 12, RC12.3.b, SC 8.

⁸⁰ E.g., GC 2, NWP 12, PSS&S (applicable via GC 12).

⁸¹ E.g., GC 9-10.

⁸² E.g., GC 7, 401 Certification Condition 1.

⁸³ E.g., NWP 12, RGC 7, RGC 11, SC 4.

⁸⁴ E.g., GC 23, RGC 10, RC12.3.b.vi.

⁸⁵ E.g., GC 30, SC 1, SC 7.

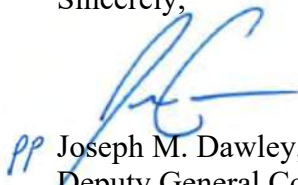
⁸⁶ <http://www.deq.virginia.gov/PipelineUpdates.aspx#PublicComment>.

June 15, 2018

Page 21

justification for impeaching the sufficiency of the requirements applied to each of the Project's stream and wetland crossings through NWP 12 or, for that matter, for questioning the Board's CWA § 401 Certification of NWP 12 as it applies to this Project.

Sincerely,


pp Joseph M. Dawley, P.E.
Deputy General Counsel
EQT Corporation
625 Liberty Avenue
Pittsburgh, PA 15222
412.553.5700

Attachment C

MVP Pre-Filing Meeting Request (Jan. 26, 2021)



2200 Energy Drive | Canonsburg, PA 15317

844-MVP-TALK | mail@mountainvalleypipeline.info

www.mountainvalleypipeline.info

January 26, 2021

By Email and US Mail

Mr. David K. Paylor
Director, Virginia Department of Environmental Quality
1111 E. Main Street, Suite 1400
Richmond, Virginia 23219

Re: Water Quality Certification Pre-Filing Meeting Request

Dear Mr. Paylor:

Mountain Valley Pipeline, LLC (Mountain Valley) intends to submit an application to the U.S. Army Corps of Engineers for a permit to cross jurisdictional streams and wetlands in Virginia and a corresponding request to the Virginia Department of Environmental Quality for water quality certification. In accordance with 40 C.F.R. § 121.4, Mountain Valley requests an opportunity to host a pre-filing meeting with the Department.

Please contact Justin Curtis at justin@aqualaw.com to coordinate a meeting time that is convenient for your staff.

Respectfully submitted,
MOUNTAIN VALLEY PIPELINE, LLC
by and through its operator,
EQM Gathering Opco, LLC
By:

A handwritten signature in blue ink, appearing to read "Todd Normane".

Todd Normane
Deputy General Counsel

cc: Melanie Davenport, DEQ
David Davis, DEQ
Todd Miller, USACE Norfolk
Michael Hatten, USACE Huntington
Scott Hans, USACE Pittsburgh

Attachment D

DEQ Upland 401 Certification Memo to Board (Nov. 9, 2017)
(attachments E & F omitted)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

Memorandum

To: Members of the State Water Control Board

From: Melanie D. Davenport
Director, Water Permitting Division

Date: November 9, 2017

Subject: Proposed 401 Water Quality Certification
Mountain Valley Pipeline, LLC
Certification No. 17-001

During the State Water Control Board meeting on December 6th and 7th, 2017, Department of Environmental Quality (DEQ) staff will present a 401 Certification for the proposed Mountain Valley Pipeline (MVP) to the Board for your consideration. The Certification applies to MVP activities in upland areas outside of the U.S. Army Corps of Engineers' jurisdictional areas under 33 U.S.C. § 1344 which may result in an indirect discharge to waters of the United States; water withdrawal activities that are exempt from coverage under the Virginia Water Protection Permit Program Regulation (9 VAC 25-210-10, *et seq.*); and, land disturbing activities not covered under the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*). The proposed 401 Certification provides additional conditions for water quality protections from impacts in upland areas from the proposed pipeline.

Project Summary

The MVP project is a proposed interstate natural gas transmission pipeline regulated by the Federal Energy Regulatory Commission (FERC) pursuant to Section 7c of the Natural Gas Act (15 USC § 717f(c)). The pipeline as proposed is approximately 303 miles in length and has a diameter of 42 inches and will transport up to 2.0 MMDth/d of natural gas from an interconnection point in Wetzel County, West Virginia, to an interconnection with an existing pipeline in Pittsylvania County, Virginia. Approximately 106 miles of the pipeline, 58 miles of access roads, and appurtenances such as construction lay down yards will be located within Virginia and traverse portions of Giles County, Craig County, Montgomery County, Roanoke

County, Franklin County, and Pittsylvania County. The developer of this project is Mountain Valley Pipeline, LLC, a joint venture between EQT Midstream Partners, LP and affiliates of NextEra US Gas Assets, LLC; Con Edison Gas Midstream, LLC; WGL Midstream; and RGC Midstream, LLC.

FERC released the final Environmental Impact Statement on June 23, 2017 and issued an order granting MVP a Certificate of Public Convenience and Necessity on October 13, 2017.

Basis for Certification

Previously, the Virginia Water Protection (VWP) program was sufficient to evaluate and, when necessary, mitigate potential water quality impacts for linear construction projects, such as roads and pipelines. However, the VWP Permit coverage addresses the impacts caused to wetlands and streams and does not cover activities in upland areas.

In order to address the potential water quality concerns from impacts in upland areas, DEQ issued a guidance document describing procedures DEQ will use to conduct a separate supplemental review of a natural gas infrastructure project with respect to upland impacts that may indirectly affect state waters. Consistent with this guidance, DEQ reviewed additional information and concluded that it was necessary to impose additional 401 water quality conditions on the proposed MVP project for upland areas. Additional information including the 401 Certification process and scope, and its relation to the other environmental programs (i.e. Erosion and Sediment Control, Stormwater Management, Section 404, etc.) is attached (see Attachment A).

Draft Section 401 Certification - Public Comment Process

Subsequent to its conclusion that additional conditions were necessary to protect water quality from pipeline impacts in upland areas, DEQ developed a draft Section 401 Water Quality Certification for the proposed MVP project. This draft certification was subject to public notice and comment in accordance with DEQ's procedures.

During the week of July 3rd, 2017, public notification was made announcing the public hearings and seeking public comments on a draft 401 Certification for the proposed MVP project that would establish additional conditions in upland areas that are located near state waters and that may indirectly affect state waters along the route of the proposed pipeline. The public notice was published in nine newspapers with circulation areas that covered the counties and localities affected by the project. The notice provided: (i) the purpose of the notice; (ii) announcement of the public comment period from July 3, 2017 to August 22, 2017; (iii) the public hearing information including time and location; (iv) the purpose of the public hearings; (v) the project information and description including a link to the pipeline information and the draft Section 401 Certification conditions; and, (vi) information on how to submit comments including staff contact information. As provided in the public notice, two public hearings were held on August 8, 2017 in Radford and August 9, 2017 in Chatham. Further information on the public participation process and the processing activities used to ensure that the thousands of comments received were appropriately processed, reviewed, and considered is provided in Attachment B.

Summary of Comments and Department Response

Over 8,000 comments on the draft 401 Certification for the proposed MVP project were received during the 50-day public comment period that ran from July 3, 2017 to August, 22, 2017.

Comments were submitted via postal letters and postcards, electronic mail, petitions, photographs, technical reports and oral comments, songs, prayers and poems delivered during the public hearings. DEQ reviewed and categorized all of the comments that were submitted during the comments period. Attachment C, Response to Comments, provides a summary of comments received and a response to those comments.

Although thousands of comments were received, there were very clear and recurring issues and themes raised by the commenters. DEQ has broadly stated these issues in Attachment C and has provided responses. Several representative examples of the comments that were received are included in the Board book. The full text of all comments received will be made available to the Board electronically.

Numerous comments that were submitted both in opposition to and support of the draft 401 Certification spoke to issues that are outside the scope of the draft Certification. Many commenters expressed opposition to the project based on a number of issues including: MVP's exercise of eminent domain and its impact on private property rights; the connection between pipeline transportation projects and increased hydraulic fracking of gas; impacts to rural and forest view sheds; negative impacts to property values; lack of demonstrated need for the project and demand for the gas; preference for development of renewable energy sources; threat of pipeline explosion once in operation and greenhouse gas emissions from the pipeline.

Numbers of other commenters expressed support for the project based on issues including: opportunity for economic development, manufacturing and job creation; increased safety of pipeline transportation compared to overland trucking of natural gas; decreased reliance on coal for energy production, and thoroughness of FERC's evaluation of the project. These comments are also outside the scope of the draft 401 Certification.

Changes to the Draft 401 Certification

Revisions to the draft 401 Certification have been prepared and a version that notes the additions and deletions can be found in Appendix E. A clean version of the revised, proposed Certification is included as Attachment F. Staff will review the revisions at the Board meeting.

Staff Contact Information

Should you have any questions or need additional information please contact us:

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Deputy Director – Operations

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ATTACHMENTS:

- Attachment A - Mountain Valley Pipeline Project Basis for Certification
- Attachment B - Draft Section 401 Certification Public Comment Process
- Attachment C - Response to Comments
- Attachment D - Monitoring Plan
- Attachment E - Redline Changes to Draft 401 Certification
- Attachment F - Clean 401 Certification with Additional Conditions

Basis for Certification

The Mountain Valley Pipeline (MVP) Project is a proposed interstate natural gas transmission pipeline regulated by the Federal Energy Regulatory Commission (FERC) pursuant to Section 7c of the Natural Gas Act (15 U.S.C. § 717f(c)) which provides that no natural-gas company shall undertake the construction or extension of any facilities for the transportation or sale of natural gas without first obtaining a Certificate of Public Convenience and Necessity (Certificate) from FERC authorizing such acts or operations. MVP initially filed its application for a Certificate of Public Convenience and Necessity with FERC on October 23, 2015. Following FERC's environmental review of the proposed MVP Project (Project), FERC released a draft Environmental Impact Statement for the proposed Project on September 16, 2016 and the final Environmental Impact Statement on June 23, 2017. FERC issued an order granting MVP a Certificate of Public Convenience and Necessity on October 13, 2017. The proposed pipeline as authorized by FERC will be approximately 303 miles in length, with a diameter of 42 inches, and will transport up to 2.0 MMDth/d of natural gas from an interconnection point in Wetzel County, West Virginia, to an interconnection with an existing pipeline in Pittsylvania County, Virginia. Approximately 106 miles of the proposed pipeline, 58 miles of access roads, and appurtenances such as construction lay down yards will be located within Virginia and traverse portions of Giles County, Craig County, Montgomery County, Roanoke County, Franklin County, and Pittsylvania County. The developer of this Project is Mountain Valley Pipeline, LLC, a joint venture between EQT Midstream Partners, LP and affiliates of NextEra US Gas Assets, LLC; Con Edison Gas Midstream, LLC; WGL Midstream; and RGC Midstream, LLC.

Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires that any applicant for a Federal license or permit to conduct any activity, including, but not limited to, the construction or operation of facilities which may result in a discharge to navigable waters, must provide the federal licensing or permitting authority with a certification from the state in which the discharge originates or will originate that any such discharge will comply with state water quality standards. A certification sets forth any conditions necessary to assure compliance with applicable water quality requirements under state law, and these become a condition of the

federal license or permit. The State Water Control Law (Law) grants the authority to provide this water quality certification to the State Water Control Board (Board) in accordance with the Law.

In addition to the FERC Certificate, MVP must separately obtain approval from the U.S. Army Corps of Engineers (“Corps”) under Section 404 of the Clean Water Act for impacts to jurisdictional wetlands and streams.

With respect to impacts to jurisdictional wetlands and streams, § 62.1-44.15:20 of the Law and the Virginia Water Protection (VWP) Permit Regulation (9VAC25-210), VWP permit coverage, including general VWP coverage and coverage associated with a Corps’ Nationwide Permit certified by Virginia, constitutes the certification required under § 401 of the Clean Water Act. In the present case, the Corps issued Nationwide Permit 12 on March 19, 2017, related to activities required for the construction, maintenance, repair, and removal of utilities lines and associated facilities in waters of the United States. After review and public comment, the Department provided its § 401 certification of Nationwide Permit 12 on April 7, 2017. The VWP program and prior certification of the Corps’ Nationwide Permits has proven to be sufficient to evaluate and, when necessary, mitigate potential water quality impacts for linear construction projects, such as roads and pipelines.

The permits issued by the VWP program and the permits issued by the Corps only address the impacts caused to wetlands and streams by excavating in a wetland, draining or significantly altering wetland acreage or function, filling or dumping in a stream or wetland, or permanently flooding or impounding a wetland area or stream. However, the conditions and requirements of these permits do not cover activities in upland areas, outside of wetlands and streams, which may result in a discharge to state waters or otherwise cause or contribute to an exceedance of Virginia’s Water Quality Standards (9VAC25-260). For large linear construction projects, there can be activities in upland areas that may have the potential to affect water quality but do not fall within the scope of the VWP or the Corps permits. Likewise, information related to such impacts would not be contained in the Joint Permit Application (JPA) utilized to determine permit conditions for a VWP and Corps permits.¹

¹ MVP submitted a JPA for this Project on February 26, 2016.

In order to address the potential impact to water quality caused by upland activity outside the scope of the VWP or the Corps permits, the Department of Environmental Quality (DEQ or Department) issued its May 19, 2017 guidance memorandum, Guidance Memo No. GM 17-2003, Interstate Natural Gas Infrastructure Projects - Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 (“401” Certification). This guidance document describes the procedures DEQ uses to conduct a separate supplemental review of a natural gas infrastructure project with respect to upland impacts that may indirectly affect state waters. The guidance states that after further evaluation, DEQ may make a recommendation to the Board for additional conditions on upland activities that may be necessary to protect water quality beyond the conditions required by, or that can be imposed through, the VWP Permit Program, Corps permits, including any applicable Nationwide Permits, or conditions otherwise imposed by FERC. Identification of this gap was consistent with the numerous inquiries and communications from concerned citizens and affected property owners, local governments, state legislators and environmental organizations received by DEQ regarding Virginia’s environmental oversight of the Project.

Historically DEQ has satisfied its water quality certification for linear utility projects, including pipelines, with its certification of the Corps’ Nationwide Permit 12. However, MVP is a proposed interstate natural gas transmission pipeline. For facilities that transport natural gas in interstate commerce, their siting, construction, and operation are generally governed by the Natural Gas Act and must be authorized and approved by FERC through the issuance of a Certificate of Public Convenience and Necessity.

Very few linear utility projects require such federal authorization. Since MVP does require a FERC Certificate, DEQ may utilize Guidance Memo No. GM17-2003 to conduct a supplemental water quality review of potential upland impacts and develop a second 401 Certification driven by FERC approval of proposed pipeline construction and operation.

As the guidance memorandum directs, DEQ considered a number of project specific factors regarding the Project including the length of the pipeline, the amount of construction related land disturbance, the diameter of the pipeline, and numerous geographic, hydrologic and topographic considerations, including: the occurrence and/or proximity of steep slopes, karst geology,

sensitive streams/wetlands, seasonally high water tables, sink holes/underground springs, water impoundment structures/reservoirs, areas with highly erodible soils, low pH and acid sulfate soils. After reviewing these factors, DEQ determined that it was appropriate and consistent with the May 19, 2017 guidance to review additional information and evaluate whether to impose additional 401 conditions.

The concept of imposing additional 401 conditions and protections for activity in upland areas not already addressed by other regulations and/or permits is unique to the proposed pipeline and is described in the recently issued guidance memorandum. At the Board's July 19, 2017 meeting, DEQ briefed the Board on this water quality protection strategy by outlining the five major areas of review that DEQ was engaged in regarding the MVP Project. These include: review of and comment on the FERC draft environmental impact statement; wetlands and stream crossings to be permitted by the Corps either under Nationwide Permit 12 or an individual permit if the Corps determines that an individual permit is necessary; ensuring compliance with the requirements of Virginia's Erosion and Sediment Control and Stormwater Management laws and regulations; additional protections and conditions related to activities in uplands not already addressed by other regulations and or permits; and additional instream biological and water quality monitoring designed to evaluate baseline preconstruction conditions and evaluate whether there are effects on aquatic life.

The proposed 401 Certification addresses Project activities in upland areas outside of the Corps jurisdictional areas and water withdrawal activities that are exempt from coverage under the VWP Permit Program Regulation (9VAC25-210) or are otherwise imposed through the erosion and sediment control and stormwater management regulations.² This includes all activities associated with the construction of the proposed pipeline, any components thereof or appurtenances thereto, and related access roads and rights-of-way as well as certain Project-related water withdrawals. This proposed 401 Certification covers all relevant upland Project activities within the route identified in the final Environmental Impact Statement and/or the FERC Certificate and any subsequent revisions that may be approved by FERC.

² These regulatory requirements are imposed through the Annual Standards and Specifications program, which will be discussed in detail later on in this document. MVP's annual standards and specifications were approved in June 2017.

This proposed 401 Certification and the conditions contained in Section V of the proposed 401 Certification are intended to apply to MVP Project activities that are outside the jurisdictional scope of the VWP Permit Program Regulation, and accordingly should not be interpreted as limiting any conditions imposed pursuant to the VWP Permit Program Regulation or any permit issued by the Corps for any portion of the Project. The Department's 401 Water Quality Certification for the Corp's Nationwide Permit 12 issued April 7, 2017³ and this additional proposed 401 Certification developed pursuant to Guidance Memo No. GM17-2003, Interstate Natural Gas Infrastructure Projects – Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 ("401" Certification) *together* would constitute the Commonwealth of Virginia's 401 Certification for the MVP Project.

In addition, the proposed 401 Certification operates in conjunction with other regulatory actions including the Erosion and Sediment Control Regulation and the Stormwater Management Regulation, which are all requirements of MVP's Annual Standards and Specifications previously approved by DEQ.

Scope of Additional 401 Water Quality Certification

The U.S. Environmental Protection Agency (EPA) has promulgated regulations that outline the process for providing Section 401 water quality certification at 40 C.F.R. § 121 which states that the certification shall, among other elements, include a statement that there is a reasonable assurance⁴ that the activity will be conducted in a manner which will not violate applicable water quality standards.⁵

³ A number of parties (Dominion Pipeline Monitoring Coalition, Preserve Craig, Inc. and Bold Alliance) filed an appeal of DEQ's § 401 water quality certification for the U. S. Army Corps of Engineers' Nationwide Permit 12. On behalf of DEQ the Office of the Attorney General filed a Motion to Dismiss. On September 5, 2017, the appeal was dismissed with prejudice.

⁴ Federal Regulations require that a § 401 Certification must include reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards. Reasonable assurance is more than a probability or mere speculation. However, a § 401 Certification addresses future events; therefore, it is inherently predictive in nature and absolute certainty is not required.

⁵ 40 C.F.R. § 121.2, Contents of certification, provides that:

(a) A certification made by a certifying agency shall include the following:

(1) The name and address of the applicant;

This additional upland 401 Water Quality Certification addresses several unique aspects of the proposed Project not directly regulated by other existing state and federal programs and primarily focuses on additional protections necessary for riparian buffer protection and to address potential impacts from construction near karst terrain or on steep slopes; and, water use for hydrostatic testing and dust control. Consideration of these additional potential water quality impacts is unprecedented in DEQ's review of a proposed pipeline and these additional conditions push the bounds of the 401 reasonable assurance analysis beyond strict application of instream water quality standards and into much broader protection of water quality.

In developing the proposed 401 Certification and determining whether there is reasonable assurance that applicable water quality standards will not be violated, DEQ reviewed, evaluated and analyzed, among other information, the following reports, documents and submittals:

1. All applicable FERC documents, including Draft and Final Environmental Impact Statements issued by FERC and the associated docket materials including all Appendices, and the FERC order granting a Certificate of Public Convenience and Necessity (Certificate) on October 13, 2017;
2. The Department's initial Request for Information (RFI) dated May 19, 2017 in accordance with the Guidance, the Department's subsequent June 15, 2017 RFI and the Owner's June 1, 2017, and June 22, 2017 responses including but not limited to requested supplemental responses dated August 8, 2017, October 27, 2017, and November 2 and 6, 2017;

(2) A statement that the certifying agency has either (i) examined the application made by the applicant to the licensing or permitting agency (specifically identifying the number or code affixed to such application) and bases its certification upon an evaluation of the information contained in such application which is relevant to water quality considerations, or (ii) examined other information furnished by the applicant sufficient to permit the certifying agency to make the statement described in paragraph (a)(3) of this section;

(3) A statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards;

(4) A statement of any conditions which the certifying agency deems necessary or desirable with respect to the discharge of the activity; and

(5) Such other information as the certifying agency may determine to be appropriate.

(b) The certifying agency may modify the certification in such manner as may be agreed upon by the certifying agency, the licensing or permitting agency, and the Regional Administrator.

3. Proceedings of the multi-agency technical work session held June 6-7, 2017 (Lexington, Virginia);
4. Documents submitted for approval by the Department pursuant to requirements of the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*);
5. Corps Nationwide Permit 12 and Norfolk District Regional Conditions;
6. Guidance Memo No. GM17-2003, Interstate Natural Gas Infrastructure Projects- Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 (“401” Certification); and,
7. Public comments submitted during the public comment period, including both written (electronic or paper copy) and oral comments provided during the August 8 and 9, 2017 public hearings.

In drafting the proposed 401 Certification, DEQ tentatively determined that compliance with existing duly promulgated and adopted regulatory and permitting programs along with the fourteen enumerated conditions in section V of the proposed 401 Certification provide reasonable assurance that applicable standards will not be violated.

The conditions imposed by the proposed 401 Certification are in addition to any other federal or state permit or regulatory requirements with which the Project must comply, including federal resource agency requirements embodied in the FERC Certificate. The proposed 401 Certification imposes requirements that are in addition to many other enforceable requirements imposed by other state and federal entities. As described below, the various regulatory programs are well established and demonstrated to provide protection of water quality.

For a project that disturbs one acre or more of land and discharges dredged or fill material into surface water, including wetlands, the primary regulatory programs are: the Virginia Erosion and Sediment Control (VESC) Program; the Virginia Stormwater Management Program (VSMP); the Virginia Pollutant Discharge Elimination System (VPDES) permit program for stormwater

from construction activities;⁶ and, the Virginia Water Protection Permit Program (VWP) and Section 404 of the Clean Water Act.

Erosion and Sediment Control and Stormwater Management

Virginia's erosion and sediment control law and regulations provide effective control of soil erosion, sediment deposition, and nonagricultural runoff from regulated land-disturbing activities with the goal of preventing the unreasonable degradation of properties, stream channels, waters, and other natural resources. The VESC Program is authorized by the Virginia Erosion and Sediment Control Law and implemented through the Virginia Erosion and Sediment Control Regulations. The VESC regulations specify the "minimum standards" that must be followed on all regulated activities including: erosion and sediment control design criteria, techniques, practices and policies.

The goal of the VSMP is to ensure the general health, safety, and welfare of the citizens of the Commonwealth, and to protect the quality and quantity of state waters from the potential harm of unmanaged stormwater. The VSMP is authorized by the Virginia Stormwater Management Act and implemented through the Virginia Stormwater Management Program Regulations. The VSMP addresses stormwater management at three critical phases: before construction starts through the review and approval of plans to ensure the local and state regulatory design criteria have been satisfied to protect state waters from unmanaged stormwater; during construction through the inspection of erosion and sediment control practices, pollution prevention measures, and the installation of stormwater best management practices that are used to prevent or reduce the pollution of state waters after construction is complete; and after construction through the inspection of BMPs to ensure proper maintenance is being performed by the owner.

⁶ Federal law exempts discharges of stormwater runoff from oil and gas transmission facilities from the administrative requirement to obtain a VPDES permit but Virginia's regulation imposes identical performance, monitoring and inspection requirements through its regulatory requirement to conduct the project under approved annual standards and specifications.

Annual Standards and Specifications Requirements Under the Virginia Stormwater Management Program

The Virginia Stormwater Management Program (VSMP) law and regulations establish that land disturbance associated with pipeline construction activities must meet Erosion and Sediment Control and Stormwater Management requirements to protect surface water quality during and after construction completion. State law further mandates that natural gas pipeline utilities (and certain other utilities) meet the requirements for VESC and VSMP under a DEQ-approved Annual Standards and Specifications Program.

Specifically, Virginia Code § 62.1-44.15:31 states:

(F)or linear projects [including construction, installation, or maintenance of electric transmission, natural gas, and telephone utility lines and pipelines, and water and sewer lines], electric, natural gas, and telephone utility companies, interstate and intrastate natural gas pipeline companies, and railroad companies shall ... annually submit a single set of standards and specifications for Department approval that describes how land-disturbing activities shall be conducted. Such standards and specifications shall be consistent with the requirements of this article and associated regulations, including the regulations governing the General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Construction Activities and the Erosion and Sediment Control Law (§ [62.1-44.15:51](#) *et seq.*) and associated regulations. ... The standards and specifications shall include:

1. Technical criteria to meet the requirements of this article and regulations developed under this article;
2. Provisions for the long-term responsibility and maintenance of stormwater management control devices and other techniques specified to manage the quantity and quality of runoff;
3. Provisions for erosion and sediment control and stormwater management program administration, plan design, review and approval, and construction inspection and enforcement;
4. Provisions for ensuring that responsible personnel and contractors obtain certifications or qualifications for erosion and sediment control and stormwater management comparable to those required for local government;
5. Implementation of a project tracking and notification system to the Department of all land-disturbing activities covered under this article; and

6. Requirements for documenting onsite changes as they occur to ensure compliance with the requirements of the article.

MVP worked for approximately eighteen months to develop, revise and refine Annual Standards and Specifications (AS&S) that meet Virginia's legal and technical requirements. MVP's Annual Standards and Specifications that address both erosion and sediment control and stormwater management were approved by DEQ on June 20, 2017.

The concept set out by state law in the creation of the AS&S program is that entities which are required to submit annual standards and specifications essentially become self-regulating. Therefore, Virginia law, in § 62.1-44.15:31, affirmatively places an authority that would normally be delegated to a locality for the review, approval and enforcement of erosion control and stormwater management plans with the utility with limited oversight by DEQ through review and approval of annual standards and specifications. Once an authorized utility has approved AS&S it is not required to submit site specific ESC and SWM plans to DEQ for approval. In fact, § 62.1-44.15:55.D of Code of Virginia clearly states that: "Individual approval of separate projects within subdivisions 1 and 2 is not necessary when approved specifications are followed". Subdivision 1 applies to construction, installation, or maintenance of electric transmission, natural gas, and telephone utility lines and pipelines, and water and sewer lines. DEQ does retain compliance and enforcement authority over any project specific erosion and stormwater plans and practices but DEQ in general does not review specific plans or construction.

However, as an additional measure to ensure protection of state waters and in response to numerous citizen concerns and comments, DEQ has required MVP to submit project specific ESC and SWM plans to DEQ for review and approval. These project specific plans address every foot of land disturbance related to pipeline construction, including the path of the proposed pipeline right of way (ROW), access roads, construction lay-down areas and construction activities that will occur in streams and wetlands.

DEQ has contracted with an outside engineering consulting firm to assist in review of the erosion and stormwater plans to ensure that they meet the design requirements contained in Virginia's

ESC and SWM regulations (including post construction stormwater water quality and quantity requirements); however, DEQ retains ultimate approval authority.

Unlike many of the Board's permit programs, Virginia law does not provide a right for public notice of and comment on ESC and SWM plans. However, in order to provide a transparent review process and public participation, DEQ decided to also require MVP to post the plans on their website in order that they be made available for public input. DEQ requested input on technical and engineering requirements of the draft ESC and SWM plans. The input period was at least 30 days.

VPDES Permit for Stormwater from Construction Activities

With few exceptions, land disturbance of one or more acres requires coverage under Virginia's Construction General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880.1 *et seq.*). However, the Virginia Stormwater Management Program regulation (9VAC25-870 *et seq.*) states that DEQ may not require a state VPDES permit for discharges of stormwater runoff from oil and gas exploration, production, processing or treatment operations, or transmission facilities. This exemption is consistent with the federal exemptions contained in 40 C.F.R. § 122.26(a)(2)(ii). The scope of this exemption includes construction activities necessary to support the construction of pipelines, access roads and compressor stations, as well as long term maintenance of the system.

Even though federal laws exempt MVP from obtaining a VPDES permit, as does Virginia's Regulation, 9VAC25-870-76 of the VSMP regulation requires linear development projects to control post-development stormwater runoff in accordance with a site-specific stormwater management plan or a comprehensive watershed stormwater management plan. In addition, as previously discussed, under § 62.1-44.15:31 of the Code of Virginia, gas pipelines are required to have approved AS&S that are consistent with the requirements of the Virginia Stormwater Management Act and associated regulations, the Erosion and Sediment Control Law and associated regulations and the regulations governing the General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Construction

Activities (the construction general permit). Additionally, DEQ has required that MVP prepare a stormwater pollution prevention plan.

Even though Congress has clearly stated that stormwater from land disturbing activity associated with construction of the pipeline does not need to be authorized by a section 402 discharge permit,⁷ Virginia's annual standards and specifications program incorporate the same engineering, erosion and sediment control, recordkeeping, monitoring, inspecting and post construction stormwater management requirements that are otherwise implemented in the Board's General VPDES Permit for Discharges of Stormwater from Construction Activities, also known as the construction general permit (9VAC25-880-1 *et seq.*)

Virginia Code § 62.1-44.15:31 states that interstate and intrastate natural gas pipeline companies (among others), shall annually submit a single set of standards and specifications for DEQ approval that describes how land-disturbing activities shall be conducted. Virginia law goes on to state that such standards and specifications shall be consistent with the requirements of the Stormwater Management Law and associated regulations, including the regulations governing the General Permit for Discharges of Stormwater from Construction Activities and the Erosion and Sediment Control Law (§ 62.1-44.15:51 *et seq.*) and associated regulations.

⁷ EPA has delegated to DEQ the authority to issue CWA Section 402 discharge permits. The Board duly promulgated Virginia's VPDES regulations and its general permits.

Virginia Water Protection Permit/Clean Water Act Section 404 Permit

Section 404 of the federal Clean Water Act (CWA) establishes a permitting program to regulate the discharge of dredge and fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (*e.g.*, certain farming and forestry activities).

This program is administered by the Corps, with oversight from EPA. Section 401 of the CWA requires anyone applying for a Section 404 permit to also obtain a water quality certification from the state, which affirms that the State has a reasonable assurance the activity will comply with state water quality standards. DEQ implements an independent State-wide permitting program for impacts to surface waters (including wetlands), which can also serve as a 401 certification for a Section 404 permit.

The VWP Permit Program regulates impacts to state waters, including wetlands. VWP permit conditions are designed to assure “no net loss” of wetlands, establish in-stream flow requirements, and protect the beneficial uses of state waters. A VWP permit also serves as the 401 certification for any federal 404 permit. DEQ can provide this 401 certification by: (1) issuing a VWP individual or general permit; (2) by certifying Corps’ nationwide (NWP) and regional permits (RP); or (3) by issuing a 401 certification without a separate VWP permit. Further, Virginia law also authorizes DEQ to provide regulatory oversight to isolated wetlands and excavation activities that are beyond the jurisdiction of the Section 404 program.

Under Section 404(e) of the Clean Water Act, the Corps can issue general permits to authorize activities that have only minimal individual and cumulative adverse environmental effects. General permits can be issued for a period of no more than five years. A nationwide permit is a general permit that authorizes activities across the country, unless a district or division commander revokes the nationwide permit in a state or other geographic region. There are currently 54 nationwide permits, and they authorize a wide variety of activities such as mooring buoys, residential developments, utility lines, road crossings, mining activities, wetland and

stream restoration activities, and commercial shellfish aquaculture activities. The current nationwide permits took effect on March 19, 2017.

By a letter dated April 7, 2017, DEQ, after following the Board-established procedures in the Virginia Water Protection Permit Regulation, found that there is a reasonable assurance that the activities permitted under the Corps' Nationwide Permit program, including the Norfolk District Regional Conditions, will be conducted in a manner which will not violate applicable water quality standards, provided permittees comply with all applicable conditions including those added by Virginia. DEQ made this finding pursuant to 40 C.F.R. § 121.2 (a)(2) and (3), after examining the NWPs, the Norfolk District Regional Conditions, and (ii) other decision documents provided by the Corps.

To qualify for coverage under Nationwide Permit 12 (NWP 12), the pipeline developers must comply with numerous General Conditions applicable to each nationwide permit including General Condition 12. This condition requires that appropriate soil erosion and sediment controls be used during the construction. General Condition 12 ties in the requirements and practices of the VESC program and regulations. Each stream crossing during the construction phase is subject to both federal and state oversight.

The Corps NWP 12 authorizes temporary disturbance of the stream during construction - in other words, a trench can be dug across the stream channel or wetland area so that pipe can be laid. NWP 12 clearly requires that after construction is complete (after the pipe has been laid), the impact area of the stream or wetland area must be restored to its pre-construction condition. Additionally, the ESC regulation (tied into the NWP 12 through General Condition 12) requires that when work in a live watercourse is performed, precautions must be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. This translates to a requirement that digging a trench in a flowing stream is not allowed - practices must be employed to divert or temporality channelize the stream during construction. The regulations also require that when a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of non-erodible material must be provided. And, ESC requires that the bed

and banks of a watercourse must be stabilized immediately after work in the watercourse is completed.

Conclusion

The conditions included in the proposed Section 401 certification for upland areas are in addition to any other federal or state permit or regulatory requirements with which the Project must comply, including federal resource agency requirements embodied in the FERC Certificate.

Each of the regulatory processes being applied individually focuses on water quality protection and collectively provides a combination of protections for state waters including detailed engineering best practices, adherence to approved annual standards and specifications, and extensive inspection and monitoring activities. The various regulatory programs being applied by DEQ are well-established, comprehensive and demonstrably provide protection of water quality.

When considered as a unified approach, all of the programs described above provide a thorough technical evaluation and process that is designed to ensure that Virginia's water quality is protected. The proposed 401 Certification that is the subject of this Board's review is just one portion of a larger regulatory scheme for ensuring that water quality is protected during construction of this Project.

The additional conditions contained in Section V of the draft certification along with the requirements imposed by the VWP regulation, the Corps Section 404 permitting requirements, and prior regulatory actions associated with the approval and requirements of the June 2017 AS&S, provide reasonable assurance that water quality standards will not be violated.

Attachment B

MVP Public Participation Process

Public Notice and Comment Period

On the week of July 3rd, 2017 DEQ ran public notices seeking comments on the draft Section 401 Water Quality Certification for activities in upland areas along the proposed Mountain Valley Pipeline (MVP). The notices ran in newspapers with circulation areas that covered the counties and localities affected by the project. The affected counties and localities are: the Counties of Pittsylvania, Franklin, Roanoke, Montgomery, Craig, and Giles. DEQ ran the public notices of the MVP public hearing dates in nine newspapers: The Franklin News-Post, The Roanoke Times, Danville Register & Bee, Chatham Star Tribune, The Southwest Times, Virginian Leader, News Messenger, The Floyd Press, and Salem Times-Register.

The notices included a link to DEQ's *Water Protection for Pipelines* web page that provided copies of the draft Section 401 Water Quality Certification for activities in upland areas and other resources related to the MVP project. The notices also announced two public hearings to be held for the purpose of receiving oral and/or written comments and provided information about the hearing locations and times. DEQ received written comments by hand-delivery, e-mail, postal mail, and at the public hearings during the comment period from July 3 to August 22, 2017. This 50-day comment period was 20 days longer than required by the State Water Control Board's Procedural Rule No. 1 (9VAC25-230-130B).

The notice specified that DEQ would consider only comments related to the proposed conditions in the Section 401 Water Quality Certification for MVP. Comments on erosion and sediment control plans, stormwater plans, the Corps Nationwide 12 permit, or the project's environmental impact statement were not considered as part of this action's record.

DEQ requested that comments include the names, mailing addresses and telephone numbers of the person commenting and of all people represented by that person, and a brief, informal statement on how the proposal affected the person or people.

Email

DEQ set up a dedicated e-mail account (comment-mvp@deq.virginia.gov) to provide a single point of contact for the public to submit e-mail comments and attachments regarding the MVP project. DEQ published the email address in the Public Notice, in the informational materials distributed at each public hearing, and on DEQ's *Water Protection for Pipelines* web page.

Public Hearings

DEQ scheduled two public hearings to help ensure that those who wished to make oral comments would be able to do so without traveling more than 60 miles. DEQ typically schedules one hearing on projects during the public comment period. Each public hearing was chaired by a

member of the State Water Control Board. The public hearings were held at the locations noted below. Some of the factors taken into consideration when securing venues were the capacity and suitability of the venue, average travel distances, availability of State Water Control Board members to officiate at the hearings, and agency resources:

- Radford University, Radford, Virginia – August 8, 2017
170 individuals signed up to speak
- Chatham High School Auditorium – Chatham, Virginia – August 9, 2017
102 individuals signed up to speak

At the public hearing venues, individuals wishing to speak were directed to sign in and receive a numbered ticket. The public hearings convened at 6:00 p.m. Speakers were called in numeric order and were typically provided three minutes in which to provide comments. This process continued until the all registered speakers had delivered their comments, or by the 10:00 p.m. cut-off time, whichever occurred first. A certified court reporter attended each hearing and then provided DEQ with a written record and digital audio recording of the oral comments.

Comment Processing

All of the comments received during the duly-noticed public comment period for the draft 401 certification for the Mountain Valley Pipeline (MVP) were reviewed by Department technical staff. Due to the thousands of comments submitted, a process was developed to ensure that every comment submitted was appropriately considered by DEQ technical staff for review and response. The processing activity included reading, reviewing and characterizing each comment submitted. As part of this activity, all comments submitted in hard-copy/paper formats were scanned then these comments along with those comments submitted in electronic formats were sorted into spreadsheets which were developed for organizing the comments. The processing activities began on July 6th and ended on October 6th, 2017 with the bulk of the work being performed from August 23rd to October 6th, 2017. In total, twenty-one Department staff were assigned to the comment processing task and these staff spent a combined total of over 1370 hours for both pipelines.

DEQ staff processed all comments that were received during the public comment period. Each comment was reviewed and summarized, and, if provided, the name and address of the commenter was recorded. In order to organize the comments on the draft 401 Certification, DEQ developed a spreadsheet format with sixteen broad topic areas, which were based on the recurring themes observed during the comment period. These broad topics were:

- Erosion & Sediment Control / Stormwater Management
- Karst
- Water Supplies (Wells / Springs / Septic)
- Water Quality Impacts / Monitoring
- Section 401 Certification / Nationwide Permit 12
- No Individual Crossing Analysis / Cumulative Impacts
- Process (DEQ / FERC / General)
- Recreation

- Species Impacts
- Forest Impacts
- Wetlands
- Steep Slopes / Slide Prone
- Contamination (Leaks / Explosions / Hydrostatic testing)
- Existing Projects
- Surface Water Withdrawals
- Other

Staff captured any unique information presented in the comments or summarized topics not otherwise represented by the broader topics, separately. Finally, staff noted any comments that included technical documents or unique issues not otherwise covered in other comments and these were routed to the appropriate technical staff for further review.

The number of comments DEQ received for both projects was estimated at the close of the comment period to be about 20,000. After processing the comments, staff estimates the number of comments received for MVP to be approximately 8,000.

Comments received after 11:59 pm on August 22, 2017 were considered to be late. Several comments were submitted to the Board's email address prior to this deadline but not retrieved by DEQ staff until after the deadline – these were not considered to be late. Several email comments were submitted to specific DEQ staff, rather than the public comment email inbox, prior to this deadline but were not opened or accessed until after the deadline – these were not considered to be late. Approximately 33 late emails were received for MVP. Another approximate 47 paper comments were received late but not separated by project. No late comments were considered.

Attachment C

Summary Response to Comments

1. Administrative Procedures - DEQ has not followed appropriate administrative procedures for public comment and public hearings.

The State Water Control Board (Board) has broad authority to adopt rules governing the procedure for the Board with respect to: (a) hearings; (b) the filing of reports; (c) the issuance of certificates and special orders; and (d) all other matters relating to procedure. DEQ adhered to established procedures for public comment and public hearing with respect to the proposed issuance of this 401 Water Quality Certification. Guidance Memo No. GM17-2003, Interstate Natural Gas Infrastructure Projects - Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 ("401" Certification), provides that (1) public notice of draft certification conditions will be published once in one or more newspapers of general circulation in the areas in which the pipeline activity is to take place and (2) provide a public comment period of 15 to 30 days including an opportunity to request a hearing or provide a comment period of 30 days with a scheduled public hearing at the end of the 30 days.

Public notices of the draft Section 401 Water Quality Certification for Mountain Valley Pipeline (MVP) and the opportunity to submit written comments during the public comment period and to submit oral and written comment at two public hearings were published the week of July 3, 2017, and appeared in nine newspapers: The Franklin News-Post, The Roanoke Times, Danville Register & Bee, Chatham Star Tribune, The Southwest Times, Virginian Leader, New Messenger, The Floyd Press, and Salem Times-Register.

The notice included the announcement of a 50-day comment period (July 3, 2017 through August 22, 2017) and two public hearings (August 8, 2017 at Radford University and August 9, 2017 at Chatham High School Auditorium). In addition, as provided in the guidance, the notice included a brief description of the proposed pipeline activity, location of such activity and state waters that may be affected (a listing of localities was included along with a link to the DEQ website for additional project-specific information and location), a summary of the draft

conditions, details on how to submit comments and request additional information, and a brief description of the formulation of a final determination on any additional conditions.

2. DEQ has rushed the process and could not have conducted an appropriate review for a project of this scope.

DEQ has been engaged in the environmental review of the proposed MVP Project (Project) for more than two years. MVP made its initial filing for a Certificate of Public Convenience and Necessity with the Federal Energy Regulatory Commission (FERC) on October 23, 2015. Formal review of multiple environmental aspects of the Project was initiated during the Environmental Impact Review (EIR) process, which is Virginia's opportunity to review and comment upon the draft environmental impact statement (EIS). DEQ reviewed numerous environmental considerations of the Project including many relevant to the protection of water quality. In fact, comments that DEQ raised during EIR have informed the additional requirements in the proposed 401 Certification. FERC released its draft EIS on September 16, 2016. DEQ submitted its comments on the draft EIS to FERC on December 22, 2016.

In addition to DEQ's participation in FERC's environmental review process, inquiries from concerned citizens and affected property owners, local governments, state legislators, and environmental organizations were addressed to DEQ as early as November 2015, just weeks after MVP's initial filing with FERC. After consideration of these inquiries and concerns, by letter dated May 16, 2016 DEQ notified MVP that due to the scope of its proposed pipeline, project-specific erosion and sediment control and stormwater management plans must be submitted to and approved by DEQ. In this letter, DEQ also required that these plans be posted on the MVP website and that all inspection reports, compliant logs, and complaint responses must be submitted to DEQ.

DEQ has thoroughly reviewed the documents enumerated in Section IV of the proposed 401 Certification and all additional information submitted by MVP in response to DEQ's May 19, 2017 Request for Information (MVP's June 1, 2017 and June 22, 2017 responses). Additionally, DEQ has been reviewing erosion and sediment control and stormwater management measures for the Project since early 2016. MVP first submitted its annual standards and specifications in February 2016. The standards and specifications were approved in June, 2017. As of the date of

this writing, DEQ has had over 60 meetings and work sessions with MVP to review and discuss, the standards and specifications and the project-specific Erosion and Sediment Control (ESC) and Stormwater Management (SWM) plans that cover every foot of land disturbance. DEQ will continue to review and require revisions to the Project plans to ensure that these plans meet Virginia regulatory requirements for ESC and SWM.

3. Segmented Regulatory Review - DEQ has unjustifiably splintered the regulatory process into discrete parts that are inextricably linked and essential to an evaluation of the Project's impacts on water quality.

DEQ has not divided its regulatory review of MVP. DEQ has applied multiple layers of regulatory review to the Project and has gone above and beyond any historical evaluations of necessary water quality protections related to pipeline construction. As noted in the *Basis for Certification* (Attachment A to the Memorandum), the intent of this proposed 401 Certification is to address several unique aspects of the proposed Project that are not directly regulated by other regulations or permits. This proposed 401 Certification is narrowly focused on additional protections related to those unique aspects that DEQ believes are necessary in upland areas to minimize potential impacts to water quality. The resources and impacts of concern are karst hydrogeology, private and public water supplies, maximization of riparian forest buffers, surface water withdrawals that are exempt from permitting requirements, minimization of landslide risks related to construction activity on steep slopes, minimization of risks associated with blasting activities, and financial responsibility associated with impacts to private drinking water sources.

The conditions in the proposed 401 Certification impose requirements that are in addition to other existing DEQ programs being applied to the Project as well as many other requirements compelled by other state and federal entities. This proposed 401 Certification applies to project activities in upland areas outside of the Corps jurisdictional areas under 33 U.S.C. § 1344 which may result in an indirect discharge to waters of the United States, water withdrawal activities that are exempt from coverage under the Virginia Water Protection Permit Program Regulation (9 VAC 25-210-10, *et seq.*), and activities not covered under the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*).

4. The Board should request DEQ to reconsider and reverse its decision to defer to the U.S. Army Corps of Engineers (Corps) and its Nationwide 12 permit for wetlands and stream impacts.

Section 404 of the federal Clean Water Act (CWA) establishes a permitting program to regulate the discharge of dredge and fill material into waters of the United States. This program is administered by the U.S. Army Corps of Engineers (the Corps), with oversight from the U.S. Environmental Protection Agency (EPA). Section 401 of the CWA requires anyone applying for a Section 404 permit to also obtain a State water quality certification (a 401 certificate), which affirms that the State has a reasonable assurance that the activity complies with all applicable State water quality laws and standards. DEQ implements an independent State-wide permitting program, the Virginia Water Protection (VWP) Permit Program, for impacts to surface waters (including wetlands), which can also serve as a 401 certificate for a Section 404 permit.

The VWP Permit Program regulates impacts to state waters, including wetlands. VWP permit conditions are designed to ensure “no net loss” of wetlands, establish in-stream flow requirements, and protect the beneficial uses of state waters. DEQ can provide a 401 certificate for a Section 404 permit (1) by issuing a VWP individual or general permit; (2) by certifying Corps’ nationwide (NWP) and regional permits (RP); or (3) by issuing a 401 certificate without a separate VWP permit. Further, Virginia law also authorizes DEQ to provide regulatory oversight to isolated wetlands and excavation activities that are beyond the jurisdiction of the Section 404 program.

DEQ and the Corps utilize a Joint Permit Application (JPA) so that an applicant can apply for both federal and state permits through one application. Processing this JPA is coordinated between the Corps and Virginia.¹ After reviewing the proposed activity and evaluating the scope and impacts of a project to jurisdictional wetlands and stream crossings, the Corps will determine if the Project qualifies for a nationwide or regional permit or whether an individual permit must be drafted.

¹ In the case of impacts to tidal wetlands and subaqueous bottoms over a certain size, the Virginia Marine Resources Commission (VMRC) may also have a permitting role and the joint permit application covers any applicable VMRC permits.

The Corps' Nationwide Permits (NWP) authorize specific activities in jurisdictional waters, including wetlands. There are currently 54 NWPs in Virginia addressing a variety of common project types such as road construction, commercial development, maintenance of water control structures, channel dredging, and utility line installation. The Corps develops conditions for each NWP that ensure compliance with the Clean Water Act while protecting endangered species and cultural resources. The Corps reissues the NWPs every five years in a process that solicits comments on the draft permit conditions from public, private, and regulatory stakeholders. The Corps considers the comments and incorporates them into the final NWP conditions as appropriate. At the state level, the Corps' District Offices then develop additional Regional Conditions for the NWPs that address that state's unique geological features and water resources.

In Virginia the Corps' Norfolk District Office provided substantially updated regional conditions to supplement the reissued 2017 NWPs. Under Section 401 of the Clean Water Act, each state must then determine if the final NWPs are protective of that state's water quality standards. In Virginia, this determination is made by DEQ on behalf of the State Water Control Board and in accordance with the Virginia Water Protection Permit Program Regulation. DEQ reviews the proposed NWPs, the Norfolk District Regional Conditions, and other decision documents provided by the Corps. When DEQ finds that there is a reasonable assurance that the activities permitted under a Corps' NWP, including the Norfolk District Regional Conditions, will not violate applicable water quality standards, Virginia issues a Water Quality Section 401 Certification for that NWP as meeting the requirements of the VWP Permit Program regulation.

Alternatively, DEQ may issue additional certification conditions on any NWP to ensure compliance with State water quality standards. Certification conditions attached to a NWP by Virginia are enforceable conditions of the NWP. Finally, a state can reject the use of any NWP, provided it has a comparable mechanism to ensure a project's compliance with the Clean Water Act. DEQ has found that NWPs, including Regional Conditions and State Water Quality Certifications, expedite permit processing while safeguarding the environment and reducing duplication of effort by regulatory agencies. The Corps reissued its NWPs in March of 2017, including the NWP 12 for Utility Line Activities. DEQ evaluated the proposed 2017 NWP 12, including the Norfolk District Regional Conditions, and provided certification of the NWP 12 with three conditions concerning water withdrawals, construction methods and mitigation for

impacts. DEQ's evaluation of the NWP 12 for Utility Line Activities found that the NWP 12's conditions provide reasonable assurance that any utility project constructed in accordance with the NWP 12 Conditions, the Norfolk District Regional Conditions and DEQ's State Water Quality Section 401 Certification conditions, will not violate the Commonwealth's water quality standards.

The Corps imposed a number of enhanced and additional conditions in the 2017 reissuance of NWP 12. These include:

- A recommendation to use equipment mats during temporary work in wetlands.
- Added a requirement to provide remediation plans for inadvertent hydraulic drilling fluid release during directional drilling. Also authorizes fluid cleanup under the NWP 12.
- Added a requirement to coordinate Threatened & Endangered (T&E) Species with the US Fish and Wildlife Service (FWS) Virginia Field Office, which incorporates the Department of Game and Inland Fisheries (DGIF) and Department of Conservation and Recreation (DCR) into the process.
- Added a requirement to coordinate T&E with the National Marine Fisheries Service, as appropriate.
- Added a recommendation to use Virginia native species for revegetation per DCR's list.
- Added requirements to restore the pre-construction conditions at stream crossings using materials that mimic the natural stream bed. No riprap shall be used except as required by Virginia stormwater regulations. The stream restoration shall promote the free passage of aquatic organisms.
- Added that a mitigation plan is required for all permanent loss over 1/10 acre and/or 300 linear feet of waters.

Also of note, is that under current VWP regulations, most of the nontidal wetland and stream crossings associated with MVP would qualify for a VWP General Permit for Facilities and Activities of Utility and Public Service Companies Regulated by Federal Energy Regulatory

Commissions or the State Corporation Commission and Other Utility Line Activities (WP-2).

The WP-2's conditions track closely with the NWP 12 conditions, but are less robust overall.

Alternatively, each project could have been authorized under a VWP Individual Permit.

Individual Permits have standard conditions, and also allow for special conditions as appropriate.

However, given the extensive and thorough conditions included in the 2017 NWP 12 and its associated Regional and State Conditions DEQ's issues and concerns have been addressed.

DEQ has determined that the NWP 12 as currently certified and conditioned in Virginia is protective of the Commonwealth's water quality standards for the physical crossings of wetlands and streams. DEQ is proposing separate individual Section 401 certification conditions on the Projects' FERC license to provide additional water quality protections as detailed in Response to Comment (RTC) #3.

5. DEQ is inappropriately excluding comments on Erosion and Sediment Control Plans and Stormwater Management Plans, the Corps' NWP 12 and environmental impact statements from the record of the proposed 401 Certification.

DEQ is not excluding comments on the record. DEQ is simply stating that such comments are not relevant to this proposed 401 Certification. DEQ acknowledges that its review and approval of project-specific stormwater management and erosion and sediment control plans is a critical component of assuring protection of water quality. But this is separate and apart from the scope of this proposed 401 Certification. Before any land disturbing activity can occur, DEQ must have reviewed and approved MVP's project-specific plans. As explained in the *Basis for Certification* (Attachment A to the Memorandum), the Virginia Stormwater Management Program law and regulations establish that land disturbance associated with pipeline construction activities must meet Virginia Erosion and Sediment Control (VESC) and Stormwater Management (SWM) requirements to protect surface water quality during and after construction completion. State law further mandates that natural gas pipeline utilities (and certain other utilities) meet the requirements for VESC and SWM under a DEQ approved Annual Standards and Specifications Program. These plans will not be approved unless they meet Virginia's statutory and regulatory requirements for post construction stormwater management and erosion and sediment control during construction.

The Annual Standards and Specifications for the MVP Project were approved in June 2017. Additionally, as detailed in RTC #4, DEQ has also reviewed and approved a Water Quality Certification for the Corps NWP 12 as providing protection of water quality as a result of activities in streams and wetlands. DEQ comments on the draft Environmental Impact Statement have either been addressed in the Final Environmental Impact Statement (FEIS), the Certificate, or subsequent regulatory actions by other state and federal agencies.

6. DEQ has deferred evaluation of erosion and sediment control and stormwater management plans until *after* this 401 process, even while it acknowledges that these plans are “critically important” to protecting water quality in Virginia’s streams, rivers, and wetlands.

The evaluation and approval of erosion and sediment control and stormwater management plans is being conducted under the requirements of the approved Annual Standards and Specifications and associated Law and Regulations, as detailed in the *Basis for Certification* (Attachment A to the Memorandum). Plans will not be approved unless they meet all the requirements. Initiation of land disturbing activities *will not* be allowed unless they are approved. This prohibition on land disturbing activity prior to plan approval is an independent state authority and separate from this additional 401 certification process.

7. Reasonable Assurance - The 401 certification fails to demonstrate “Reasonable Assurance”. DEQ has failed to properly evaluate potential impacts to water quality including identification of which water quality standards might be affected and apply the antidegradation policy.

The term “reasonable assurance” is not defined in the Clean Water Act or applicable federal regulations.² The U.S. Environmental Protection Agency (EPA) has promulgated regulations that outline the process for providing Section 401 water quality certification at 40 C.F.R. Part

² Although used in a different context, Section 7 of EPA’s Chesapeake Bay TMDL discusses a reasonable assurance concept. EPA explains that for point sources, the issuance of an NPDES permit provides the reasonable assurance that the required reductions will be achieved. Where both point sources and nonpoint sources exist on an impaired water body, determinations of reasonable assurance are based on whether practices capable of reducing the specified pollutant load: (1) exist; (2) are technically feasible at a level required to meet allocations; and (3) have a high likelihood of implementation. In other words, the existence of a framework for achieving the desired water quality is sufficient to demonstrate reasonable assurance.

121. This regulation states that the certification shall, among other elements, include a statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards. The certification must also include: (i) a statement that the certifying agency has either examined the application made by the applicant to the licensing or permitting agency and bases its certification upon an evaluation of the information contained in such application which is relevant to water quality considerations; or, (ii) that the agency has examined other information furnished by the applicant sufficient to permit the certifying agency to make the statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.

EPA's regulation also authorizes DEQ to provide a statement of any conditions which it deems necessary or desirable with respect to the discharge of the activity and, very broadly, DEQ can include other information as it may determine to be appropriate.

As noted above, federal regulations require that a § 401 certification must include “[a] statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.”³ Water quality standards consist of statements that describe water quality requirements and include: designated uses, water quality criteria, and an antidegradation policy. Virginia has adopted water quality standards to protect existing high-quality waters and to provide for the restoration of all other state waters to permit reasonable public uses and will support the growth of aquatic life.⁴ Reasonable assurance is more than a probability or mere speculation. However, a § 401 certification addresses future events; therefore, it is inherently predictive in nature and absolute certainty is not required. A state may add conditions to a § 401 certification that the state deems necessary or desirable with respect to the discharge of the activity,⁵ and the state may rely on these conditions to make a finding of reasonable assurance.

Additionally, in making a finding that there is reasonable assurance a state may rely on tools that reduce the uncertainty inherent in the predictive nature of a § 401 certification, including: future

³ 40 C.F.R. § 121.2(a)(3).

⁴ See Va. Code § 62.1-44.15(3a); 9 VAC 25-260.

⁵ 40 C.F.R. § 121.2(a)(4).

submissions of revised plans, reports, and studies; monitoring; and, adaptive management. The need for future submissions of revised plans, reports, and studies does not preclude a state from finding reasonable assurance. As long as the requirements for these future submissions are specific and set out in detail in the § 401 certification, a state may rely on them to reduce uncertainty and to make a finding of reasonable assurance. A state may also rely on adaptive management strategies, such as monitoring and the implementation of contingency plans, to make a finding of reasonable assurance as long as the requirements for adaptive management are set out with specificity and the corrective actions and outcomes are reasonably certain to occur.

Based upon a review of the record, and the conditions imposed by other permits and regulatory requirements the Project is required to meet, and with the conditions imposed in the proposed 401 Certification, there is reasonable assurance that Virginia's water quality standards will not be violated by the Project. In fact, DEQ has already established reasonable assurance that activities in streams and wetlands (April 7, 2017 DEQ 401 Water Quality Certification of Corps NWP 12), and land disturbing activities (June 20, 2017 DEQ approval of Annual Standards and Specifications) will be conducted in a manner that will not violate applicable water quality standards.

While Congress has clearly stated that stormwater from land disturbing activity associated with construction of the pipeline is exempt from a section 402 discharge permit, Virginia's annual standards and specifications program incorporates the same engineering, erosion and sediment control, recordkeeping, monitoring, inspecting and post construction stormwater management requirements that are otherwise implemented in the Board's General VPDES Permit for Discharges of Stormwater from Construction Activities, also known as the Construction General Permit (9VAC25-880-1 *et seq.*)

Virginia Code § 62.1-44.15:31 states that interstate and intrastate natural gas pipeline companies (among others) shall annually submit a single set of standards and specifications for DEQ approval that describe how land-disturbing activities shall be conducted. In addition, Virginia law provides that such standards and specifications shall be consistent with the requirements of the Stormwater Management Law and associated regulations, including the regulations

governing the General Permit for Discharges of Stormwater from Construction Activities and the Erosion and Sediment Control Law (§ 62.1-44.15:51 *et seq.*) and associated regulations.

The Board's Construction General Permit was most recently adopted by the Board on December 17, 2013, and the reissued permit became effective on July 1, 2014. This general permit was appealed by the Potomac Riverkeeper, Inc. and others. The Riverkeeper argued that the General Permit failed to adequately protect water quality. By an order dated April 10, 2017, the Richmond Circuit Court upheld the Construction General Permit and dismissed the appeal finding that the Board acted in accordance with law and that there was substantial evidence in the record to support the Board's determination that proper implementation of permit conditions, including inspections and corrective action, would protect water quality.

The Court expressly found that:

- As a matter of practice, DEQ reviews every operator's registration statement to determine if the proposed discharge involves impaired or exceptional waters;
- The Construction General Permit expressly provides control measures that must be implemented in an operator's stormwater pollution prevention plan (SWPPP);
- The SWPPP components must be reviewed and approved before authorization to discharge under the Construction General Permit will be granted;
- Discharges into impaired or exceptional waters are not eligible for coverage under the Construction General Permit unless the operator takes certain steps to protect the waters;
- Operator inspections must be performed by qualified personnel; and,
- The Virginia Erosion and Sediment Control Program authority must inspect the land disturbing activity.

In Virginia, the Annual Standards and Specifications program imposes the same technical and engineering requirements that would be required under the Construction General Permit. MVP is required to have approved VESC and SWM plans that meet regulatory requirements to protect water quality. In addition, MVP is required to have an approved SWPPP that includes the

following information consistent with the technical requirements contained in the 2014 Construction General Permit:

- General Information (Section A.1(d) & (e) of Part II)
- Erosion and Sediment Control Plan
- Stormwater Management Plan
- Pollution Prevention Plan (Section A.4 of Part II)
- SWPPP Requirements for Impaired, Total Maximum Daily Load (TMDL) and exceptional waters. (Section A.5 of Part II)
- Qualified Personnel (Section A.6 of Part II)
- Individuals or positions with delegated authority to sign inspection reports or modify the SWPPP.
- Certification: "I certify under penalty of the law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

In the absence of information demonstrating otherwise, compliance with the requirements under the Annual Standards and Specifications Program will result in stormwater discharges being controlled as necessary to meet applicable water quality standards and antidegradation requirements. More specifically, by imposing requirements that discharges to impaired, TMDL, and exceptional waters comply with additional requirements, to stabilize exposed areas faster and to conduct site inspections more frequently than other sites (in addition to meeting SWPPP, VESC and SWM requirements), authorizing these discharges will not result in a lowering of

water quality. Thus, DEQ has determined that compliance with the Annual Standards and Specifications approval generally is sufficient to satisfy Tier 2 and Tier 3 antidegradation requirements because the controls will not result in a lowering of water quality, making individualized Tier 2 or Tier 3 review unnecessary.

DEQ has determined that the Annual Standards and Specifications Program ensures compliance with water quality standards and antidegradation requirements. This is supported by the fact that the requirements under the Annual Standards and Specifications Program meet the technical requirements of the Construction General Permit. Likewise, in the 2017 Permit Fact Sheet for the NPDES Construction General Permit, EPA determined that compliance with the Construction General Permit generally is sufficient to satisfy Tier 2 (or 2.5) and Tier 3 antidegradation requirements because the controls will not result in a lowering of water quality, making individualized Tier 2 or Tier 3 review unnecessary.

Specific requirements for discharges to impaired, TMDL, and exceptional waters required under the Annual Standards and Specifications Program include:

- (1) Permanent or temporary soil stabilization applied to denuded areas within seven days after final grade is reached on any portion of the site;
- (2) Nutrients applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events; and,
- (3) A modified inspection schedule implemented as follows:
 - (a) Inspections shall be conducted at a frequency of: (i) at least once every four business days; or, (ii) at least once every five business days and no later than 48 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 48 hours between business days, the inspection shall be conducted on the next business day; and
 - (b) Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls discharging to surface waters.

As discussed in RTC #4, the temporary construction activity related to locating the proposed pipeline under streams and wetlands must be authorized by a Clean Water Act Section 404 dredge and fill permit. DEQ has determined that the NWP 12 as currently certified and conditioned in Virginia is protective of the Commonwealth's water quality standards for the physical crossings of wetlands and streams.

This proposed 401 Certification is focused on additional protections related to those unique aspects that DEQ believes are necessary in upland areas to minimize potential impacts to water quality. The additional conditions in this proposed 401 Certification include specific requirements for best work practices emphasizing hazard assessment, frequent inspection requirements, monitoring activities, preventative measures, riparian buffer protections, and comprehensive mitigation plans. These conditions are in addition to those described above and provide additional reasonable assurance that water quality standards will be protected.

8. DEQ has not evaluated potential impacts to water temperature.

The construction and operation of a linear utility right of way does not create a thermal point source. The commenters assert that the loss of shading associated with 50-foot-wide permanent easements required for the proposed pipeline will violate instream water quality criteria for temperature. The tools to evaluate potential impacts on water temperature from non-thermal non-point sources do not provide the similar analysis as exists for sediment and nutrients. The temporary nature of potential impacts from sedimentation does not apply to potential impacts on temperature resulting from permanent loss of shading.

Virginia has developed a limited number of temperature total maximum daily loads (TMDLs). These TMDLs utilized extensive modeling that evaluated and predict instream temperature responses to various land use conditions. The land use data utilized in the TMDL modeling may not be practical for estimating potential temperature impacts of linear pipeline development.

However, the sensitivity analyses of the TMDL models indicate that the most influential parameters affecting stream water temperature are ambient air temperature, relative humidity, shading provided by riparian zone vegetation, and inflow water temperature. One factor that is not accounted for in the model but likely has a powerful influence on localized stream

temperatures is groundwater surfacing into stream channels. This parameter is not as easily measured but would likely provide important clarity regarding how pipeline crossings and temporary construction easements in the riparian zone actually will affect stream temperatures. The water segments with existing, documented temperature impairments addressed by these TMDLs are generally characterized by land practices resulting in thousands of feet of riparian zone vegetation completely removed along both sides of the stream. This is in sharp contrast to the limited 50-foot-wide permanent easement for stream crossings of the proposed pipeline. Additionally, many of the streams that would be crossed by the proposed MVP are located in mountainous, headwater areas presenting with karst geology and are known for having significant groundwater and spring fed inflow.

Additionally, as was discussed in RTC #7 above, in making a finding that there is reasonable assurance Virginia may rely on tools that reduce the uncertainty inherent in the predictive nature of the 401 certification, including: future submissions of revised plans, reports, and studies; monitoring; and adaptive management. As described by staff during the Board's July 2017 meeting, and as is explained in the *Basis for Certification* (Attachment A to the Memorandum), DEQ along with the United States Geological Survey (USGS) will be conducting additional instream biological and water quality monitoring designed to evaluate baseline preconstruction conditions and evaluate whether there are effects on aquatic life, including temperature.⁶ On this issue of temperature criteria, DEQ is proposing to utilize adaptive management strategies, such as monitoring and the implementation of contingency plans, to make a finding of reasonable assurance.

Based on DEQ's experience with temperature TMDLs, and given the relatively narrow width of stream crossings, the volume of inflow of groundwater, the proposed additional 401 Certification requirements for riparian buffer protection, and the water quality monitoring activities associated with critical temperature streams, DEQ has sufficiently evaluated potential impacts to the instream water quality criteria for temperature to have reasonable assurance that water quality standards will not be violated.

⁶ DEQ's pipeline monitoring plan is found in Attachment D to the Memorandum,

9. DEQ has not evaluated Cumulative Impacts to state waters.

In accordance with the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA),⁷ FERC conducted a cumulative impact analysis as part of its environmental review of the proposed MVP project. FERC identified other actions located in the vicinity of the MVP and the EEP [Equitrans Expansion Project]⁸ facilities and evaluated the potential for a cumulative impact on the environment. This FERC analysis evaluates other actions that impact resources also affected by the projects, within the resource-specific geographic scopes. In evaluating cumulative impacts on water resources and wetlands, vegetation, land use, and wildlife, FERC considered many other proposed or permitted projects/actions within the Hydrologic Unit Code 10 (HUC10) sub-watersheds (i.e., fifth-field watersheds) crossed by the projects. These included, among others, the proposed Atlantic Coast Pipeline.

FERC specifically considered the 389 perennially flowing waterbodies that will be crossed by the proposed MVP. FERC noted that construction of the project would result in temporary or short-term impacts on surface water resources as well as some minor long-term impacts such as loss of forested cover in the watershed and partial loss of riparian vegetation. FERC found that these impacts, such as increased turbidity levels, are expected to return to baseline levels over a period of days or weeks following construction given the requirement to restore water bodies to their original contours. FERC also noted that any projects crossing Waters of the United States would have to obtain permits from the Corps. Consequently, FERC concluded that the cumulative effect on surface waterbody resources would be minor.

FERC also concluded that, given the relatively small total of wetland acres affected not only by MVP but also by other known projects in the affected watersheds, cumulative impacts on wetlands within the HUC10 watersheds when considered with the projects identified in the FERC analysis would not be significant.

⁷ 40 C.F.R. § 1508.7.

⁸ EEP is a separate request for authorization to construct and operate natural gas facilities in Pennsylvania and West Virginia. However, because the MVP and the EEP are interrelated and connected actions, FERC analyzed them together in a single comprehensive EIS. No EEP activities are located in Virginia.

In summary, the June 23, 2017 FEIS concludes that “[g]iven the project BMPs and design features, mitigation measures that would be implemented, federal and state laws and regulations protecting resources, and permitting requirements, we [FERC] conclude that when added to other past, present, and reasonably foreseeable future actions, the MVP and the EEP would not have significant adverse cumulative impacts on environmental resources with the geographic scope affected by the project.”

As is described in DEQ’s *Basis for Certification* (Attachment A of the Memorandum), there are numerous federal and state permitting and regulatory programs that apply to the Project. These include the Virginia Erosion and Sediment Control (VESC) Program; the Virginia Stormwater Management Program (VSMP); the Virginia Pollutant Discharge Elimination System (VPDES) permit program for stormwater from construction activities; the Virginia Water Protection Permit Program (VWP) and Section 404 of the Clean Water Act. Each of these regulatory tools individually requires protection of water quality for project activities. Collectively these programs impose a number of technical requirements that are designed to avoid or minimize impacts to water resources.

While federal NEPA regulations direct FERC to analyze cumulative impacts, there is no Virginia regulatory framework for DEQ to conduct such an analysis.

Moreover, while the impacts to jurisdictional waters authorized by the Corps under Section 404 of the Clean Water Act are separate from upland activities that are the subject of this Certification, the Corps also analyzed the cumulative effects of the linear utility projects and found that the individual and cumulative adverse effects on the aquatic environment resulting from the activities authorized by NWP 12 will be no more than minimal and that each crossing is a single and complete project. As stated in detail in the Corps Decision Document for NWP 12, division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse environmental effects and each have the authority to require individual permits in watersheds or other geographic areas where the cumulative adverse environmental effects are determined to be more than minimal, or add conditions to NWP 12 either on a case-by-case or regional basis to require mitigation measures to ensure that the cumulative adverse environmental effects of these

activities are no more than minimal. When a division or district engineer determines, using local or regional information, that a watershed or other geographic area is subject to more than minimal cumulative adverse environmental effects due to the use of NWP 12, he or she is directed to use the revocation and modification procedure at 33 C.F.R. § 330.5.

The concept of evaluating a project's total impacts to wetlands is also found in Virginia's VWP regulation. Specifically, the regulation includes a definition of single and complete project (9VAC25-210-10). The determination of what constitutes a single and complete project drives the analysis utilized to decide whether compensation for wetland impacts is required. In other words, the need to compensate for wetland impacts is based on the total impacts of a given project and the regulation defines how the totality of a project is evaluated to ensure wetland impacts are not fragmented and compensation avoided. The VWP regulations specifically define that for linear projects, the single and complete project (*e.g.*, a single and complete crossing) will apply to each crossing of a separate surface water (*e.g.*, a single water body) and to multiple crossings of the same water body at separate and distinct locations".⁹

10. Karst Terrain - Numerous comments and scientific reports were received identifying concerns associated with construction activity in karst terrain. These include inadequate identification of karst features, potential threats to ground and surface water, springs and wells. Many commenters feel the potential risks should create a pipeline “no-build” zone in karst terrain.

In Virginia, the Department of Conservation and Recreation (DCR) administers the Virginia Cave Protection Act (Virginia Code § 10.1-1000 *et seq.*). This act created the Virginia Cave Board whose statutory authority is to advise individuals, organizations, and public agencies on cave and karst related matters; provide cave management expertise; prepare and present educational material; identify significant caves; and recommend conservation and preservation measures for cave resources within Virginia. DEQ has worked closely with DCR to carefully evaluate potential challenges associated with constructing a pipeline in karst terrain. Many of

⁹ This is consistent with the Corps' definition of single and complete project in its 2017 NWP12 - For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization.

the concerns raised are based on hypothetical events which could occur, while relatively few examples exist where impacts to karst features from pipeline construction have actually occurred. DEQ's obligation in developing this additional 401 Certification is to evaluate whether the proposed protective measures and work practices, if implemented properly, provide a reasonable assurance that water resources will be protected.

With over 2,000 miles of existing gas pipelines currently constructed within karst terrain in Virginia, Tennessee, Kentucky, and West Virginia, it has been demonstrated that pipeline construction can be safely accomplished in karst terrain. MVP will utilize the following suite of activities that are designed to greatly reduce the potential for impacts to karst related water resources: field identification and confirmation of sensitive features (springs, sinkholes, sinking streams, outcroppings); implementation of best work practices; deployment of onsite karst specialists, and in-field inspections and monitoring during construction. MVP has also made several major, and numerous minor route adjustments to avoid karst features and sensitive water resources that were identified in its *Karst Hazard Assessment*.¹⁰

The *Karst Mitigation Plan*¹¹ calls for minor adjustments within the approved right-of-way to avoid karst features during construction if and when necessary. MVP will implement multiple avoidance and protective measures during construction to prevent impacts to karst and water resources. Best Management Practices in the Erosion and Sediment Control Plans, *Spill Prevention, Control, and Countermeasure (SPCC) Plan*, and the *Karst Mitigation Plan* are designed to prevent uncontrolled releases to surface waters and karst features in order to protect the underlying aquifer. MVP will deploy karst experts, as on-site inspectors, during all phases of construction in karst terrain to monitor karst resources, identify potential connectivity to the subterranean environment, prevent uncontrolled surface water releases, prevent impacts to karst features, and ensure that prescribed measures (referenced above) are in-place to protect karst features, surface water, and groundwater resources.

The proposed 401 Certification incorporates the karst related plans developed pursuant to FERC requirements and makes them enforceable by DEQ. FERC granted a Certificate of Public

¹⁰ Document found in FERC's final environmental impact statement and Certificate.

¹¹ Document found in FERC's final environmental impact statement and Certificate.

Convenience and Necessity for the Project on October 13, 2017, which contains additional karst related requirements that also are incorporated in the proposed 401 Certification. These additional requirements include revising the *Karst Mitigation Plan* to include post-construction monitoring using sequentially-acquired Light Imaging Detection and Ranging (LiDAR). The *Karst Hazard Assessment* identifying karst features has been completed and an addendum is required for properties previously not surveyed due to land access restrictions.

Commenters also raised general concerns regarding possible negative impacts to groundwater to quality and quantity both in karst terrain and throughout the entire Project. The experts that DEQ convened during its June 8, 2017 Karst Workshop¹² were in agreement that while some risk of very localized impact may be present, the risk is not very high. They were also in agreement that large scale interruptions of groundwater and surface water flow due to construction in karst hydrogeology were highly unlikely. The experts noted that it was difficult to envision how the proposed shallow trench (10-12 feet deep) would have any significant, prolonged effect on groundwater resources. The project area in karst is primarily comprised of bedrock aquifers with minor aquifers along streams. At the proposed depth of construction, the pipeline trench could encounter limited shallow groundwater. In those situations, the trench will be dewatered through filters into adjacent vegetated uplands so that there will be some recharge to shallow aquifers.

Additionally, in follow up to comments made during the environmental review process, DEQ consulted with the Virginia Department of Health (VDH) regarding additional protections of private drinking water sources. In a memo dated October 19, 2017, VDH recommended that in areas of karst topography a survey of existing water resources be performed. VDH stated that this recommendation came out of an abundance of caution. This survey should comprehensively identify wells, cisterns, springs, and other surface water, and also provide water quality evaluations for wells and springs within 1,000 feet of the construction activity in karst topography. The survey shall be conducted by MVP at the request of a property owner and only if the property owner provides permission for access. VDH noted that this survey could be done before the pipeline is placed into operation, not necessarily prior to construction activities.

¹² In attendance were, among others, Virginia's State Geologist, staff from the U.S. Geological Survey, DEQ staff expert on karst, and staff to the Virginia Cave Board.

This recommended survey has been incorporated as a condition into the proposed 401 Certification.

11. Dye tracing should be required before the 401 certification is issued to understand the extent of impacts (inventory of all wells/springs within 500 feet is arbitrary without results of dye test).

As stated in RTC #7, it is appropriate for a 401 certification to contain a condition requiring future monitoring and studies to determine potential impacts. Additional conditions or requirements can be imposed once those results are obtained. Requiring the monitoring and submission of results before any land disturbing activities in karst terrain take place enables DEQ to coordinate any further requirements or restrictions to protect water quality. The proposed 401 Certification incorporates the *Karst Mitigation Plan* as an enforceable component.

As a condition of the proposed 401 Certification, MVP must develop a Supplemental Karst Evaluation Plan to further evaluate flow paths for karst features in the vicinity of the Project. This supplemental plan must be submitted to DEQ for review and concurrence prior to initiation of land disturbing activities in karst terrain. DEQ, with assistance from the Virginia Department of Conservation and Recreation, identified areas of concern in Attachment B of the Department's June 15, 2017 request letter. MVP will conduct contingency planning in accordance with the findings and conclusions of the Supplemental Plan, as appropriate, in order to monitor and mitigate a potential accidental release or spill during construction in Virginia's karst terrain.

12. Steep Slopes and Landslide - Commenters raised concerns that construction and operation of a natural gas pipeline could contribute to unstable slopes and cause landslides and other slope failures resulting in impacts to water resources and pipeline integrity.

The proposed 401 Certification includes incorporation of a *Landslide Mitigation Plan*¹³ which has been developed to outline the special procedures and best management practices that will be implemented during the pipeline installation and post-construction periods to mitigate landslide

¹³ Document found in FERC's final environmental impact statement and Certificate.

potential. Plan development included field observations for these sites including: slope characteristics, GPS mapping of observed slides, slumps, rockfalls, scarp locations, the presence of geotropically affected trees, drainage features, and gullyng. The Plan includes mitigation strategies such as excavation and/or regrading of upgradient head soils, dewatering, rock embedment as well as construction operations including buttressing and reinforced soil slope.

Landslide mitigation also will depend on the installation of appropriate drainage and erosion control measures during construction and proper right-of-way reclamation. Certain site-specific measures have already been identified for certain high risk areas and others will be applied as field conditions indicate the need. During construction, MVP will deploy geotechnical inspectors to identify additional areas, not already specifically addressed in the *Landslide Mitigation Plan*, where the landslide mitigation should be implemented. The geotechnical inspectors, in conjunction with MVP's engineers, will develop additional mitigation measures to address slope stability, as necessary, based on subsurface conditions revealed during construction.

Slip prevention is preferable to slip repair. The FERC Certificate issued October 13, 2017 imposes several additional requirements to MVP's *Landslide Mitigation Plan*. These additional requirements include adoption of additional industry best management practices to be used when crossing steep slopes at angles perpendicular to contours and expanded post construction monitoring to cover all potential landslide areas project wide. The FERC Certificate requires the submission of a revised *Landslide Mitigation Plan* including these recommendations before construction begins. This revised Plan will be incorporated as an enforceable part of the proposed 401 Certification. Condition 8 of the proposed 401 Certification is revised to reflect this revised *Landslide Mitigation Plan*. These industry standard practices, site-specific measures, construction and post construction monitoring provide additional protections from landslide impacts to state waters.

13. Impacts from Blasting - Blasting will cause irreparable harm to streams and karst features and increase landslide potential.

The proposed 401 Certification includes incorporation of a *General Blasting Plan* approved by FERC in the FEIS which outlines procedures and safety measures to minimize impacts to

structures and water resources. The potential for blasting along the proposed pipeline to affect any structures or water resources will be minimized by utilizing controlled blasting techniques and using mechanical methods for rock excavation as much as possible. Controlled blasting techniques are designed to loosen rock, utilize minimal blasting charges and allow for physical removal of the rock once it has been fractured by the charge. Within the construction industry, controlled blasting techniques are regularly employed within 15 feet of active gas lines. The Plan includes specific practices for blasting conducted in karst terrain and waterbody and wetland crossings. Monitoring and pre and post blasting inspections are also required by the Plan. The use of controlled blasting techniques, where small, localized detonations are utilized, will avoid or minimize potential impacts to water resources.

14. Water Quality Monitoring Plan is inadequate. What kinds of monitoring will ensure that there are no impacts to water quality?

Condition 5 of the proposed 401 Certification requires MVP to develop a limited water quality monitoring plan to monitor and evaluate potential impacts to water quality from activities occurring in areas outside of wetlands and streams not subject to the Corps' NWP 12 (i.e., upland areas). The plan submitted by MVP details in-stream water quality monitoring to occur in three phases - before, during, and after construction in proximate upland areas. Three samples, at least one week apart, will be collected during each phase. The parameters to be monitored include: temperature, turbidity, dissolved oxygen, and pH. MVP will also complete benthic macroinvertebrate surveys to determine aquatic health before and after construction.

In addition to the upland monitoring that will be conducted by MVP, DEQ, in partnership with scientists from the U.S. Geological Survey (USGS) and Virginia Commonwealth University (VCU), is conducting project-specific water quality monitoring at a number of proposed MVP stream crossings near sensitive and/or critical areas. This monitoring will be conducted before, during and after MVP construction activities. Monitoring stations will be established upstream and downstream of the proposed pipeline crossing locations. This special study includes identification of benthic macroinvertebrate and fish community assemblages; quantitative physical habitat assessment; real-time, continuous water quality monitoring for turbidity,

temperature, specific conductance, dissolved oxygen and pH; as well as grab sample monitoring for petroleum constituents (petroleum identification and quantity in water).

Throughout August 2017, DEQ and USGS scientists visited dozens of potential crossings locations in an effort to select priority monitoring locations. Six crossings along the proposed MVP route (12 monitoring sites) were selected. Monitoring sites for DEQ's special study were prioritized based on a number of critical factors including the presence of wild trout populations and/or threatened and endangered species; proximity to Tier III (exceptional) waters; waters used as public water supplies; proximity to proposed upland construction activity (mountain regions); access to the site; and suitable water flow.

To establish a baseline of water quality conditions, monitoring began in the fall of 2017. If the MVP project is approved, the special study monitoring will continue during construction and for at least one year after completion of construction.

As has been noted in RTC #7, in making a finding that there is reasonable assurance Virginia may rely on tools that reduce the uncertainty inherent in the predictive nature of a § 401 certification, including monitoring. The monitoring is intended to provide reasonable assurance that erosion and sediment control measures are effective. If necessary, changes will be made to approved erosion and sediment control plans based on conditions encountered in the field during construction.

15. DEQ has not addressed water quality issues related to water withdrawal and discharges associated with Hydrostatic Testing, Horizontal Directional Drilling (HDD) or Dust Control activities.

The Virginia Water Protection Permit (VWP) Program Regulation specifically exempts water withdrawals that will be used for hydrostatic testing from the requirement to obtain a water withdrawal permit.¹⁴ Even so, DEQ has gone beyond its regulatory authority and has included

¹⁴ 9VAC25-210-301.A.6.b states:

“The following surface water withdrawals are excluded from VWP permit requirements. ... Surface water withdrawals from nontidal or tidal waters, regardless of the volume withdrawn, for the following uses: Hydrostatic pressure testing of water tight containers, pipelines, and vessels.”

conditions in the proposed 401 Certification which specifically address how these water withdrawals must be conducted. First, the proposed condition limits surface water withdrawals to no more than 10% of the instantaneous flow rate in the channel from which it is withdrawn. The condition also imposes typical permitting requirements designed to protect instream organisms - intake screens must be designed so that screen openings are not larger than 1 millimeter and the screen face intake velocities are not greater than 0.25 feet per second.

Withdrawals for horizontal directional drilling and dust control activities are not exempt from VWP permitting requirements if they exceed 10,000 gallons per day from nontidal waters or 2 million gallons per day from tidal waters. The proposed condition makes clear that volumes that exceed these limits must obtain a VWP permit and comply with the regulation.

Finally, although discharges from hydrostatic testing can be authorized under the Board's General Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests, the proposed 401 Certification requires discharge of hydrostatic test water to upland areas and not surface waters and monitoring consistent with this VPDES General Permit is required.

16. Public Water Supplies are at risk.

This comment is distinct from the issues raised in RTC #10 related to threats to water resources used by individual private landowners and focuses on concerns regarding public water supplies. MVP has contacted all public water suppliers in the watersheds in which construction activity will take place. MVP met twice with both the Towns of Rocky Mount and Boone's Mill. These meetings resulted in an alignment change that addressed the towns' concerns so no contingency plans were needed.

MVP also held meetings with Western Virginia Water Authority (WVWA) and, as a result, MVP prepared and submitted a Water Supply Contingency Plan to WVWA. Additionally, the October 13, 2017 FERC Certificate includes a requirement that prior to construction, MVP must file with FERC, for review and written approval, water supply contingency plans, prepared in coordination with the public water suppliers, outlining measures to minimize and mitigate potential impacts on public surface water supplies with intakes within 3 miles downstream of the

workspace, and Zones of Critical Concern within 0.5 mile of the workspace. The measures shall include, but not be limited to, providing advance notification to public water supply owners prior to the commencement of pipeline construction.

The additional conditions in the proposed 401 Certification, including specific requirements for best work practices emphasizing hazard assessment, frequent inspection requirements, monitoring activities, preventative measures, riparian buffer protections, and comprehensive mitigation plans along with the requirements of the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and the Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*) will adequately protect public water supplies.

17. Individual property owners provided comments regarding unique features located on their land that they feel were missed by on the ground surveys or not adequately addressed.

Many of these features were water resource, karst terrain, or steep slope conditions. Despite the infield surveys, desktop analysis, and various assessments developed for the Project, there always remains the possibility of certain overlooked features. Requirements for pre-land disturbing inspection (including during and after tree felling) by various personnel including Environmental Inspectors, karst specialists, and construction inspectors are designed to ensure all features are appropriately identified and avoided or mitigated prior to initiation of land disturbing activities. This process will provide for appropriate identification of unique features not already addressed.

Additionally, as explained stated in the *Basis for Certification* (Attachment A to the Memorandum), DEQ made project-specific erosion and sediment control and stormwater management plans available for public review. The plans were posted by spread beginning on July 19, 2017, and public input was accepted until October 22, 2017. DEQ received input from a small number of property owners who reviewed the project-specific erosion and sediment control and stormwater management plans and found that certain features on their property were not adequately or correctly addressed. DEQ will work directly with these property owners to resolve the identified issues. If necessary, DEQ intends to conduct limited site visits to the properties.

18. Through the issuance of the proposed 401 Certification, DEQ has added an extra level of review beyond standard practice to ensure water quality is protected. FERC and many other agencies have carefully analyzed potential impacts to land, air, water quality, wildlife and other resources.

This observation and comment are noted.

Comments Submitted that Are Outside the Scope of the Proposed 401 Certification and DEQ's Legal and Regulatory Authority

Commenters identified proximate areas of seismic activity and assert that constructing a gas pipeline in such an area poses a danger to the community.

Consideration of this issue is not within the scope of the proposed 401 Water Quality Certification. It should be noted that in areas where seismic hazards exist, MVP will install pipeline with thickness in accordance with the U.S. Department of Transportation's pipeline safety regulations. Additionally, as discussed in the response to steep slopes and landslide concerns, MVP is revising the *Landslide Mitigation Plan* to include additional post construction monitoring including sequentially-acquired Light Imaging Detection and Ranging (LiDAR) imagery to detect slope movement in the areas where the proposed pipeline traverses through the seismic zone.

Commenters identified a concern of or potential for leaks, discharges, or explosions once the pipeline is operational.

Consideration of these issues is not within the scope of the proposed 401 Certification. The proposed 401 Certification addresses activity in upland areas and certain project-related surface water withdrawals not otherwise permitted or regulated and not the operation of the proposed pipeline itself and its contents.

It should be noted that several regulatory programs at both the state and federal level address and provide oversight concerning these issues. This includes requirements and oversight by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration which

sets and enforces regulations and standards for the design, construction, operation, maintenance or abandonment of pipelines.

Commenters questioned the necessity or justification for the pipeline Project including discussions of economic and energy production impact.

These comments regarding broader issues involving the proposed pipeline regarding the necessity, justification, or impact related to the economy and energy production are acknowledged. Consideration of these issues, however, is not within the scope of the proposed 401 Certification. The proposed 401 Certification addresses activity in upland areas and certain project-related surface water withdrawals not otherwise permitted or regulated and not the operation of the pipeline itself and its contents.

It should be noted that such issues or information may be relevant or considered in other regulatory actions including the Federal Energy Regulatory Commission's review process for issuance of a Certificate of Public Convenience and Necessity.

Commenters provided concerns, comments, and information regarding private property impacts including property values, private property access, and fairness and appropriateness of the exercise of eminent domain.

Comments regarding general or broad issues involving property access and property values from the proposed pipeline Project are not within the scope of this proposed 401 Certification.

It should be noted that within the context of this proposed 401 Certification regarding upland activities, MVP must provide a financial responsibility demonstration to support the Complaint Resolution Process contained in the Water Resources Identification and Testing Plan (February 2017) in the event of impacts to a private water supply that is used for human consumption, from project construction activities.

Additionally, it should be noted that other legal requirements and processes address these issues including state and federal laws regarding property access, easements, property value impacts, and eminent domain.

Several comments discussed or identified concerns regarding the pipeline project impact on air emissions including impacts related to climate change and increased production or use of natural gas in lieu of green energy production options such as solar or wind power.

Consideration of these issues regarding air emissions, climate change, and use of natural gas in lieu of solar or wind power are not within the scope of this proposed 401 Certification.

However, it should be noted that other regulatory authorities exist to address such issues.

Additionally, issues related to energy production and alternatives including other energy production technology may be relevant or considered in other regulatory reviews for the proposed pipeline Project including the Federal Energy Regulatory Commission's review process for issuance of a Certificate of Public Convenience and Necessity.

Commenters identified permitting, certification, or compliance actions taken by other states regarding pipeline projects.

This proposed 401 Certification is governed by applicable laws, regulations, and guidance in the Commonwealth of Virginia. A decision on the proposed 401 Certification cannot take into consideration laws, regulations, guidance, basis for decisions, or enforcement actions in other jurisdictions. The proposed 401 Certification contains additional conditions to support the finding of reasonable assurance that water quality standards will not be violated.

Additionally, non-compliance or other events related to different pipeline projects cannot be presumed or ascribed to this proposed pipeline Project and, if approved, compliance with the conditions of the proposed 401 Certification will be addressed through DEQ's authority, oversight, and enforcement process.

Commenters raised concerns regarding the fact that the project owner is a limited liability corporation and there is potential for it to avoid future responsibilities and liabilities associated with the Project.

Limited liability companies (LLCs) are viable business entities subject to oversight and enforcement of their legal obligations. Pursuant to Va. Code §§ 13.1-1000 *et seq.*, LLCs can be sued, own interests in real property, make contracts and incur liabilities, enter into partnerships or joint ventures, and transact any lawful business that a corporation, partnership, or other

business entity may conduct in Virginia. MVP should not be considered differently than any other corporate entity in terms of its ability to carry out obligations related to environmental approvals during the construction and life cycle of its pipeline.

Furthermore, as it relates to complying with the FERC regulations and orders (which include enforcing conditions in certificate orders), FERC has various enforcement tools at its disposal in overseeing interstate pipelines such as MVP that are subject to FERC's jurisdiction. These tools include imposition of compliance plans; disgorgement of unjust profits; the ability to condition, suspend, or revoke, certificate authority, or blanket certificate authority; the ability to refer matters to the Department of Justice for criminal prosecution; and civil penalty authority for fines and penalties exceeding \$1 million per violation.

Finally, under the Virginia Water Protection Permit regulation (as a point of reference), the corporate status or corporate form of a permit applicant is not a ground for denying a permit application (*See* 9VAC25-210-230). Permits are issued to "persons," defined in the regulation as meaning an "individual, corporation, partnership, association, governmental body, municipal corporation, or any other legal entity" (9VAC25-210-10). Thus, a legal entity, such as a corporation or an LLC, can be issued a permit.

Comments Outside the Scope of this Certification Regulated by Other DEQ Statutes and Regulations

A significant number of comments and documents or studies were received related to issues being regulated by other DEQ regulatory programs. These comments were primarily focused on activities associated with stream crossings and issues associated with land disturbance involving erosion and sediment control and stormwater. Many of these comments are legitimate issues related to protection of water resources. All of the issues raised in this category of comments are being reviewed and appropriately addressed within those other regulatory programs. DEQ devoted considerable effort to provide clarification of the scope of this proposed 401 Certification within the supporting documentation. There is not a reduction in protection for these water resources by addressing them through the appropriate programs authorized by statute and regulation.

Comments were received in support of the pipeline including comments regarding the opportunity for economic development, manufacturing and job creation; increased safety of pipeline transportation compared to overland trucking of natural gas; decreased reliance on coal for energy production, and thoroughness of FERC's evaluation of the project.

A number of comments were received related to support of the proposed pipeline; however, consideration of these issues is not within the scope of this proposed 401 Certification.



Monitoring Plan

High-priority stream crossings along the proposed Atlantic Coast (ACP) and Mountain Valley (MVP) pipelines

The Department of Environmental Quality (DEQ), in partnership with scientists and experts from the U.S. Geological Survey (USGS) and Virginia Commonwealth University (VCU), will be conducting water quality monitoring at a number of proposed MVP and ACP stream crossings before, during, and after proposed pipeline construction activities. Monitoring will include identification of benthic macroinvertebrate and fish community assemblages; quantitative physical habitat assessment; real-time, continuous water quality monitoring for turbidity, temperature, specific conductance, dissolved oxygen and pH; as well as grab sample monitoring for petroleum constituents (petroleum identification and quantity in water).

The proposed monitoring activities will provide an inventory of baseline, pre-construction conditions in the streams of interest, as well as a comprehensive body of evidence on the effects, or lack thereof, of the proposed pipeline construction activities. The water quality and physical habitat data will provide evidence of physical and chemical changes caused by the proposed construction, whereas the fish and macroinvertebrate monitoring data will be used to determine the effects of such changes on aquatic life.

To establish a baseline of water quality conditions, monitoring will begin in the fall of 2017. If the pipeline construction is approved, the monitoring will also be performed during and after construction for at least one year. Data from the continuous monitoring devices will be made available on DEQ's water quality monitoring website. All other results will be posted to the website within five working days of DEQ's receipt of the results.

The monitoring locations are summarized in Tables 1 and 2 below. Sites were prioritized based on a number of critical factors including the presence of wild trout populations and/or threatened and endangered species; proximity to Tier III (exceptional) waters; waters used as public water supplies; proximity to proposed upland construction activity (mountain regions); access to the site; and suitable water flow. The sites included for monitoring, and the specific methodologies employed at each location, are subject to change based on site conditions and the recommendations of DEQ, USGS and VCU field staff.

Analytes

Benthic invertebrates and physical habitat - conducted by DEQ staff

- Benthic macroinvertebrates are the most commonly used assemblage for assessing ecological integrity and the only assemblage used for regulatory assessment in Virginia. Macroinvertebrates provide an integrative measure of stream conditions, as they are affected not only by conditions at the time of sampling, but by those occurring over their entire life cycles.
- Benthic macroinvertebrates will be sampled at each site using DEQ standard operating procedures for single-habitat sampling. See Appendix B, Section i of the following link:
http://www.deq.virginia.gov/Portals/0/DEQ/Water/WaterQualityMonitoring/BiologicalMonitoring/BioMonQAPP_13Aug2008.pdf.

- Physical habit will be evaluated using the relative bed stability (RBS) method¹. This method provides a detailed evaluation of the benthic substrate composition. This information can be used to estimate the degree of sedimentation or erosion caused by construction activities and the likelihood that aquatic life will recover from short-term water quality impacts. RBS sites will be selected based on best ability to discern impacts, and may not be completed at every benthic site.

General Timeline

- Initial benthic macroinvertebrate and RBS monitoring will occur in around October 2017, before any proposed construction activities begin.
- The first follow-up monitoring will occur during the first fall (Sept. 1- Nov. 30) or spring (March 1- May 31) DEQ assessment window after proposed construction is complete.
- The second follow-up monitoring will occur during the next assessment window after the window in which the first follow-up monitoring was conducted.

Fish Community Assessment - conducted by VCU

- Fish assemblages are of special interest to many citizens and provide an additional indication of the overall ecological health of streams. In addition, Class VI waters are those that have been officially designated as wild trout waters. Monitoring of trout in these waters is essential to determining whether the proposed construction activities have affected this designated water body use.
- Fish will be sampled using a direct-current backpack electrofisher, and following the National Rivers and Streams Assessment Protocols, modified for Virginia streams.
- Fish sampling reaches will be a length of 40 times the average stream channel width (for channels at least 4 meters wide), and a minimum of 150 meters (for channels less than 4 meters wide).
- A single shocking pass up the stream reach will be conducted. In streams designated as Class VI waters, blocking nets will be placed across the upstream and downstream limits of each sampling reach. If less than 20 brook trout (*Salvelinus fontinalis*) are observed, sampling will be concluded. If 20 or more brook trout are observed, two additional passes will be made to derive a quantitative estimate of the number of trout in the reach.
- The scope of work provided by VCU (Appendix A) includes additional details on the sampling methodology.
- This work will be conducted under a permit issued by the Virginia Department of Game and Inland Fisheries.

General Timeline

- Initial monitoring will occur around October 2017.

¹ Kaufmann, P.R., Faustini, J.M., Larsen, D.P. and Shirazi, M.A. 2008. A roughness-corrected index of relative bed stability for regional stream surveys. *Geomorphology*. 99:150-170.

- Follow-up monitoring will occur in the first fall season following the construction, and in additional years (during fall), as needed.

Real Time Water Quality Monitoring - conducted by USGS

- USGS will install and maintain real-time water quality monitoring stations and manage all data produced. Readings of turbidity, temperature, specific conductance, dissolved oxygen and pH will be taken every five minutes, and all data are expected to be available online to the public within one hour after collection. Monitoring will allow DEQ, USGS and public water supply staff to rapidly respond to potential pollution events.

General Timeline

- Monitoring stations will be installed around October 2017. The units will be maintained for approximately one year following the beginning of construction.
- Continuous monitoring will be extended, as needed, on a per-station basis.
- USGS will conduct quality assurance visits monthly and as needed in accordance with published protocols.
- DEQ regional and central office staff will obtain field readings during benthic and habitat surveys as quality assurance of real-time data.

Petroleum identification and quantity in water

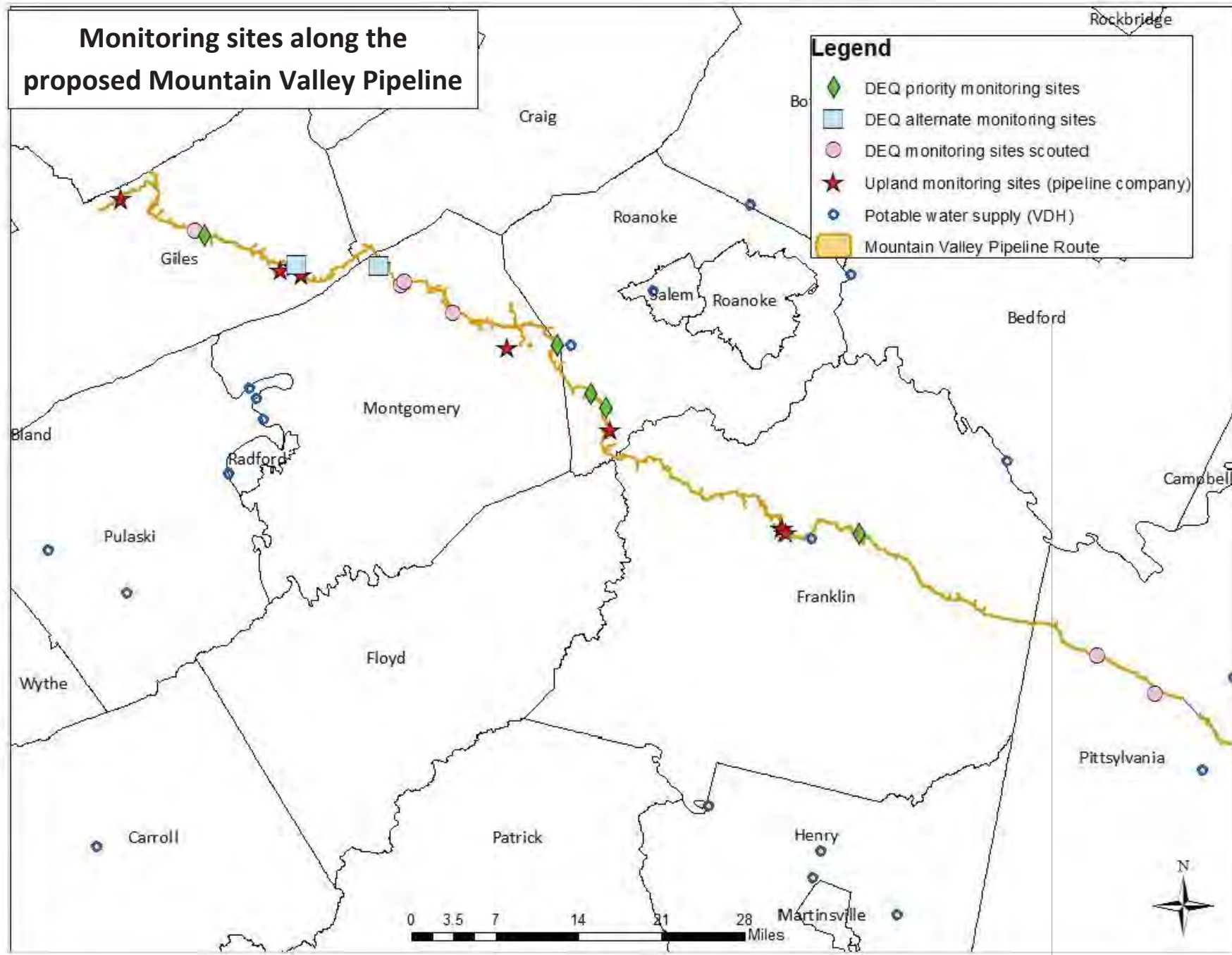
- Grab samples to be collected before, during and after construction, targeting high flow and/or hydrostatic flushing events.
- Samples will be collected at the stations located near public water supplies.
- Samples to be collected by DEQ monitoring staff and processed by the Division of Consolidated Laboratory Services.

Table 1. MVP Locations. Six stream crossings proposed (Little Stony Creek, Roanoke River, Upper Bottom Creek, Bottom Creek, Blackwater River and Sinking Creek), two monitoring sites per crossing.

Craig Creek will serve as an alternate site for continuous monitoring. Other alternate sites will be scouted, as needed.

Stream Segment ²	Parameters	Comment	County
Little Stony Creek	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Near Tier 3 stream, good wild trout stream, high benthic macroinvertebrate scores , decent site to detect disturbance	Giles
Roanoke River	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH Petroleum constituents 	Roanoke City/County and Salem City water supply and, endangered/ threatened species	Montgomery
Bottom Creek – upper	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Endangered/threatened species, high benthic macroinvertebrate scores, Tier 3, wild trout stream	Roanoke
Bottom Creek – middle	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Endangered/threatened species, high benthic macroinvertebrate scores, Tier 3, wild trout stream	Roanoke
Blackwater River	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH Petroleum constituents 	Western piedmont stream; good site to detect disturbance	Franklin
Sinking Creek	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH Alternate site for continuous monitoring 	High benthic diversity and high benthic macroinvertebrate scores.	Giles
Craig Creek	<ul style="list-style-type: none"> Alternate site for continuous monitoring 	High benthic diversity and high benthic macroinvertebrate scores	Montgomery

² Each site has two locations to capture conditions above and below the proposed pipeline crossing.

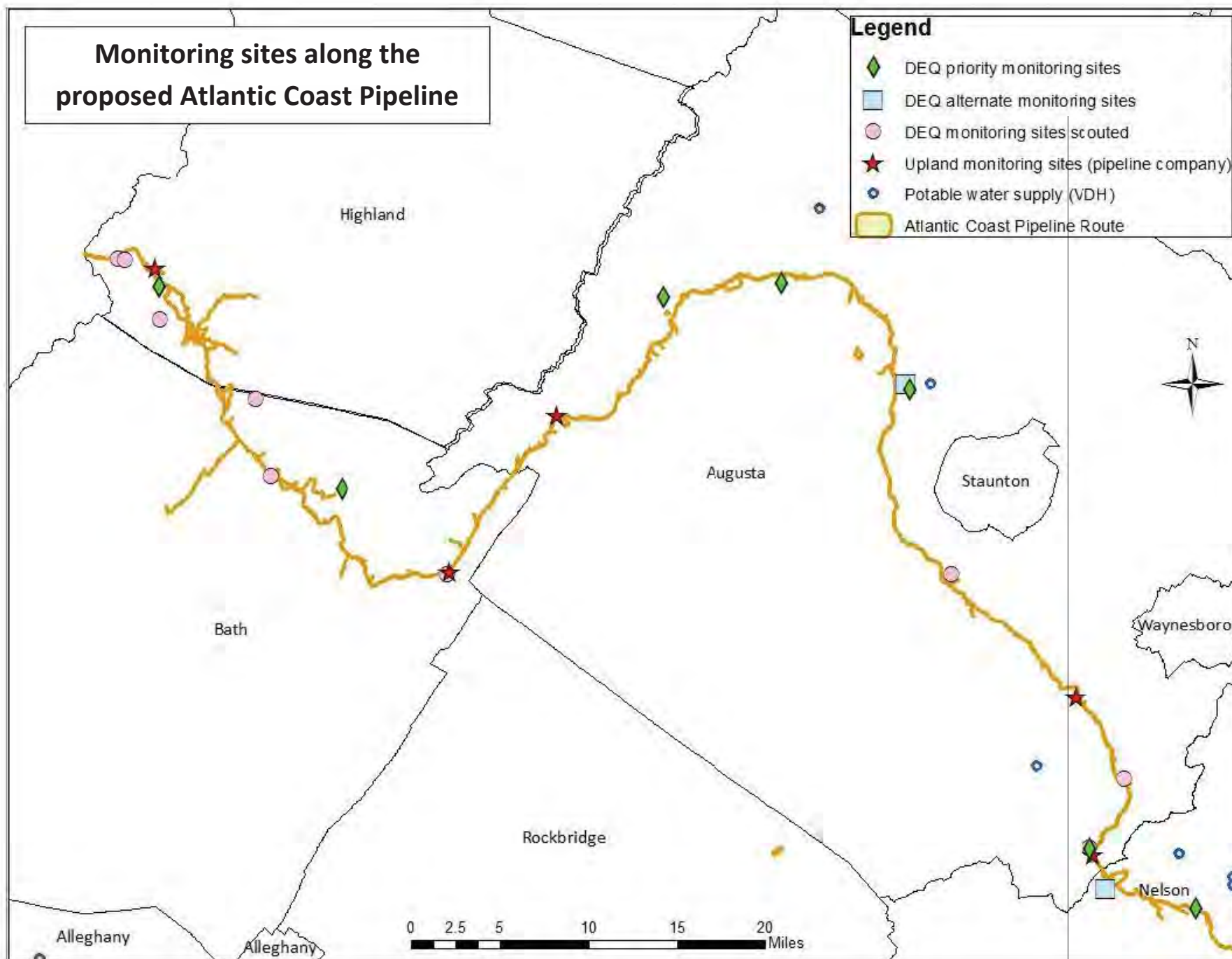


Monitoring locations are approximate.

Table 2. ACP Locations. Seven stream crossings proposed (Back Creek/Warwick Creek, Cowpasture River, Ramseys Draft, White Oak Run, Middle River, South Fork Back Creek, Spruce Creek), two monitoring sites per crossing. The three alternate sites include Jennings Branch, Jackson River and South Fork Rockfish River. Other alternates will be scouted, as needed.

Stream Segment ³	Parameters	Comment	County
Back Creek/Warwick Creek	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Drains several wild trout streams. Good site to detect disturbance. Private access.	Highland
Cowpasture River	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Good site to detect disturbance. Public access.	Bath
Ramseys Draft	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Wild trout stream. Good site to detect disturbance. Public access.	Augusta
White Oak Run	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Good wild trout stream. Good site to detect disturbance. Public access.	Augusta
Middle River	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH Petroleum constituents 	Public water supply. Good site to detect disturbance.	Augusta
South Fork Back Creek	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH 	Near good wild trout stream. Good site to detect disturbance. Public access.	Augusta
Spruce Creek	<ul style="list-style-type: none"> Benthics/habitat Fish community assessment Real-time turbidity, temperature, Specific Conductance, dissolved oxygen, pH Petroleum constituents 	Proximal to good wild trout stream. Good site to detect disturbance. Public access.	Nelson

³ Each site has two locations to capture conditions above and below the proposed pipeline crossing.



Monitoring locations are approximate.

Appendix A

Proposed Scope of Work

Fish Community and Habitat Assessment of Selected Virginia Streams

Virginia Department of Environmental Quality



Dr. Greg Garman

Dr. Stephen McNinch

Mr. David Hople

Mr. Todd Janeski

Rice Rivers Center

Fisheries Ecology Lab

Virginia Commonwealth University

Sept 6, 2017

Project Objectives

Virginia Commonwealth University will conduct quantitative fish community assessments at 14 (minimum) georeferenced Virginia stream locations provided by DEQ. Each site consists of 2 samples, upstream and downstream of the proposed pipeline crossings; adjacent reaches will be separated by blocking nets, as necessary. In addition, at Class VI (designated trout waters) sites that meet established criteria⁴, VCU will complete three-run removal sampling of salmonids to estimate population abundance (via depletion) for salmonid populations. Each site will be sampled once for baseline (preconstruction) conditions and twice under post-construction conditions during the project period. We will also evaluate EPA Rapid Habitat Assessment (instream) metrics at each sampling location and during each sampling event.

Methods

Sampling at each targeted stream location will be conducted during the period 1 September – 15 November, 2017 (for pre-construction baseline) at water temperatures $\geq 5^{\circ}\text{C}$.

If the pipelines are approved for construction, at least two post-construction events will be conducted at each stream location. The post-construction monitoring will be conducted during the fall season, and contracted separately, pending pipeline approval. Fishes at each location will be sampled quantitatively using well-maintained electrofishing equipment (pulsed direct current) and standard methods (Janeski, et al. 2014, NRSA 2013). In small streams (channel width $\leq 4\text{m}$), sampling reaches will encompass 150 stream – meters. In larger streams, sampling reach length will be 40x the mean channel width. These sampling methods are based on the National Rivers Assessment Protocols⁵ (NRSA 2013), and are consistent with those employed by DEQ throughout the state.

Electrofisher settings (e.g. output voltage and waveform) for each sampling event will optimize sampling efficiency and minimize fish mortality, based on ambient conditions and operator experience. At sites identified as non-Class VI, sampling will be performed in a single pass and in a manner that incorporates major aquatic habitat types. In Class VI streams, blocking nets will be deployed where deemed necessary and feasible and an *initial* sampling pass will be performed as a depletion run. If the number of salmonids in that initial removal pass meets an established criterion (> 20 adult salmonids), two additional removal passes will be conducted immediately. If the number of salmonids in the initial pass does *not* meet the criterion, no subsequent depletion runs will be conducted. For Class VI sites that warrant depletion sampling, all salmonids will be identified, counted, and removed to aerated, stream-side coolers for the duration of the depletion sampling, after which fish will be returned to the stream reach from which they were removed. In non-wadeable streams, boat electrofishing may

⁴ Upon issuance of DGIF permit, the established criterion is the collection of > 20 adult salmonid species.

⁵ <https://www.epa.gov/national-aquatic-resource-surveys/national-rivers-streams-assessment-201314-field-operations-0>

include multiple sampling passes (e.g. channel *versus* margin), depending on stream conditions, channel width, and habitat variability. Electrofishing settings and total effort (seconds of generator output) will be recorded for each sampling event (or depletion run), along with other relevant information. Proper precautions (e.g. use of insulated gloves, etc.) will be taken to ensure the safety of field personnel at all times. Extreme care will be taken to prevent stress, injury, or mortality to specimens during handling and during periods of off-stream holding (depletion runs).

For all gear types, a minimum crew of three experienced field biologists will be employed for effective sampling. In very small streams, the crew may be reduced to two individuals. During electrofishing, dippers will collect stunned fish and place into a cooler (for depletions) or bucket for later processing. Sampling may be interrupted to immediately process special (e.g. protected) specimens or if relatively high temperatures are likely to cause mortality. Sample processing in the field will involve enumeration and identification to species for all specimens (excluding young-of-year), as well as documentation of external anomalies (e.g. lesions, parasites). Fish species will be identified by standardized taxonomic codes created by VCU and based on recent and accepted nomenclature (American Fisheries Society). Species-level IDs will be made on-site by experienced regional ichthyologists (McIninch, Hopler, Balazik, and Garman) employed by VCU. Voucher images will be captured for species of special conservation concern. All relevant data will be recorded on a VCU fish collection form, which will also include all relevant location information for the collection reach, for later data entry into the INSTAR database. Immediately following processing, all fish will be released into the sampling reach. Every effort will be made to minimize fish mortality.

VCU will hold all necessary research permits (e.g. VDGIF, USFWS) to conduct the work and will operate under approved IACUC protocols from VCU. Instream habitat assessment will follow Barbour, et al., 1999). All field activities data management will be consistent with DEQ ProbMon protocols and an approved EPA Quality Assurance Protection Plan. Finally, VDGIF or DEQ biologists are welcome to participate in sampling as members of the VCU crew or as observers.

Deliverables to the sponsor will include annual progress reports that describe methods, accomplishments, and QA'd fish and habitat data in MS Excel format. Deliverables will be provided within two weeks of sampling date.

References

NRSA. 2013. National Rivers and Streams Assessment Field Operations Manual, Version 1.0. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. EPA841-b-12-009b.

Janeski, T., G. Garman, S. McNinch, D. Hopler, W. Shuart, J. Ciminelli, and R. Hill. 2014. Stream Ecological Health Assessment for the Chowan River Basin, Virginia and North Carolina. Final Report to the Virginia Department of Conservation and Recreation and the Virginia Department of Environmental Quality. Virginia Commonwealth University, Richmond, Virginia. 80 pages.

Attachment E

**DEQ 401 Certification Letter to USACE (Dec. 26, 2017)
(excerpt)**



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

April 07, 2017

Colonel Jason E. Kelly, PMP
United States Army Corps of Engineers
Norfolk District, Fort Norfolk
803 Front Street
Norfolk, Virginia 23510-1096

RE: Section 401 Water Quality Certification of the 2017 Nationwide Permits

Dear Colonel Kelly:

This is the Commonwealth of Virginia's decision with regard to §401 Water Quality Certification for activities authorized by the U.S. Army Corps of Engineers' (the Corps) Nationwide Permits (NWP), and Norfolk District Regional Conditions. These NWPs were published in the January 6, 2017 *Federal Register* with an effective date of March 19, 2017. The Commonwealth supports the issuance and use of nationwide and regional permits to expedite the processing of permits while safeguarding the environment and reducing duplication of effort by government regulatory agencies.

Pursuant to 40 CFR 121.2 (a)(2) and (3), the State Water Control Board (the Board) has (i) examined the NWPs, the Norfolk District Regional Conditions, and (ii) other decision documents provided by the Corps to base its certification. Accordingly, the Board finds that there is a reasonable assurance that the activities permitted under the Corps' NWP program, including the Norfolk District Regional Conditions, will be conducted in a manner which will not violate applicable water quality standards, provided permittees comply with all applicable Section 401 conditions (see table herein).

Further, pursuant to Virginia Water Protection (VWP) Permit Regulation 9VAC25-210-130 H, the Board is issuing this final §401 Water Quality Certification as meeting the requirements of the VWP regulation after having advertised and accepted public comment for 30 days on our intent to provide this certification.

The Commonwealth reserves its right to require an individual application for a permit or a certificate or otherwise take action on any specific project that could otherwise be covered under any of the NWP's when it determines on a case-by-case basis that concerns for water quality and the aquatic environment so indicate.

Thank you for your continuing cooperation in the administration of the Joint Permit Program.

Sincerely,



James J. Golden
Director of Operations

cc: The Honorable Molly J. Ward
Mr. John M.R. Bull, Commissioner, VMRC
Mr. William T. Walker, Norfolk District Regulatory Branch
Mr. William Seib, Baltimore District Regulatory Branch
Ms. Bettina Sullivan, DEQ-OEIR
DEQ Regional VWP Managers

Commonwealth of Virginia Final §401 Certifications of the 2017 Nationwide Permits April 07, 2017		
Nationwide Permit	Final §401 Certification	Final §401 Certification Conditions
NWP 8 – Oil and Gas Structures on the Outer Continental Shelf	Unconditional	
NWP 9 – Structures in Fleeting and Anchorage Areas	Unconditional	
NWP 10 – Mooring Buoys	Unconditional	
NWP 11 – Temporary Recreational Structures	Unconditional	
NWP 12 – Utility Line Activities	Conditional	<p>provided that:</p> <p>(1) the activities are not associated with a surface water withdrawal or the transport of non-potable raw surface water, except for the purpose of hydrostatic testing and when the associated discharges are authorized by a VPDES permit, if required;</p> <p>(2) any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44.15:23 A through C, except in the absence of same river watershed alternatives in Hydrologic Unit Codes (HUC) 02040303 and 02040304, single family dwellings or locality projects may use compensatory mitigation in HUC 02080102, 02080108, 02080110, or 02080111 in Virginia;</p> <p>(3) temporary diversions of surface water associated with “pump arounds” during the construction of utility crossings are specifically allowed.</p>
NWP 13 – Bank Stabilization	Conditional	<p>provided that:</p> <p>(1) the stabilization activities do not permanently impact more than 1,500 linear feet of any type of nontidal stream bed, regardless of any waiver decision made by the USACE;</p> <p>(2) any compensatory mitigation meets the requirements in the Code of Virginia, Section 62.1-44.15:23 A through C, except in the absence of same river watershed alternatives in Hydrologic Unit Codes (HUC) 02040303 and 02040304, single family dwellings or locality projects may use compensatory mitigation in HUC 02080102, 02080108, 02080110, or 02080111 in Virginia.</p>

Attachment F

**MVP NWP 12 Verification Letters
(Dec. 26, 2017 & Jan. 23, 2018)**



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

December 26, 2017

Western Virginia Regulatory Section
NAO-2017-0898 / VMRC#2016-0305

Mountain Valley Pipeline, LLC
Attn: Mr. Robert Cooper
555 Southpointe Blvd., Suite 200
Canonsburg, Pennsylvania 15317

Dear Mr. Cooper:

This is in regard to your Department of the Army permit application number NAO-2015-08998 (VMRC #2016-0305) to impact permanently impact approximately 4.32 acres of wetlands and 478 linear feet of stream and to temporarily impact 28,677 linear feet of stream channel and 4.78 acres of wetlands. Impacts will occur to facilitate the installation of pipeline at 383 separate stream crossings and 142 separate wetland crossings within the Commonwealth of Virginia along a 302 mile 42 inch natural gas pipeline known as the Mountain Valley Pipeline. The Mountain Valley Pipeline will run from Pennsylvania through West Virginia and Virginia. The Virginia portion would pass through Giles, Craig, Montgomery, Roanoke, Franklin and Pittsylvania Counties, Virginia (see attached map). These impacts are depicted on the enclosed drawings entitled "Mountain Valley Pipeline Project Attachment H1 – Wetland and Waterbodies Impact Overview Figure" prepared and submitted on behalf of the applicant by Tetra Tech, Inc. and dated September 2017 and date stamped as received by this office on September 11, 2017 (attached).

Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permit 12, attached. The Corps Nationwide Permits were published in the January 6, 2017, Federal Register notice (82 FR 1860) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

This nationwide permit verification is contingent upon the following project specific conditions:

Special Conditions:

1. The Permittee shall submit to the Corps all compensatory mitigation credit purchase bills of sale prior to any wetland impacts. Please submit documentation to todd.m.miller@usace.army.mil

2. The Permittee shall ensure that all waters and wetlands are flagged in the field prior to any construction to prevent accidental impact to resources not necessary for construction.
3. The Permittee shall remove all temporary Stream construction entrances immediately upon project completion.
4. The Permittee shall replace to pre-project contours, stabilized, and re-seeded all stream banks, riparian areas, and wetlands disturbed as a result of this project immediately upon project completion at each crossing.
5. The Permittee shall ensure that any properties unavailable for wetland survey prior to application submittal shall be reviewed and submitted to the Corps for incorporation in to our records for the delineation.
6. The Permittee shall submit to the Corps for additional permit consideration, any adjustments to impacts based on information gained from updated wetland delineations or construction/plan alteration.
7. Upon completion of the project the Permittee shall submit to the Corps As built plans.
8. The construction limit of disturbance within Waters of the US shall be limited to 75 feet. This limitation shall be carried out 50 feet on either side of the Waters of the US to limit impacts to the aquatic resource.
9. One month after the authorized work is completed, and again at the end of the first full growing season (no later than October 31) after the authorized work has been completed the Permittee shall inspect all authorized stream and wetland crossings sites that have been temporarily impacted in order to verify that excess fill material has been removed and that the site has been restored to pre-existing conditions and contours. These monitoring events shall be summarized in a single report containing:
 - a. A statement of whether all excess fill has been removed.
 - b. A description of the status of vegetative growth in the impacted wetlands/stream

Provided the project specific conditions (above) and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. In addition, the Virginia Department of Environmental Quality has provided a conditional §401 Water Quality Certification for Nationwide Permit Number 12. A permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification is not valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. You should contact your local government before you begin work to find out how the CBPA applies to your project.

Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the nationwide permit terms and conditions.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2022. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the NWP verification expires, unless the district engineer removes those conditions. Activities completed under the authorization of an NWP which was in effect at the time the activity was completed continue to be authorized by that NWP.

In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.

If you have any questions and/or concerns about this permit authorization, please contact Mr. Todd Miller via telephone at (804) 323-3782 or via email at todd.m.miller@usace.army.mil.

Sincerely,

William T. Walker
Chief, Norfolk District Regulatory Branch

Enclosure(s)

Cc: Tetra Tech, Inc.
Mike Rolband, Wetland Studies and Solutions, Inc.
Randy Owen, Virginia Marine Resources Commission
Steven Hardwick, Department of Environmental Quality
Brian Clauto, Mountain Valley Pipeline, LLC



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

January 23, 2018

Western Virginia Regulatory Section
NAO-2017-0898 / VMRC#'s 2016-0305 and 2017-1609

Mountain Valley Pipeline, LLC
Attn: Mr. Robert Cooper
555 Southpointe Blvd., Suite 200
Canonsburg, Pennsylvania 15317

Dear Mr. Cooper:

This is in regard to your Department of the Army permit verification letter dated December 26, 2018, project number NAO-2015-08998 (VMRC #'s 2016-0305 and 2017-1609) to impact waters of the US (streams and wetlands) to facilitate the installation of pipeline at 383 separate stream crossings and 142 separate wetland crossings within the Commonwealth of Virginia along a 302 mile 42 inch natural gas pipeline known as the Mountain Valley Pipeline. According to clarification you recently sent, cumulatively these activities will permanently impact approximately 4.21 acres of wetlands and 478 linear feet of stream and temporarily impact 28,677 linear feet of stream and 4.77 acres of wetlands. These impacts are depicted on the enclosed drawing entitled "Mountain Valley Pipeline Project Attachment H1 – Wetland and Waterbodies Impact Overview Figure" prepared and submitted on behalf of the applicant by Tetra Tech, Inc. and dated September, 2017 with a revision date of December, 2017(attached).

Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permit 12, attached. The Corps Nationwide Permits were published in the January 6, 2017, Federal Register notice (82 FR 1860) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

This nationwide permit verification is contingent upon the following project specific conditions:

Special Conditions:

1. Compensatory mitigation credit purchase bill of sale shall be submitted to the Corps prior to any wetland impacts. Please submit documentation to todd.m.miller@usace.army.mil
2. All waters and wetlands shall be flagged in the field prior to any construction to prevent accidental impact to resources not necessary for construction.
3. All temporary Stream construction entrances must be removed immediately upon project completion.
4. All stream banks, riparian areas, and wetlands disturbed as a result of this project must be replaced to pre-project contours, stabilized, and re-seeded immediately upon project completion at each crossing.

5. Any properties unavailable for wetland survey prior to application submittal shall be reviewed and submitted to the Corps for incorporation in to our records for the delineation.
6. Any adjustments to impacts based on information gained from updated wetland delineations or construction/plan alteration must be submitted to the Corps for analysis and verification under the NWP 12.
7. As built plans must be submitted to the Corps upon completion of the project.
8. The construction limit of disturbance in wetlands shall be limited to 75 feet. This limitation shall be carried out 50 feet on either side of the wetland to limit impacts to the aquatic resource.
9. One month after the authorized work is completed, and again at the end of the first full growing season (no later than October 31) after the authorized work has been completed you shall inspect all authorized stream and wetland crossings sites that had been temporarily impacted in order to verify that excess fill material has been removed and that the site has been restored to pre-existing conditions and contours. These monitoring events shall be summarized in a single report containing:
 10. a. A statement of whether all excess fill has been removed.
 - b. A description of the status of vegetative growth in the impacted wetlands/stream

Provided the project specific conditions (above) and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. In addition, the Virginia Department of Environmental Quality has provided a conditional §401 Water Quality Certification for Nationwide Permit Number 12.

A permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification is not valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. You should contact your local government before you begin work to find out how the CBPA applies to your project.

Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the nationwide permit terms and conditions.

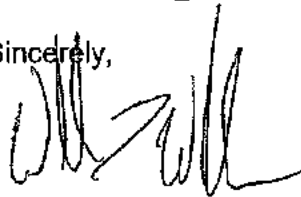
This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2022. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or

revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the NWP verification expires, unless the district engineer removes those conditions. Activities completed under the authorization of an NWP which was in effect at the time the activity was completed continue to be authorized by that NWP.

In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.

If you have any questions and/or concerns about this permit authorization, please contact Todd Miller at (804) 323-3782 or via email at todd.m.miller@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'William T. Walker', with a stylized flourish at the end.

William T. Walker
Chief, Norfolk District
Regulatory Section

Enclosure(s)

Cc: Tetra Tech, Inc.
Mike Rolband, Wetland Studies and Solutions, Inc.
Randy Owen, Virginia Marine Resources Commission
Steven Hardwick, Department of Environmental Quality
Brian Clauto, Mountain Valley Pipeline, LLC

USACE Norfolk District Richmond Field Office
Including Giles, Craig, Montgomery, Roanoke,
Franklin, and Pittsylvania Counties

Anticipates Echin Impact **Study Area** **Primary/Arbitral/Contestatory Boundary** **Water Bodies**

Articulated Wellhead **Class** **Upland Area**

2015 UACIE Site **Highways** **USACE Forest Site**

Verification **Major Roads** **Service Company**

2010 UACIE Site **County Boundary** **State Boundary**

Verification **State Boundary** **State Boundary**

Note: TYPED indicates creation/alteration of features.

September, 2017
<http://doi.org/10.1016/j.jmb.2017.08.007>

Approved Status Report				
Item ID	Item Name	Item ID	Item Name	Item ID
10001	Item 1	10002	Item 2	10003
10004	Item 3	10005	Item 4	10006
10007	Item 5	10008	Item 6	10009
10010	Item 7	10011	Item 8	10012
10013	Item 9	10014	Item 10	10015
10016	Item 11	10017	Item 12	10018
10019	Item 13	10020	Item 14	10021
10022	Item 15	10023	Item 16	10024
10025	Item 17	10026	Item 18	10027
10028	Item 19	10029	Item 20	10030
10031	Item 21	10032	Item 22	10033
10034	Item 23	10035	Item 24	10036
10037	Item 25	10038	Item 26	10039
10040	Item 27	10041	Item 28	10042
10043	Item 29	10044	Item 30	10045
10046	Item 31	10047	Item 32	10048
10049	Item 33	10050	Item 34	10051
10052	Item 35	10053	Item 36	10054
10055	Item 37	10056	Item 38	10057
10058	Item 39	10059	Item 40	10060
10061	Item 41	10062	Item 42	10063
10064	Item 43	10065	Item 44	10066
10067	Item 45	10068	Item 46	10069
10070	Item 47	10071	Item 48	10072
10073	Item 49	10074	Item 50	10075
10076	Item 51	10077	Item 52	10078
10079	Item 53	10080	Item 54	10081
10082	Item 55	10083	Item 56	10084
10085	Item 57	10086	Item 58	10087
10088	Item 59	10089	Item 60	10090
10091	Item 61	10092	Item 62	10093
10094	Item 63	10095	Item 64	10096
10097	Item 65	10098	Item 66	10099
10100	Item 67	10101	Item 68	10102
10103	Item 69	10104	Item 70	10105
10106	Item 71	10107	Item 72	10108
10109	Item 73	10110	Item 74	10111
10112	Item 75	10113	Item 76	10114
10115	Item 77	10116	Item 78	10117
10118	Item 79	10119	Item 80	10120
10121	Item 81	10122	Item 82	10123
10124	Item 83	10125	Item 84	10126
10127	Item 85	10128	Item 86	10129
10130	Item 87	10131	Item 88	10132
10133	Item 89	10134	Item 90	10135
10136	Item 91	10137	Item 92	10138
10139	Item 93	10140	Item 94	10141
10142	Item 95	10143	Item 96	10144
10145	Item 97	10146	Item 98	10147
10148	Item 99	10149	Item 100	10150

[illegible]

Attachment G

Upland 401 Certification (Dec. 8, 2017)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

December 8, 2017

Certified Mail

John Centofanti
Corporate Director, Environmental Affairs
Mountain Valley Pipeline, LLC
EQT Plaza, Suite 1700
625 Liberty Avenue
Pittsburgh, PA 15222-3111

Re: Issuance 401 Water Quality Certification
No. 17-001

Dear Mr. Centofanti:

Enclosed is Section 401 Water Quality Certification No. 17-001 issued to Mountain Valley Pipeline, LLC (MVP) on December 8, 2017.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternatively, any owner aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may petition in writing for a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9VAC25-230-130 (Procedural Rule No. 1 – Petition for formal hearing). In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you have any questions about this Certification, please contact me at (804) 698-4038 or Melanie.Davenport@deq.virginia.gov.

Sincerely,

A handwritten signature in blue ink that reads "Melanie D. Davenport". The signature is written in a cursive style with a large, stylized "M" and "D".

Melanie D. Davenport, Director
Water Permitting Division

Enclosure 401 Certification No, 17-001



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

CERTIFICATION No. 17-001

401 Water Quality Certification Issued To

Mountain Valley Pipeline, LLC
625 Liberty Avenue, Suite 1700
Pittsburgh, PA 15222

Pursuant to Guidance Memo No. GM17-2003
Interstate Natural Gas Infrastructure Projects -
Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality
Certification Pursuant to 33 USC § 1341 ("401" Certification)

I. CERTIFICATION

The State Water Control Board finds that, subject to the additional conditions set out in Section V below, there is reasonable assurance that the Mountain Valley Pipeline, LLC activities covered by this Certification will be conducted in a manner that will not violate applicable Water Quality Standards in 9 VAC 25-260-5, *et seq.*, and will comply with the applicable provisions of 33 U.S.C. §§ 1311, 1312, 1313, 1316, and 1317.

II. DEFINITIONS

The following terms as used in this Certification shall have the following meaning:

"Annual Standards and Specifications" means the program for linear utility projects implementing the requirements of the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*).

"Board" means State Water Control Board.

“Certification” means Clean Water Act Section 401 Water Quality Certification developed in accordance with Guidance Memo No. GM17-2003, Interstate Natural Gas Infrastructure Projects – Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 (“401” Certification).

“Construction material or waste material” means solid waste as defined in the Solid Waste Management Regulations (9 VAC 20-81-95).

“Corps” means U.S. Army Corps of Engineers.

“Department” means the Virginia Department of Environmental Quality.

“Environmental Impact Statement” or “EIS” means the Final Environmental Impact Statement (FEIS) issued by FERC on June 23, 2017.

“FERC” means the Federal Energy Regulatory Commission.

“Guidance” means Guidance Memo No. GM17-2003, Interstate Natural Gas Infrastructure Projects - Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 (“401” Certification) dated May 19, 2017.

“Karst feature” means any sinkhole, sinkhole lineament, cave, cavern, swallet, spring, or similar feature found in an area identified as an area of karst geology characterized by the presence of soluble bedrock such as limestone, dolomite, marble or gypsum. Karst features shall include all such features identified in Appendix L of the EIS and any subsequently identified features in areas of karst geology.

“Owner” means Mountain Valley Pipeline, LLC (MVP) a joint venture between EQT Midstream Partners, LP and affiliates of NextEra US Gas Assets, LLC; Con Edison Gas Midstream, LLC; WGL Midstream; and RGC Midstream, LLC.

“Project” means the Virginia portion of a pipeline project approximately 303 miles in length and 42-inches in diameter to transport up to 2.0 MMDth/d of natural gas from an interconnect point in Wetzel County, West Virginia, to an interconnect with an existing pipeline in Pittsylvania County, Virginia including approximately 106 miles of pipeline, 58 miles of Project access roads, and appurtenances which will be located within Virginia and traverse portions of Giles County, Craig County, Montgomery County, Roanoke County, Franklin County and Pittsylvania County. The 401 Water Quality Certification applies to the location of pipeline right of way, access roads, and appurtenances as described in the EIS and any changes thereto subsequently approved by FERC.

“Riparian buffer” means a vegetated area near a stream, usually forested, which helps shade and partially protect a stream from the impact of adjacent land uses.

III. SCOPE OF CERTIFICATION

This Certification addresses Project activities in upland areas outside of the Corps jurisdictional areas under 33 U.S.C. § 1344 and water withdrawal activities that are exempt from coverage under the Virginia Water Protection Permit Program Regulation (9 VAC 25-210-10, *et seq.*). In the manner and to the extent described herein, this includes all proposed upland activities associated with the construction, operation, maintenance, and repair of the pipeline, any components thereof or appurtenances thereto, and related access roads and rights-of-way as well as certain project-related surface water withdrawals. This Certification covers all relevant upland Project activities within the route identified in the Environmental Impact Statement.

As this Certification and the conditions contained in Section V are intended to address Project activities that are outside the jurisdictional scope of the Virginia Water Protection Permit Program Regulation, this Certification shall not be interpreted as limiting or otherwise relieving the Owner of any conditions for any portion of the Project that are imposed pursuant to the Virginia Water Protection Permit Program Regulation, to any permit issued by the Corps or Virginia Marine Resources Commission in response to the February 26, 2016 joint permit application, or to any other separate state or federal permit, license, or approval required for the Project.

In addition, this Certification operates in conjunction with other regulatory actions including: (a) regulations adopted for land disturbing activities pursuant to the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*); and, (b) all requirements of the Annual Standards and Specifications applicable to the Project approved by the Department on June 20, 2017. These completed regulatory actions remain in full force and effect, and this Certification shall not be interpreted as limiting, modifying, or otherwise relieving the Owner of any conditions imposed pursuant thereto.

Pursuant to 33 U.S.C. § 1341 (a)(3), the Board reserves the right to impose further conditions if any existing plans and/or mitigation measures are amended by the Owner and/or FERC that may materially reduce the water quality protection provided thereunder.

IV. INFORMATION EXAMINED

In developing this Certification and the additional conditions imposed herein, the Board and Department have considered the record relevant to water quality considerations associated with the Project, including but not limited to:

1. All applicable FERC documents, including Draft and Final Environmental Impact Statements issued by FERC and the associated docket materials including all Appendices, and the FERC order granting a Certificate of Public Convenience and Necessity (Certificate) on October 13, 2017;
2. The Department's initial Request for Information (RFI) dated May 19, 2017 in accordance with the Guidance, the Department's subsequent June 15, 2017 RFI

- and the Owner's June 1, 2017, and June 22, 2017 responses including but not limited to requested supplemental responses dated August 8, 2017, October 27, 2017, and November 2 and 6, 2017;
3. Proceedings of the multi-agency technical work session held June 6-7, 2017 (Lexington, Virginia);
 4. Documents submitted for approval by the Department pursuant to requirements of the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*);
 5. Corps Nationwide Permit 12 and Norfolk District Regional Conditions;
 6. Guidance Memo No. GM17-2003, Interstate Natural Gas Infrastructure Projects- Procedures for Evaluating and Developing Additional Conditions for Section 401 Water Quality Certification Pursuant to 33 USC § 1341 ("401" Certification); and,
 7. Public comments submitted during the public comment period, including both written (electronic or paper copy) and oral comments provided during the August 8 and 9, 2017 public hearings.

V. CONDITIONS

In consideration of the recommendations of the Department, the Board finds that there are additional reasonable and prudent conditions that will provide the Commonwealth with an increased degree of assurance that upland Project activities which may result in a discharge to surface waters will be conducted in a manner that will not violate applicable water quality standards. This Certification is only valid provided the Owner complies with the following conditions, limitations, and/or requirements:

1. The Owner shall follow the measures detailed in its June 1, 2017 and June 22, 2017 responses to the Department's May 19, 2017 and June 15, 2017 Requests for Information including but not limited to requested supplemental responses dated August 8, 2017, October 27, 2017, and November 2 and 6, 2017.
2. Riparian Buffer Requirements
 - a. Removal of riparian buffers not directly associated with the Project's construction activities is prohibited. Disturbance and removal of riparian buffers from Project-related upland land disturbing activities that would occur within 50 feet of any perennial, intermittent, or ephemeral surface waters shall be avoided where possible, and minimized to the maximum extent practicable if 50 feet is not possible. The Owner shall notify the Department of any and all instances in which it believes 50 feet is not possible and shall proceed only where the Department concurs with the Owner's use of less than 50 feet of buffer. Removal of riparian buffers not associated with crossings shall not be allowed where stream bank stability under normal flow conditions would be compromised.

- b. The construction limit of disturbance (LOD) in upland areas approaching waterbody and wetland crossings shall be reduced from 125 feet to 75 feet wide and shall apply 50 feet from each side of the stream or wetland crossing to minimize the extent of riparian buffer disturbance. For any upland area approaching a waterbody or wetland crossing where this reduced LOD is not possible, notification of FERC approval (and Corps approval, if required) shall be provided to the Department prior to initiating land disturbing activity in that area.
- c. No refueling, hazardous materials storage, equipment maintenance, or equipment parking will take place within 100-feet of the waterbody or wetland crossing, except as allowed by the approved Annual Standards and Specifications.

3. Karst Terrain Requirements

- a. An addendum to the Karst Hazard Assessment (February 2017), and any subsequent revisions or addenda to the same approved by FERC, will be provided to the Department upon completion of field survey activities and final pipeline alignments, and prior to land disturbing activities, that address those properties in Virginia where the Owner could not previously conduct karst surveys due to land access restrictions.
- b. The Owner shall follow the measures as detailed in the Karst Mitigation Plan (March 2017), and any subsequent revisions or addenda to the same approved by FERC.
- c. To further evaluate flow paths for karst features in the vicinity of the project, the Owner shall develop a Supplemental Karst Evaluation Plan to be submitted to the Department for review and concurrence prior to initiation of land disturbing activities in karst terrain. The Department, with assistance from the Virginia Department of Conservation and Recreation (DCR) identified areas of concern in Attachment B of the Department's June 15, 2017 request letter. The Owner will conduct contingency planning in accordance with the findings and conclusions of the Supplemental Plan, as appropriate, in order to monitor and mitigate a potential accidental release or spill during construction in Virginia's karst terrain.
- d. The Owner shall: (1) conduct a survey to identify wells, cisterns, springs, and other surface waters within 1,000 feet of the project centerline in areas known to have karst topography; and, (2) conduct one water quality sampling event to evaluate wells and springs used for human consumption and located between 500 feet to 1000 feet from the project centerline. The sampling shall include the parameters identified in the Water Resources Identification and Testing Plan (February 2017), and any subsequent revisions or addenda to the same approved by FERC. The survey and/or water quality sampling event shall be conducted by the Owner at the request of a property owner and only if the property owner provides permission for access. This survey and/or water quality sampling event shall be conducted before the pipeline is placed into operation. The Owner must complete any survey and water quality evaluation requests received at least 30 days prior to placing the project in service.

- e. The Owner shall provide a financial responsibility demonstration to the Department in the amount of five million dollars (\$5,000,000), to support the Complaint Resolution Process contained in the Water Resources Identification and Testing Plan (February 2017) in the event a private water supply used for human consumption is impacted from project construction activities.

This demonstration requirement may be satisfied by any of the financial assurance mechanisms that are set forth in 9 VAC 25-650-90 through 9 VAC 25-650-130. The mechanism or combination of mechanisms shall not be accessible by third parties and shall be used by the Department to implement the Water Resources Identification and Testing Plan when necessary due to the Owner's failure to do the same.

The mechanism or combination of mechanisms shall be submitted to the Department for review and approval and must contain such wording and terms as specified by the Department to satisfy this condition.

The demonstration, having been approved by the Department, shall be made available prior to initiation of land disturbing activities in karst terrain and shall be maintained until 180 days after all land disturbing activity associated with the construction of the pipeline, and related access roads and rights-of-way have achieved final stabilization as required by the Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*). The Department will notify the Owner when the conditions to release the financial demonstration have been met.

4. Surface Water Withdrawals

- a. Any surface water withdrawals for the purposes of hydrostatic testing shall not violate applicable Water Quality Standards and shall be managed so that no more than 10% of the instantaneous flow rate from the channel is removed; the intake screens shall be designed so that screen openings are not larger than 1 millimeter and the screen face intake velocities are not greater than 0.25 feet per second.
- b. Any surface water withdrawals for the purposes of horizontal directional drilling or dust control that do not exceed 10,000 gallons per day from non-tidal waters or two million gallons per day from tidal waters shall not violate applicable Water Quality Standards and shall be managed so that no more than 10% of the instantaneous flow rate from the channel is removed and the intake screens shall be designed so that screen openings are not larger than 1 millimeter and the screen face intake velocities are not greater than 0.25 feet per second.
- c. Daily withdrawals from horizontal directional drilling or dust control activities that exceed 10,000 gallons per day from non-tidal waters and two million gallons per day from tidal waters must comply with the requirements of the Virginia Water Protection Permit Program Regulation. The Owner shall record and track the daily volumes of water withdrawn for horizontal directional drilling or dust control activities and make such records available during inspection or upon request by the Department.

- d. Hydrostatic test water shall be released to upland areas through energy dissipating dewatering devices. The energy dissipating dewatering devices must be sized to accommodate the rate and volume of release and be monitored and regulated to prevent erosion and over pumping of the energy dissipating dewatering devices. There shall be no direct point source discharge or intentional indirect discharge of hydrostatic test water to surface waters. The upland discharge of hydrostatic test waters shall be monitored in accordance with the General Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests (9 VAC 25-120-10, *et seq.*) ("VPDES General Permit"). The Owner shall record and track the daily volumes of water withdrawn for hydrostatic testing activities and make such records available during inspection or upon request by the Department. In the event of an inadvertent indirect discharge to surface waters, the Owner shall be responsible for ensuring that such discharge complies with all requirements of the VPDES General Permit, including the requirement to notify the Department within 14 days.
5. The Owner shall implement water quality monitoring in accordance with the Upland Construction Water Quality Monitoring Plan (May 31, 2017, revised June 19, 2017).
6. The Owner shall implement the measures identified in the Spill Prevention, Control, and Countermeasure (SPCC) Plan (submitted with the June 1, 2017 response to the Department and additional information submitted June 22, 2017), and any subsequent revisions or addenda to the same approved by FERC.
7. All construction and installation associated with the Project, except as permitted by the Corps, shall be accomplished in such a manner that construction material or waste material shall not be placed into any perennial, intermittent, or ephemeral surface waters or karst features.
8. The Owner shall implement the measures intended to minimize the potential for discharges of soil or rock as detailed in the General Blasting Plan (February 2017) and the Landslide Mitigation Plan Revision 4 (February 2017), and any subsequent revisions or addenda to the same approved by FERC. The Owner shall notify the Department immediately, but no later than 24 hours after discovery, if blasting or landslide activity results in unpermitted discharges of soil or rock to any perennial, intermittent, or ephemeral surface waters. Any potential impacts to karst features will be addressed in accordance with the Karst Mitigation Plan.
9. The Owner shall follow the measures intended to minimize the potential for impacts as detailed in the Acid Forming Materials Mitigation Plan (May 2017), and any subsequent revisions or addenda to the same approved by FERC.

10. The Project, including all relevant records, is subject to inspection at reasonable hours and intervals by the Department or any authorized representative of the Department to determine compliance with this Certification.
11. The Owner shall provide the Department with written or electronic notification at least 10 business days prior to any planned Construction Spread pre-construction conferences.
12. The Owner shall immediately notify the Department of any modification of this Project and shall demonstrate in a written statement that said modifications will not violate any conditions listed in this Certification. If such demonstration cannot be made, the Owner shall apply for a modification of this Certification.
13. The Owner shall comply with the requirements of the Stormwater Management Act (Va. Code § 62.1-44.15:24, *et seq.*) and Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*) and the Virginia Water Protection Permit Program Regulations (9 VAC 25-210-10, *et seq.*). The enforceability under this Certification is in addition to the independent enforcement authority of each individual program and/or permit.
14. This Certification is subject to revocation for failure to comply with the above conditions after a proper hearing. Any unpermitted or unauthorized direct or indirect discharge to State waters shall be subject to enforcement under the State Water Control Law.
15. The terms and conditions of this Certification shall remain in effect until 180 days after all land disturbing activity associated with the construction, operation, maintenance, and repair of the pipeline, and related access roads and rights-of-way have achieved final stabilization as required by the Erosion and Sediment Control Law (Va. Code § 62.1-44.15:51, *et seq.*).
16. This Certification is binding on the Owner and any successors in interest, designees and assigns, jointly and severally.

VI. CONCLUSION

The additional conditions contained in Section V of this Certification along with the requirements imposed by the VWP regulation, the Corps Section 404 permitting requirements, and prior regulatory actions associated with the approval and requirements of the June 2017 Annual Standards and Specifications, and the April 7, 2017 Section 401 Water Quality Certification of the Corps Nationwide Permit 12 provide reasonable assurance that water quality standards will not be violated. The conditions included in this Certification for upland areas are in addition to any other federal or state permit or regulatory requirements with which the Project must comply, including federal resource agency requirements embodied in the FERC certificate.

This Certification constitutes the Commonwealth's final decision on the upland activities associated with the construction, operation, maintenance, and repair of the Project under the requirement of Clean Water Act § 401. The provisions of this Certification are severable and

should any provision(s) of this Certification be declared invalid or unenforceable, the remainder of the Certification, including without limitation any additional conditions imposed hereunder, shall continue in full force and effect. The Commonwealth reserves its right to review this certification decision and take any appropriate action in accordance with 33 U.S.C. § 1341(a)(3). This Certification applies solely to upland activities authorized by FERC and shall not waive or otherwise impair or affect the authority of the Board to require additional certification under state or federal law.

By: Melanie A. Daneyport

Date: December 8, 2017

Attachment H

ESC and SWM Plan Approval Letter (Mar. 26, 2018)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 1111 E. Main Street, Suite 1400, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

March 26, 2018

Mr. Brian Clauto
Senior Environmental Coordinator
EQT Corporation
555 Southpointe Blvd, Suite 200
Canonsburg, PA 15317

Transmitted electronically to: BClauto@eqt.com

Re: Mountain Valley Pipeline, LLC
Project Location: Mile Post 196.35 through 303.4 and Supportive Ancillary Areas
DEQ SWM #: MVP-17-01
Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Plans

Dear Mr. Clauto:

The Department of Environmental Quality (DEQ) received combined Stormwater Management and Erosion & Sediment Control Plans for the project on June 19, 2017. DEQ has reviewed approximately 100 revised plan sets over the past nine months. The plans received March 26, 2018 are found to be in accordance with the *Virginia Stormwater Management Act and Regulations* and the *Virginia Erosion and Sediment Control Law and Regulations* and are approved. This approval authorizes MVP to begin land disturbing activities consistent with these plans. **No modifications, updates or additions may be made to the approved Plans without obtaining prior approval from DEQ. Additionally, approval of the ESC and SWM Plans does not relieve the owner and/or operator of complying with all other federal, state, or local laws and regulations.**

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty (30) days from the date you received this decision within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Virginia Department of Environmental Quality.

It is the responsibility of the owner and/or operator to ensure that the project is constructed in accordance with the approved Plans and accompanying specifications. Upon completion of the project, the owner and/or operator will be required to submit construction record drawings for all

March 26, 2018

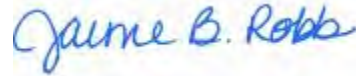
Re: DEQ SWM #: MVP-17-01

Page 2

permanent stormwater management facilities (i.e., post-development best management practices) constructed in accordance with the approved Plans.

Please contact Mr. Benjamin Leach at 804-698-4037 or Benjamin.leach@deq.virginia.gov if you have any questions about this letter.

Sincerely,



Jaime B. Robb, Manager
Office of Stormwater Management

Cc: Benjamin Leach, DEQ-CO
Jerome Brooks, Water Compliance Manager

Enclosure

Attachment I

DEQ Plan Review Memo to Board (Mar. 26, 2018)
(attachments omitted)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Matthew J. Strickler
Secretary of Natural
Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

Memorandum

To: Members of the State Water Control Board

From: Melanie D. Davenport
Director, Water Permitting Division *Melanie D. Davenport*

Date: March 26, 2018

Subject: 401 Water Quality Certification No. 17-001 - Mountain Valley Pipeline, LLC
Report to the Board on the Supplemental Karst Evaluation Plan, Annual
Standards and Specifications, and Erosion and Sediment Control and Stormwater
Management Plans

Background

On December 7, 2017, the State Water Control Board (Board) approved issuance of a Section 401 water quality certification (Certification) for upland activities for the Mountain Valley Pipeline (MVP). The Certification was issued and became effective on December 8, 2017 (Attachment A).

In order to ensure the protection of Virginia's environmental resources, the Department of Environmental Quality's (DEQ) review of MVP has been one of the most rigorous for any pipeline previously constructed in Virginia. DEQ has developed this report on MVP to provide additional information to the Board and the public on the adequacy of MVP's Supplemental Karst Evaluation Plan, Annual Standards and Specifications, and Erosion and Sediment Control and Stormwater Management Plans. Each of these documents has been subject to a thorough and comprehensive review process prior to receiving final approval from DEQ. Although the Board did not require this report when it approved the 401 Water Quality Certification No. 17-

001 for MVP, DEQ has prepared this report to be consistent with what the Board required when it issued the 401 Certification for the Atlantic Coast Pipeline (ACP) project.¹

Supplemental Karst Evaluation Plan

In Virginia, the Department of Conservation and Recreation (DCR) administers the Virginia Cave Protection Act (Virginia Code § 10.1-1000 *et seq.*). This act created the Virginia Cave Board, whose statutory authority is to advise individuals, organizations, and public agencies on cave and karst related matters; provide cave management expertise; prepare and present educational material; identify significant caves; and recommend conservation and preservation measures for cave resources within Virginia. DEQ has worked closely with DCR's staff to the Cave Board to carefully evaluate challenges associated with constructing a pipeline in karst terrain.

With over 2,000 miles of existing gas pipelines currently constructed within the karst terrain of Virginia, Tennessee, Kentucky, and West Virginia, it has been demonstrated that pipeline construction can be safely accomplished in karst terrain. In its October 13, 2017 order granting MVP a Certificate of Public Convenience and Necessity, the Federal Energy Regulatory Commission (FERC) requires MVP to implement a number of activities before, during and after construction that are designed to greatly reduce the potential for impacts to karst related water resources. These include field identification and confirmation of sensitive features (springs, sinkholes, sinking streams, outcroppings); implementation of best work practices; deployment of onsite karst specialists, and in-field inspections and monitoring during construction. MVP has also made several major, and numerous minor, route adjustments to avoid karst features and sensitive water resources that were identified by MVP in its *Karst Hazard Assessment*.

FERC also required MVP to develop and implement a *Karst Mitigation Plan* which calls for minor adjustments within the approved right-of-way to avoid karst features encountered

¹ 401 Water Quality Certification No. 17-001 issued to MVP does not contain a delayed effective date. 401 Water Quality Certification No. 17-002 issued to ACP on December 20, 2017 has a delayed effective date and does not become effective until after the submission, review and final approval as required by law of the Karst Mitigation Plan (Supplemental Karst Evaluation Plan), Annual Standards and Specifications, and Erosion and Sediment Control Plans and Stormwater Management Plans, and a report to the Board and the public by DEQ on the adequacy of these materials.

during construction if and when necessary. MVP will implement multiple avoidance and protective measures during construction to prevent impacts to karst and water resources. Best management practices required by Virginia's erosion and sediment control program and FERC's requirements in MVP's *Spill Prevention, Control, and Countermeasure (SPCC) Plan* and the *Karst Mitigation Plan* are designed to prevent uncontrolled releases to surface waters and karst features in order to protect underlying aquifers. MVP will deploy karst experts as on-site inspectors during all phases of construction in karst terrain to monitor karst resources, identify potential connectivity to the subterranean environment, prevent uncontrolled surface water releases, prevent impacts to karst features, and ensure that prescribed measures are in-place to protect karst features, surface water, and groundwater resources.

Certification No. 17-001 issued to MVP requires submission and approval of a Supplemental Karst Evaluation Plan prior to initiating land disturbing activities in karst terrain. Specifically, Condition 3.c. requires *"To further evaluate flow paths for karst features in the vicinity of the project, the Owner shall develop a Supplemental Karst Evaluation Plan to be submitted to the Department for review and concurrence prior to initiation of land disturbing activities in karst terrain. The Department, with assistance from the Virginia Department of Conservation and Recreation (DCR) identified areas of concern in Attachment B of the Department's June 15, 2017 request letter. The Owner will conduct contingency planning in accordance with the findings and conclusions of the Supplemental Plan, as appropriate, in order to monitor and mitigate a potential accidental release or spill during construction in Virginia's karst terrain."*

In response to DEQ's June letter (cited in the above condition) and in advance of the issuance of the Certification, on July 14, 2017, MVP submitted its Supplemental Karst Mitigation Plan (Plan), which was developed with guidance provided by DCR. The Plan described additional dye testing that would be conducted in order to evaluate flow paths in karst areas which had not been previously studied. This information would be used by MVP to facilitate the development of appropriate spill response and recovery measures (also referred to as "contingency plans") in the event substances are accidentally released in an area that could affect sensitive karst features during the construction or operation of the MVP project. The supplemental Plan is consistent with discussions and understandings reached among MVP's

consultants, DEQ and DCR staff at a karst work session on June 8, 2017, as well as various follow up consultations regarding the issues. DEQ and DCR reviewed the Plan and by letter dated March 13, 2018, DEQ concurred that the Plan would evaluate the flow paths for karst features identified in Attachment B of DEQ's June 15, 2107 request for information, as required by Condition 3.c of Section 401 Water Quality Certification No. 17-001.

MVP elected to retain DCR to conduct the dye tracing and evaluate flow paths that are included in the Plan. DCR conducted the field studies between August and November 2017. In a report dated February 27, 2018, DCR provided MVP and DEQ the results of the field studies. Information in this report will be used by MVP's Karst Specialist Inspectors who will be on-site in karst terrain during all phases of land disturbance, as required by the Mountain Valley Karst Mitigation Plan.

Finally, MVP consulted with DCR and prepared a field manual² consistent with the February 2018 report from DCR. This field manual identifies all milepost sections of the MVP Project limit of disturbance that overlie or are connected to karst terrain to assist MVP's Karst Specialist Team in responding to any accidental releases that may occur in those areas. This document (Attachment B) provides designation by route segment as defined by construction mileposts of karst waters (spring or springs, cave streams) potentially at risk for impact from construction activities or operation. Such segments will necessarily overlap in areas near spring basin boundaries (*e.g.*, the north slope of Sinking Creek Mountain). Pre-designation of and association of these corridor segments will be used in contingency planning to identify specific karst locations that require monitoring and any potential mitigation in the event of an accidental spill during construction and operation in karst terrains.

The field manual will also assist the Karst Specialists in identifying appropriate surface water locations in other areas of karst terrain outside the identified mileposts shown in the manual. This will be an additional resource to utilize along with other studies and plans such as the Karst Hazards Assessment, Karst Mitigation Plan, Erosion and Sediment Control Plan, and SPCC, for deployment of recovery and mitigation measures in the event of an accidental release during construction activities or operation.

² MVP has titled this manual as the Karst Area Contingency Guide.

Annual Standards and Specifications

Virginia Code § 62.1-44.15:52 provides that Virginia's erosion and sediment control program and regulations shall be designed to prevent unreasonable degradation of properties, stream channels, waters, and other natural resources by providing for effective control of soil erosion, sediment deposition, and nonagricultural runoff from regulated land-disturbing activities. The Virginia Erosion and Sediment Control Program (VESCP) is authorized by the Virginia Erosion and Sediment Control Law and implemented through the Virginia Erosion and Sediment Control Regulations. These regulations specify the "minimum standards" that must be followed on all regulated activities including: erosion and sediment control design criteria, techniques, practices and policies.

Virginia Code § 62.1-44.15:25 provides that the Virginia Stormwater Management Program (VSMP) shall be designed to ensure the general health, safety, and welfare of the citizens of the Commonwealth, and to protect the quality and quantity of state waters from the potential harm of unmanaged stormwater. The VSMP is authorized by the Virginia Stormwater Management Act and implemented through the Virginia Stormwater Management Program Regulations. The VSMP addresses stormwater management at three critical phases: before construction starts through the review and approval of plans to ensure that local and state regulatory design criteria have been satisfied to protect state waters from unmanaged stormwater; during construction through the inspection of erosion and sediment control practices, pollution prevention measures, and the installation of stormwater best management practices that are used to prevent or reduce the pollution of state waters after construction is complete; and after construction through the inspection of BMPs to ensure proper maintenance is being performed by the owner.

State law requires natural gas pipeline utilities (and certain other utilities) to meet the requirements for the VESCP and VSMP under a DEQ-approved Annual Standards and Specifications (AS&S) Program. The Virginia Stormwater Management Program law and regulations establish that land disturbance associated with pipeline construction activities must satisfy the requirements of the stormwater and erosion and sediment control laws and regulations.

Specifically, Virginia Code § 62.1-44.15:31 states:

State entities, including the Department of Transportation, and for linear projects [including construction, installation, or maintenance of electric transmission, natural gas, and telephone utility lines and pipelines, and water and sewer lines], electric, natural gas, and telephone utility companies, interstate and intrastate natural gas pipeline companies, and railroad companies shall ... annually submit a single set of standards and specifications for Department approval that describes how land-disturbing activities shall be conducted. Such standards and specifications shall be consistent with the requirements of this article and associated regulations, including the regulations governing the General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Construction Activities and the Erosion and Sediment Control Law (§ 62.1-44.15:51 et seq.) and associated regulations. ... The standards and specifications shall include:

- 1. Technical criteria to meet the requirements of this article and regulations developed under this article;*
- 2. Provisions for the long-term responsibility and maintenance of stormwater management control devices and other techniques specified to manage the quantity and quality of runoff;*
- 3. Provisions for erosion and sediment control and stormwater management program administration, plan design, review and approval, and construction inspection and enforcement;*
- 4. Provisions for ensuring that responsible personnel and contractors obtain certifications or qualifications for erosion and sediment control and stormwater management comparable to those required for local government;*
- 5. Implementation of a project tracking and notification system to the Department of all land-disturbing activities covered under this article; and*
- 6. Requirements for documenting onsite changes as they occur to ensure compliance with the requirements of the article.*

Virginia law, in § 62.1-44.15:31, affirmatively gives authority that would normally be delegated to a locality for the review, approval and enforcement of erosion control and stormwater management plans to the utility, with limited oversight by DEQ through review and approval of annual standards and specifications.

MVP worked for approximately eighteen months to develop, revise and refine AS&S in order to meet Virginia's legal and technical requirements. MVP's Annual Standards and

Specifications that address both erosion and sediment control and stormwater management were approved by DEQ on June 20, 2017 (Attachment C).

Mountain Valley Pipeline Project Specific Erosion and Sediment Control and Stormwater Management Plans

Due to the scope and scale of this project, concerns from local governments, legislators, and the public, DEQ required MVP to submit project specific erosion and sediment control (ESC) and stormwater management (SWM) plans for DEQ review and approval even though the plans are not required when approved AS&S are followed. Virginia Code § 62.1-44.15:55.D states that: “Individual approval of separate projects within subdivisions 1 and 2 is not necessary when approved specifications are followed”. Subdivision 1 applies to construction, installation, or maintenance of electric transmission, natural gas, and telephone utility lines and pipelines, and water and sewer lines. DEQ does retain compliance and enforcement authority over any project specific erosion and stormwater plans and practices but DEQ in general does not review specific plans or construction. Requiring the submittal of ESC and SWM plans provides an additional measure to ensure protection of state waters. These project specific plans address every foot of land disturbance related to pipeline construction, including the path of the proposed pipeline right-of-way (ROW), access roads, construction lay-down areas and construction activities that will occur in streams and wetlands.

In order to provide a transparent review process and to receive public input, DEQ went beyond state law requirements and required MVP to post the plans on its website so that the public could review them and provide technical input on technical and engineering requirements of the draft ESC and SWM plans. The opportunity to provide input lasted at least 30 days.

DEQ contracted with an outside engineering consulting firm to assist in reviewing the ESC and SWM plans to ensure that they meet the design requirements contained in Virginia’s regulations, including post-construction stormwater water quality and quantity requirements. DEQ worked very closely with the consulting engineers and remained the approval authority.

Project specific ESC and SWM plans have been in development since October 2016. DEQ (and its contractors), as well as MVP have spent tens of thousands of person-hours in designing and reviewing the plans. MVP and DEQ conducted approximately eleven (11) in-

person work sessions and meetings, supplemented by approximately seventeen (17) conference call work sessions between July 2017 and March 2018. This intensive review, comment, revision and collaboration resulted in project plans that meet the technical standards and criteria set out in the ESC and SWM regulations.

DEQ approved MVP's project specific erosion and sediment control and stormwater management plans by letter dated March 26, 2018 (Attachment D). Further information regarding the criteria for and review of the ESC and SWM Plans is included below.

Erosion and Sediment Control Plans

Virginia's Erosion and Sediment Control Regulation requires the development of a plan that demonstrates compliance with the criteria, techniques and methods described in nineteen (19) minimum standards. The Virginia Erosion and Sediment Control Handbook (Handbook) establishes minimum design and implementation standards for these practices that are utilized to achieve the minimum standards. The Handbook states that it is intended to serve as a technical guide but that innovative modifications to the control measures or design procedures are acceptable and encouraged, particularly to improve mitigation of sediment loss. Inherent in the development and approval of an erosion and sediment control plan is the application of best professional judgment and definition of underlying assumptions. In approving these project specific plans DEQ has deliberately applied a host of conservative assumptions in its design requirements.

MVP will utilize a number of erosion and sediment control practices during construction. The most frequent practices are: clean water diversions (CWD), enhanced inspection frequency, installation of temporary water bars, dry ditching of stream crossings (unless directional drilling is utilized), perimeter controls, temporary seeding/mulching of all disturbed areas within seven days of inactivity, top soil segregation and reuse, soil decompaction specifications and native seed mix for permanent revegetation.

The approved ESC plans require MVP to install approximately 1,050 individual CWDs during right-of-way construction. CWDs prevent clean water from running onto the construction right-of-way and picking up sediment. CWDs also reduce the volume of water that has come in

contact with disturbed land and allow for installed erosion control features to operate more effectively. MVP will also install temporary water bars, which are a ridge or channel constructed diagonally across the right-of-way to convey water off the construction site. Also known as slope breakers, they break the flow into smaller volumes to control the velocity of the water coming off of the site. All temporary water bars will have compost filter sock outlet protection and an excavated sump for additional capacity to filter runoff. MVP will utilize a variety of perimeter controls during the construction process, including: silt fence, super silt fence, compost filter sock, and belted silt retention fence on all downslope edges based on contributing slope lengths. These perimeter controls protect water bodies from sediment-laden runoff.

The ESC plans include a stream crossing restoration detail, which depicts the restoration sequence and mitigates erosion of streambanks during the operational life of the pipeline. Permanent water bars will be installed within 25 feet of all water body banks.

The specifications for both soil decompaction and top soil segregation are designed to improve plant growth and vitality and reduce runoff after stabilization. The specification for the permanent seed mix includes use of a native seed mix, which was developed to return the limits of disturbance to native habitat and provide suitable habitat for wildlife in the permanent right of way.

The approved ESC plans provide a variance to Minimum Standard 16, which states in part that for construction of underground utility lines no more than 500 linear feet of trench may be opened at one time. The Erosion and Sediment Control Regulation, 9VAC25-840-50, provides that a variance may be granted when any technical requirement is inappropriate or too restrictive for site conditions. The regulation requires that a project applicant explain the reasons for the requested variance in writing and any allowed variances must be documented in the ESC plan. The regulation also provides that in considering the request, DEQ is to consider the need of the applicant to maximize cost effectiveness and the need to protect off-site properties and resources from damage.

DEQ has evaluated a number of factors in providing this variance including the construction techniques that will be utilized, the equipment required for construction, the length

of the project, the diameter of the pipe involved and the need to create safe working conditions for all employees involved in the Project. The variance allows MVP to have five (5) cumulative miles of trench open in each construction spread, with interruptions required at regular intervals based on the terrain. Specifically, continuous open trench lengths are limited based on slope conditions: (i) in steep slope areas (where the slope exceeds thirty three (33) percent), the open trench must be interrupted every 2,500 feet; (ii) in areas where slopes range from ten (10) percent to 33 percent, the trench must be interrupted every 5,000 feet; and, (iii) in low slope areas (less than 10 percent slope), the maximum continuous length cannot exceed 7,000 feet.

Post-Construction Stormwater Management Plans

Similar to the erosion and sediment control plans, DEQ also required MVP to submit detailed, project-specific post-construction stormwater calculations and plans for every aspect of the project including the right-of-way, access roads, and valve pads. These post-construction stormwater management plans must comply with Virginia's stormwater regulations that are designed to protect water quality after construction by meeting both the water quality and quantity requirements (including channel, flood, and sheet flow requirements) in accordance with the Virginia Stormwater Management Program Regulation, 9VAC25-870.

In order to meet the post-construction water quality and quantity requirements of Virginia's Stormwater Program Regulation, MVP will install approximately 3,800 permanent water bars across the stabilized right-of-way (ROW). A water bar is a small ditch or ridge of material that is constructed diagonally across the right-of-way to divert stormwater runoff. These permanent features will provide treatment at the end of each water bar. This end of bar treatment is designed to ensure stormwater runoff from the ROW will be converted to sheet flow and will not occur at such velocities to cause erosion.

Additionally, thirteen valve pads located on the mainline and the permanent access roads needed to reach these valve pads will also utilize stormwater features that reduce post construction runoff quantity in accordance with the regulation.

Conclusion

As shown in this report, the oversight process for MVP has been more rigorous than any other pipeline in Virginia history. DEQ has carefully reviewed MVP's Supplemental Karst Evaluation Plan, Annual Standards and Specifications, and Erosion and Sediment Control and Stormwater Management Plans. By letter dated March 13, 2018, DEQ concurred on the Supplemental Karst Evaluation Plan. By letter dated June 20, 2017, DEQ determined that the Annual Standards and Specifications were in compliance with the State Water Control Law and applicable, duly-promulgated regulations and were approved by DEQ. By letter dated March 26, 2018, DEQ determined that the Erosion and Sediment Control and Stormwater Management Plans were in compliance with the State Water Control Law and applicable, duly-promulgated regulations and were approved by DEQ.

Attachment J

DEQ Presentation to Board (Apr. 12, 2018)

Director's Report
April 12, 2018

Melanie D. Davenport
Director, Water Permitting Division

Mountain Valley Pipeline, LLC

Erosion and Sediment Control
and
Stormwater Management

ESC and Stormwater Management Plan Review Time Line

Spring 2016 – Summer 2017

- Meetings with MVP on Virginia's ESC and SWM requirements
- Review by DEQ of proposed project documentation related to Annual Standards & Specifications and ESC and SWM plans
- AS&S approved June 20, 2017

3

ESC and Stormwater Management Plan Review Time Line

Summer 2017 – March 26, 2018

- DEQ hires 3e Consulting, Inc. June 2017 to assist in MVP and ACP plan review
- 100+ ESC and SWM plan sets received for ROW, roads, contractor yards, and white paper
- More than 4,500 hours of 3e and 2,000 hours of DEQ staff time spent on plan review
- March 26, 2018 DEQ determines ESC and SWM plans for MVP meet regulatory requirements and approves plans for 4 spreads, 2 contractor yards, and access roads

4

Annual Standards & Specifications

- § 62.1-44.15:31 of VA Code requires gas pipelines to obtain Annual Standards and Specifications consistent with:
 - Stormwater Management Act and associated regulations
 - Erosion and Sediment Control Law and associated regulations and
 - Regulations governing the General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Construction Activities (the construction general permit)
- AS&S generally describes programs for:
 - performing plan reviews
 - conducting compliance inspections
 - details requirements of the SWPPP
 - Other special environmental consideration (such as karst mitigation plan)

5

Site Specific Plans

- 9VAC25-870-76 of VSMP regulations requires site-specific stormwater management plans or comprehensive stormwater management plan for post construction SWM from linear development projects.
- Site specific plans required regardless of AS&S
 - Detail features specifically located at project site
 - Demonstrate implementation of ESC and post construction SWM measures
 - Identifies components required for complete ESC and SWM plans

6

Plan Review Process: Completeness Review

- General project information
- All detail sheets for project
- Supporting calculations
- Existing and proposed topography
- Limits of disturbance delineated
- Temporary and permanent ROW
- Jurisdictional waterbodies and impaired waters
- Stream crossings
- Pre- and post- land cover and predominant soils (for SWM)
- Environmentally sensitive features, applicable setbacks
- ESC measures
- SWM facilities (if applicable)
- Existing and final drainage patterns and flow paths
- Final stabilization and revitalization plans
- General calculation principles correctly applied

Full ESC and SWM plan review begins after plans are deemed "complete"

7

Plan Review Process: Full Review

- Verify plans accurately represent existing conditions
- Determine appropriateness of ESC and SWM measures and placement
- Confirm all calculations meet ESC and SWM requirements.

ESC and SWM plans cannot be approved until reviewed by a certified plan reviewer.

§62.1-44.15:53 A and §62.1-44.15:30 B

8

Strategic Approach to Plan Review

- Initially received plans for all spreads
- Implemented a 'template' approach: review and comment on a single spread, once satisfactorily meets all Virginia's ESC and SWM requirements, apply all methodologies to all other spreads.
- More efficient
- Spread 8 chosen as the template
 - Represents various environmentally sensitive features found across multiple spreads

9

Typical Utility Erosion and Sediment Control (ESC) Measures

TYPICAL ESC MEASURES	DEFINITION
Waterbars/Slope Breakers	Is a ridge or channel constructed diagonally across a utility right-of-way or a road that is for the water to be conveyed off the construction site. They break the flow into smaller volumes to help control the velocity of the water coming off of the site.
Compost Filter Sock (CFS)	Is a type of contained compost filter berm with a mesh tube filled with composted material that is placed perpendicular to sheet-flow runoff to control erosion and retain sediment in a disturbed areas.
Silt Fence,	Is a fence made of filter fabric material used on construction sites to protect water quality in water bodies from sediment latent stormwater runoff.
Belted Silt Retention Fence (BSRF)	Is a silt fence that has greater elasticity providing more protection to help with filtering capabilities and enhanced structural strength.

10

Typical Utility Erosion and Sediment Control (ESC) Measures

TYPICAL ESC MEASURES	DEFINITION
Super silt fence (chain link backed)	Is a design that uses filter fabric reinforced by a wire mesh or chain link fence. The metal backing gives the fence increased strength to resist the weight of soil and water, which may be trapped by the fence in a large drainage area.
Sediment sump/trap/basin	Is a temporary pond built on a construction site to capture eroded or disturbed soil that is washed off during a storm. It allows for the water to settle in this area before discharging into a local water body.
Sediment sump/trap/basin	Is a diversionary measure that conveys water away from a project area towards other ESC control measures. These diversion dikes are used to allow for proper sizing of downstream ESC measures.
Clean Water Diversions	Is a diversion measure that moves clean water that is outside of the project area away from entering the construction site. This may be done by utilizing a dike or a pipe or both in conjunction with one another.

11

Typical Utility Erosion and Sediment Control (ESC) Measures

TYPICAL ESC MEASURES	DEFINITION
Slope Drains	Is a pipe that leads water away from the right of way or outside the construction site. This flow may be clean or have sediment within it.
Outlet Protection	Is typically riprap (rock) that is used as slope protection to prevent erosion by dissipating the energy of the runoff. This is done by reducing the speed of concentrated stormwater flow, thereby reducing the potential of erosion or scouring at stormwater outlets.
Trench Breakers	Are used in pipeline construction to control erosion and are usually placed at a specified distance down slope in series of one another. They are typically made of Polyurethane Foam and/or Sandbags which helps to keep water from running down the trench.
Wetland Crossing Mats	Is a hardwood mat or logs cabled together that prevent heavy equipment and vehicles from impacting areas, sometimes it is used as part of a bridging or causeway system.
Post Construction Mats used to Encourage Vegetation for Stabilization	Is either a jute mesh mat, hydro seeding tackifiers, or some other stabilization method that limits the movement of exposed soils and encourages both temporary and permanent vegetation to establish within the post construction site.

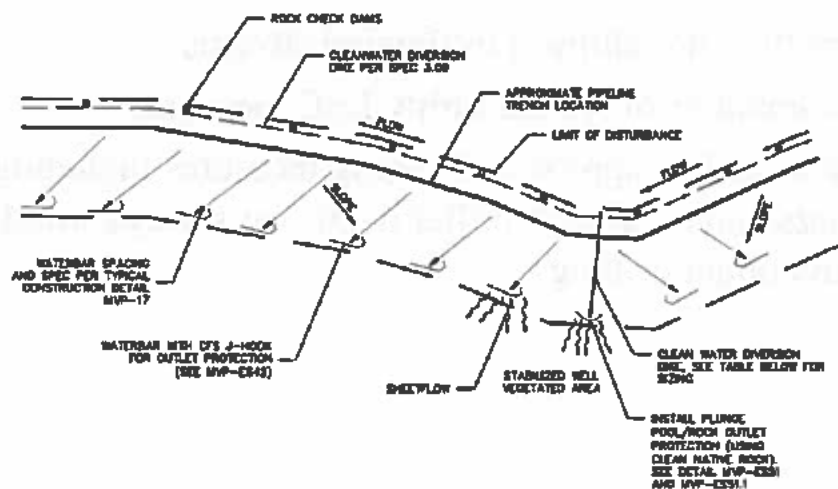
12

Clean Water Diversion (CWD)

- Used to divert water from running onto project area
- Unique to Virginia
- Allows proper sizing of each individual ESC measure to provide reasonable assurance that the system as a whole will minimize erosion and sedimentation
- 1,058 clean water diversions proposed

13

Temporary Construction Clean Water Diversion Detail



14

Waterbars

- Required by FERC
- Temporary and permanent
- Approximately 3,800 total
- Potential to create a point of concentrated flow at permanent waterbars, which could cause erosion
- MVP revised approach

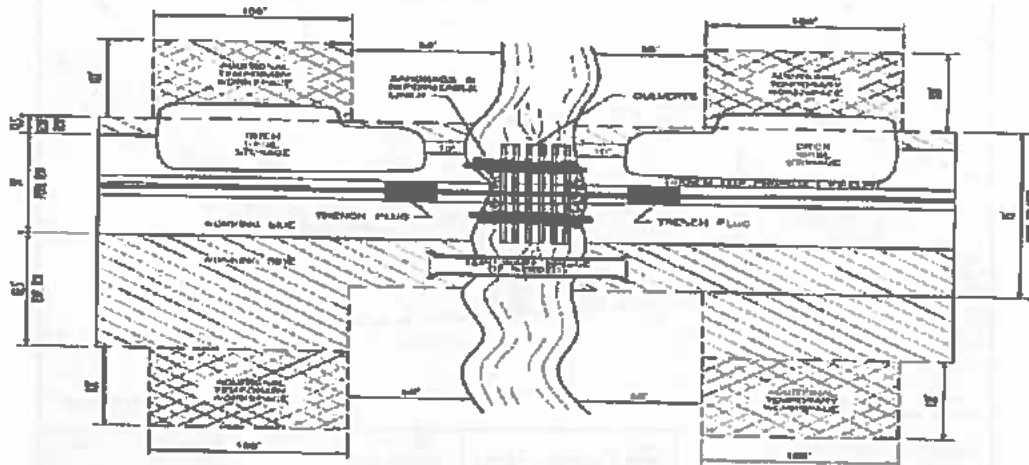
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Wetland & Stream Crossings

- Construction not allowed in flowing streams
- Implementation of typical utility ESC measures
- Must also utilize approved bridging measures including flume crossings, pump around, coffer dams, causeways/wood mats and directional drilling

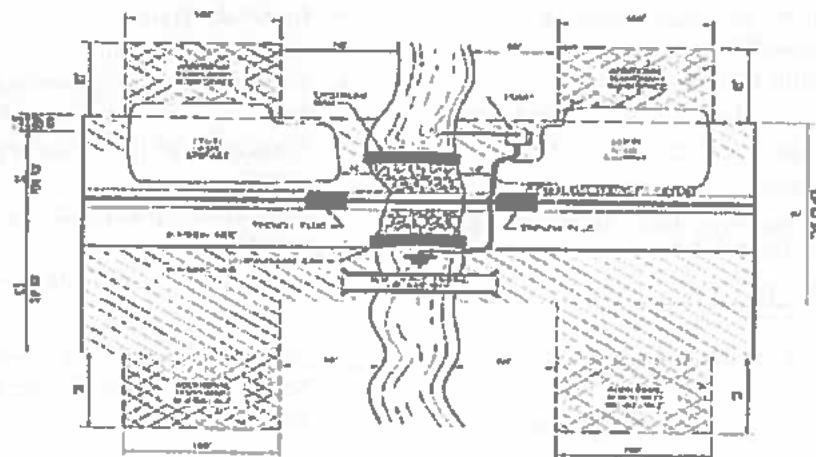
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Stream Crossing - Flumed Example



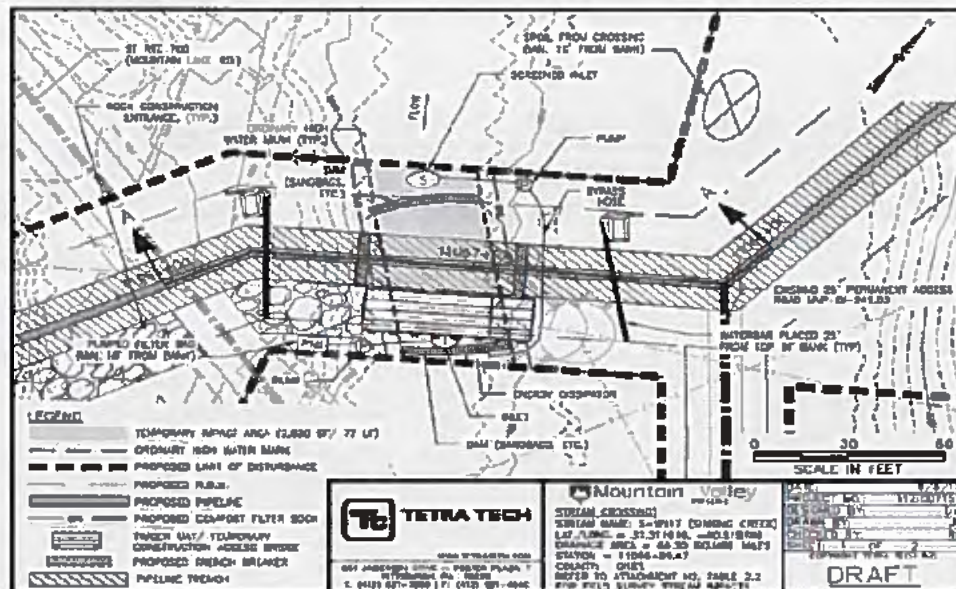
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Stream Crossing – Dam and Pump Example



18

Detailed Stream Crossing



Sequence of Pipeline General Construction Activities

- Survey & Stake Limits of Disturbance
- Install perimeter ESC
- Tree felling, clearing & grubbing
- Install, seed, and mulch CWD
- Grading
- Upgrade/construct Access Roads & Laydown Yards
- Segregate Top Soil
- Strip and stockpile
- Seed and mulch stockpiles
- Stake centerline
- Install temporary waterbars
- Create Benchwork area
- Excavate Trench
- Segregate Top Soil
- Trench preparation, stringing, bending, welding, pipe installation
- Trench backfilled w/segregated topsoil
- Re-spread topsoil and disk
- Final grading
- Install permanent waterbars
- Clean up
- Remove Clean Water Diversions
- Seed and mulch ROW for final stabilization

Sequence of Pipeline Construction Activities

- During construction activities, temporary waterbars are installed at the end of each day following land disturbance and removed at the start of the following day.
- Temporary seed and mulch applied for stabilization to stockpiles or benchwork areas.
- Topsoil segregation will occur within limits of disturbance.

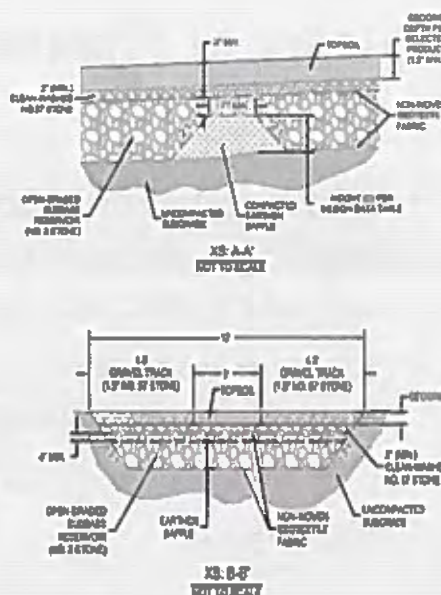
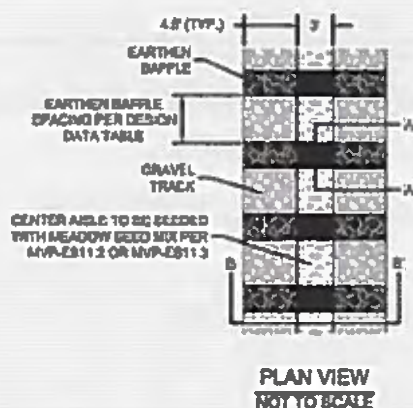
21

Permanent Access Roads

- Low Impact Development (LID) proposed to address water quantity from permanent roads.
- Principle design elements similar to permeable pavement.
- MVP significantly decreased the number of permanent access roads from about 50 miles of proposed roads to approximately 12,000 linear feet of new roadways total.

22

Permanent Access Roads



23

Stormwater Technical Whitepaper

- Details conservative assumptions used in SWM calculations
- Demonstrates how the methodology meets water quality and quantity requirements in accordance with VSMP regulations (9VAC25-870) including:
- Channel protection for concentrated flows met by the Energy Balance Method.
- Flood protection for concentrated flows met by reduction in runoff from the 10-year 24-hour storm.
- Sheet flow requirements met through no increases in sheet flow volumes and physical spreading via water bar end treatments.
- Implemented project wide

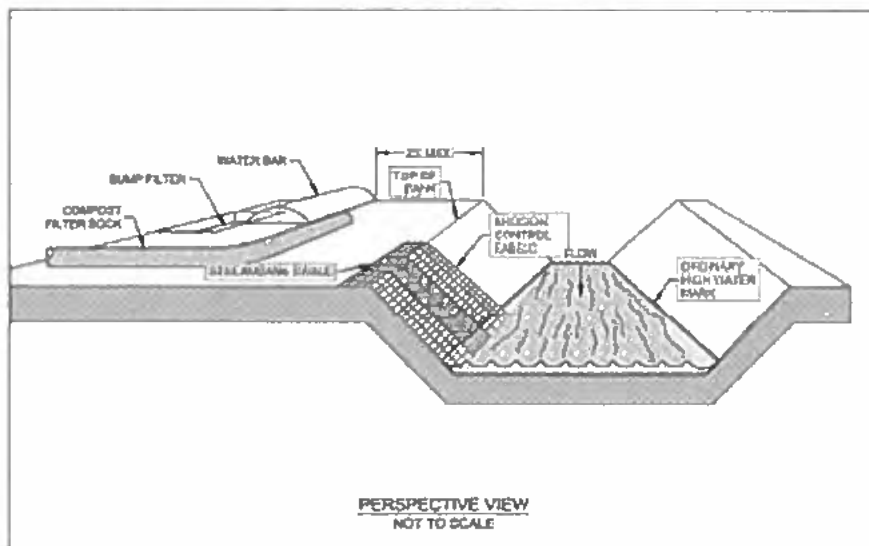
24

Post Construction Stream Crossing

- Designed to prevent re-concentration of flow at post-construction waterbars
- Re-concentrated flow could cause edge of stream erosion
- Unique because of Virginia's stormwater management water quantity requirements
- Runoff diverted from water bar to sump and staged released level vegetated area to decrease concentrated flow volumes
- Any re-concentrated flow will be directed to an armored channel discharging to stream

25

Post Construction Stream Crossing

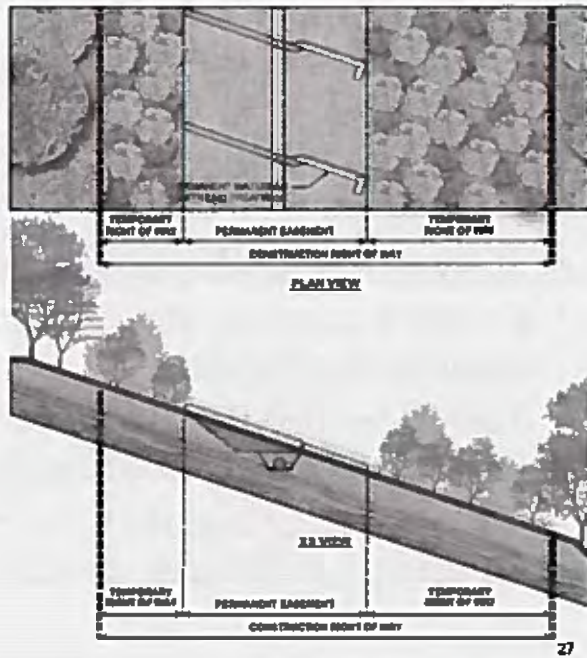


POST-CONSTRUCTION STREAM CROSSING DESIGN DETAILS

PLATE 4

26

POST CONSTRUCTION ROW



Attachment K

DEQ Presentation Board (Davis) (Aug. 21, 2018)

Comparison of VWP Permit and Nationwide 12 Permit

Dave Davis

Office of Wetlands & Stream Protection

August 21, 2018

VWP Program and Corps Program

- Both Virginia Water Protection (VWP) permit and the Corps' Section 404 permits **apply to the same activities**: the dredging or filling of surface waters and wetlands.
- For linear projects (all roads and all types of utility projects), both programs have substantially identical permitting requirements.

9 VAC 25-210-130 (J)

"Coverage under a general, regional, or nationwide permit promulgated by the USACE and certified by the board in accordance with this section shall be deemed coverage under a VWP general permit regulation..."

08/21/2018

3

Siting Determinations In SWCL

Regarding the requirement to develop general permits, State Water Control Law (62.1-44.15:21(D)(2)) states:

"No Board action on an individual or general permit for such facilities shall alter the siting determination made through Federal Energy Regulatory Commission or State Corporation Commission approval."

08/21/2018

4

VWP Permit & Corps' NWP12

Both require:

- Surface Waters Delineation
- Avoidance/minimization
- Compensation for unavoidable permanent impacts
- Each wetland/stream crossing is a "single and complete project"
- Restoration of all temporary impacts
- Coordination with DGIF regarding time of year restrictions for state trout waters
- Appropriate Erosion & Sediment Controls

08/21/2018

5

DEQ VWP Program	Corps Permit Program
<p>Permitting: Permit requirements apply to activities including the construction, dredging, filling, or excavation of surface waters and wetlands. VWP also regulates certain types of excavation in wetlands and fill in isolated wetlands which may not be under federal jurisdiction. For linear projects, DEQ and Corps have substantially identical requirements.</p> <p>VWP regulations do not provide the authority to regulate upland construction activities. The Clean Water Act Section 401 certification process allows DEQ to go beyond VWP's regulatory authority by providing a mechanism to review a project under the lens of overall potential water quality impacts from upland construction activities.</p>	<p>Permit requirements apply to activities including the construction, dredging, filling, or excavation of surface waters and wetlands. For linear projects, DEQ and Corps have substantially identical requirements.</p> <p>The Corps does not regulate activities in uplands.</p>

08/21/2018

6

DEQ VWP Program	Corps Permit Program
Joint Permit Application (JPA) The JPA process and JPA forms are used by the USACE, the VMRC, the DEQ, and the Local Wetlands Board for permitting purposes involving tidal and/or non-tidal water, tidal and/or non-tidal wetlands, including, but not limited to, construction, dredging, filling, or excavation. JPAs are submitted to VMRC.	Joint Permit Application (JPA) U.S. Army Corps of Engineers uses the same JPA process and JPA forms as DEQ.

7

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DEQ VWP Program	Corps Permit Program
Definition of "single and complete project" "Single and complete project (e.g., a single and complete crossing) applies to each crossing of a separate surface water (e.g., a single water body) and to multiple crossings of the same water body at separate and distinct locations." (9VAC25-670-10)	Nationwide Permit 12 – Note 2 "For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization."

8

08/21/2018

DEQ VWP Program	Corps Permit Program
Compensation	Compensation
<p>VWP requires compensation for all permanent loss over 1/10 acre and/or 300 linear feet of waters.</p> <p>VWP requires compensation for permanent conversion impacts (forested wetlands to emergent wetlands) at a 1:1 ratio.</p> <p>For utility projects, regulations allow for a 20-foot wide maintenance and access corridor not subject to compensation requirement.</p>	<p>The Corps requires compensation for all permanent loss over 1/10 acre and/or 300 linear feet of waters.</p> <p>Nationwide Permit 12, RC #14 3 – c: "Compensatory mitigation may be required for permanent conversion of wetlands within the utility line corridor." (emphasis added)</p> <p>** MVP has voluntarily offered compensation at a 1:1 ratio for permanent conversion impacts as part of their NWP12 Corps permit</p> <p>** ACP has voluntarily offered compensation at a 1:1 ratio for permanent conversion impacts as part of their NWP12 Corps permit</p>

DEQ VWP Program	Corps Permit Program
Erosion and Sediment Control	Erosion and Sediment Control
<p>"Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control handbook, Third Edition, 1992." (9VAC25-670-100)</p>	<p>Corps requires compliance with state and local erosion and sediment control laws for construction.</p>

DEQ VWP Program	Corps Permit Program
Delineation State Water Control Law (62.1-44.15:21(C)) states "[t]he [State Water Control] Board shall utilize the U.S. Army Corps of Engineers' 'Wetlands Delineation Manual, Technical Report Y-87-1, January 1987, Final Report'"	Delineation The U.S. Army Corps of Engineers' "Wetlands Delineation Manual, Technical Report Y-87-1, January 1987, Final Report" is the approved method for delineating wetlands.
SWCL goes on to say: "Any delineation accepted by the U.S. Army Corps of Engineers as sufficient for its exercise of jurisdiction pursuant to § 404 of the Clean Water Act shall be determinative of the geographic area of that delineated wetland."	

08/21/2018

VWP Permit	NWP 12
Standard Project Conditions 1) "The activities authorized by this permit shall be executed in a manner that any impacts to beneficial uses are minimized..." (9VAC25-210-110 C.2) 2) "No activity shall substantially disrupt the movement of aquatic life..." (9VAC25-210-50 A)	Regional & General Conditions RC #14 - 3. b. i: "...selection of an alignment which avoids and minimizes wetland and stream impacts to the maximum extent practicable." GC #2: "No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life"

08/21/2018

VWP Permit	NWP 12
Standard Project Conditions	NWP12 & General Conditions
<p>3) "Flows downstream of the project area shall be maintained to protect all uses." (9VAC25-210-50 A)</p> <p>4) "No activity shall cause more than minimal adverse effect on navigation..." (9VAC25-210-230 A.1)</p>	<p>"Appropriate measures to maintain normal downstream flows and minimize flooding to maximum extent practicable"</p> <p>GC #1 – a: "No activity may cause more than a minimal adverse effect on navigation."</p>

13

VWP Permit	NWP 12
Standard Project Conditions	General Conditions
<p>5) "The activity shall not impede the passage of normal or expected high flows..." (9VAC25-210-50 A)</p> <p>6) "Continuous flow of perennial springs shall be maintained..." (9VAC25-670-100 B.13)</p>	<p>#9: "The activity must not restrict or impede the passage of normal or high flows"</p> <p>Covered by #9: [because no distinction between perennial spring and other surface water types]</p>

14

VWP Permit	NWP 12
Standard Project Conditions	General Conditions
<p>7) "All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity" (9VAC25-210-50 A)</p>	<p>#3: "Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized."</p> <p>#9: "Appropriate erosion and sediment controls must be used and maintained in effective operating condition during construction"</p> <p>#11: "...other measures must be taken to minimize soil disturbance."</p>

08/21/2018

15

VWP Permit	NWP 12
Standard Project Conditions	General Conditions
<p>8) "All instream activities shall be conducted during low-flow conditions whenever practicable." (9VAC25-670-100 D.4)</p> <p>9) "All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters..." (9VAC25-210-50 A)</p>	<p>#12: "Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides."</p> <p>#6: "No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.)"</p>

08/21/2018

16

VWP Permit	NWP 12
Standard Project Conditions 10) "All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts..." (9VAC25-210-110 C) 11) "Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters." (9VAC25-210-110 E)	Regional & General Conditions GC #6: "Material used for construction or discharged must be free from toxic pollutants in toxic amounts." RC #14 – 9: "...a plan to address the prevention, containment, and cleanup of sediment or other materials caused by inadvertent returns of drilling fluids to waters of the U.S..... needs to be included with the PCN."

08/21/2018

17

VWP Permit	NWP 12
Standard Project Conditions 12) "Machinery or heavy equipment in temporarily impacted wetlands shall be placed on mats or geotextile fabric, or other suitable means shall be implemented, to minimize soil disturbance to the maximum extent practical." (9VAC25-670-100 B.9) 13) "Stream channel restoration activities shall be conducted in the dry or during low-flow conditions." (9VAC25-670-100 D.4)	General Conditions #11: "Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance." #12: "Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides."

08/21/2018

18

VWP Permit	NWP 12
Standard Project Conditions	Regional & General Conditions
<p>14) "Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable." (9VAC25-210-80 B.1f)</p> <p>15) "All temporarily disturbed wetlands shall be restored to preconstruction conditions within 30 calendar days of completing work in areas, which shall include re-establishing pre-construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on DCR's Virginia Invasive Plant Species List..." (9VAC25-670-100 B.11)</p>	<p>NWP12: "After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate."</p> <p>RC #14 – 5. b: "All excavated material must be placed back into the trench to the original contour and all excess excavated material must be completely removed from the wetlands within 30 days after the pipeline has been laid"</p> <p>RC #7: "Plant species listed by the most current Virginia DCR Invasive Alien Plant List shall not be used for re-vegetation for activities authorized by any NWP"</p>

VWP Permit	NWP 12
Standard Project Conditions	Regional Conditions & NWP12
<p>17) "All materials (including fill, construction debris, excavated materials, and woody materials that are temporarily placed in wetlands, in stream channels, or on stream banks) shall be placed on mats or geotextile fabric..." (9VAC25-670-100 B.12)</p> <p>18) "Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials." (9VAC25-670-100 B.7)</p> <p>19) "Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities." (9VAC25-210-110 B)</p>	<p>RC #14 – 5. a: "All excavated material stockpiled in a vegetated wetland area is placed on filter cloth, mats, or some other semi-permeable surface"</p> <p>NWP12: "Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows."</p> <p>NWP12: "The State Water Control Board issued conditional Section 401 Water Quality Certification for NWP 12 as meeting the requirements of the Virginia Water Protection Permit Regulation, which serves as the Commonwealth's Section 401 Water Quality Certification"</p>

VWP Permit	NWP 12
<p>Standard Project Conditions</p> <p>20) "All non-impacted surface waters and any required buffers with compensation areas that are within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that no activities are to occur in these marked areas." (9VAC25-670-100 B.10)</p>	<p>There is no Nationwide Permit 12 condition referring to flagging and demarcation of non-impacted surface waters within fifty feet of project activities.</p> <p>** MVP is voluntarily flagging all non-impacted surface waters and any required buffers within the project or right-of-way limits for the life of the construction activity, as part of their NWP12 Corps permit.</p> <p>** ACP is voluntarily flagging all non-impacted surface waters and any required buffers within the project or right-of-way limits for the life of the construction activity, as part of their NWP12 Corps permit.</p>

08/21/2018

VWP Permit	NWP 12
<p>Special Conditions E: Installation of Utilities</p> <p>"All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed waters shall be restored in accordance with Part I.C.15, C.16, and C.17, unless otherwise authorized by this permit." (9VAC25-670-100 D.1)</p>	<p>NWP12 & Regional Conditions</p> <p>NWP12: "After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate." RC #14 – 5. b: "All excavated material must be placed back into the trench to the original contour and all excess excavated material must be completely removed from the wetlands within 30 days after the pipeline has been laid" #7: "Plant species listed by the most current Virginia DCR Invasive Alien Plant List shall not be used for re-vegetation for activities authorized by any NWP." #14 – 5. a: "All excavated material stockpiled in a vegetated wetland area is placed on filter cloth, mats, or some other semi-permeable surface."</p>

08/21/2018

VWP Permit	NWP 12
Special Conditions	NWP12
<p>2) "Material resulting from trench excavation may be temporarily sidecast into wetlands not to exceed a total of 90 calendar days, provided the material is not placed in a manner such that it is dispersed by currents or other forces." (9VAC25-670-100 D.2)</p> <p>3) "The trench for a utility line cannot be constructed in a manner that drains wetlands (e.g., backfilling with extensive gravel layers creating a French drain effect)." (9VAC25-670-100 D.3)</p>	<p>"Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces."</p> <p>"The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a French drain effect).</p>

08/21/2018

23

VWP Permit	NWP 12
Special Conditions	Regional & General Conditions
<p>9VAC25-670-70. Compensation - F: "When conversion results in a permanent alteration of the functions of a wetland, compensatory mitigation for conversion impacts to wetlands shall be required at a 1:1 mitigation ratio, as calculated on an area basis. For example, the permanent conversion of a forested wetland to an emergent wetland is considered to be a permanent impact for the purposes of this chapter."</p> <p>For utility projects, regulations allow for a 20-foot wide maintenance and access corridor not subject to compensation requirement.</p>	<p>RC #14 3 – c: "Compensatory mitigation <u>may</u> be required for permanent conversion of wetlands within the utility line corridor." (emphasis added)</p> <p>** MVP is voluntarily compensating at a 1:1 ratio for permanent conversion impacts as part of their NWP12 Corps permit</p> <p>** ACP is voluntarily compensating at a 1:1 ratio for permanent conversion impacts as part of their NWP12 Corps permit</p>

08/21/2018

24

VWP Permit	NWP 12
Special Conditions	Regional Conditions
<p>9VAC25-670-100. VWP General Permit – Part I. Special Conditions – B. 2: "...Pipes and culverts placed in streams must be installed to maintain low flow conditions and shall be countersunk at both inlet and outlet ends of the pipe or culvert"</p> <p>9VAC25-670-100. VWP General Permit – Part I. Special Conditions – B. 15: "The permittee shall conduct his activities in accordance with the time-of-year restrictions recommended by the Virginia Department of Game and Inland Fisheries, the Virginia Marine Resource Commission, or other interested and affected agencies"</p>	<p>#8 – a: "All pipes: all pipes and culverts will be countersunk at both the inlet and outlet ends"</p> <p>#2: "For any proposed NWP, if the project is located in an area documented as an anadromous fish use area (confirmed or potential), a time-of-year restriction (TOYR) prohibiting all in-water work will be required... specified by VDGIF and/or Virginia Marine Resources Commission."</p> <p>#6: "VDGIF recommends the following time-of-year restrictions (TOYRs) for any instream work within streams identified as wild trout waters in its Cold Water Stream Survey database."</p>

Summary of VWP and NWP12 Comparison for MVP & ACP

- Of 46 regional and general conditions in the Corps' NWP12, **only 2 differ** from the VWP Permit Program:
 - VWP requires compensation for permanent conversion impacts (forested wetland to emergent wetland) at a 1:1 ratio
 - VWP requires all non-impacted surface waters and any required buffers that are within fifty feet of any project activities, shall be clearly flagged or demarcated
- Both MVP and ACP offered compensation for permanent conversion impacts at a 1:1 ratio, and agreed to flag non-impacted surface waters.
- The Corps incorporated these 2 provisions as conditions to the NWP12 permits.
- For linear projects (all roads and all types of utility projects), both programs have substantially identical permitting requirements.

Attachment L

DEQ Presentation Board (Robb) (Aug. 21, 2018)

Site-Specific Stream Crossing Reviews

Jaime Robb, Manager
Office of Stormwater Management



Site Specific Stream Crossing Reviews

- ☐ Each stream crossing is analyzed during ESC plan review
- ☐ Stream crossings can only be performed in dry conditions
 - ☐ Virginia does not allow crossings in the wet
- ☐ ESC measures for upland areas and at crossings work as a system to minimize and prevent erosion
- ☐ Proper placement and management of upland ESC controls are crucial
- ☐ Three ESC Minimum Standards specifically address stream crossings
- ☐ Nationwide 12 Permit

ESC MINIMUM STANDARDS SPECIFIC TO STREAM CROSSINGS

Minimum Standard 12:

"When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during constructions. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials."

ESC MINIMUM STANDARDS SPECIFIC TO STREAM CROSSINGS

Minimum Standard 13:

"When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided."

ESC MINIMUM STANDARDS SPECIFIC TO STREAM CROSSINGS

Minimum Standard 15:

*"The bed and banks of a watercourse shall be stabilized **immediately** after work in the watercourse is completed."*

NATIONWIDE 12 PERMIT

- ☐ Each crossing is considered single and complete for linear utility projects
 - ☐ Crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations
- ☐ Avoid and minimize wetland and stream impacts
- ☐ Minimize soil disturbance
- ☐ Maintain normal downstream flows
 - ☐ Cannot restrict or impede the passage of normal or high flows

NATIONWIDE 12 PERMIT

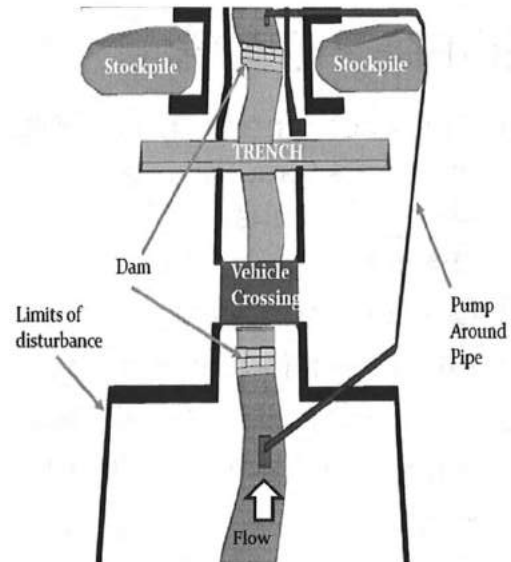
- ☐ Erosion and sediment controls must be used and maintained during construction
- ☐ Excavated material must be placed back into the trench to the original contour
- ☐ Areas returned to pre-construction elevations and revegetated
- ☐ Plant species listed by the most current Virginia DCR Invasive Alien Plant List cannot be used for re-vegetation

TYPES OF STREAM CROSSINGS

- ☐ Dam and Pump (aka – Pump Around)
- ☐ Flume
- ☐ Cofferdam
- ☐ Horizontal Directional Drilling (HDD)

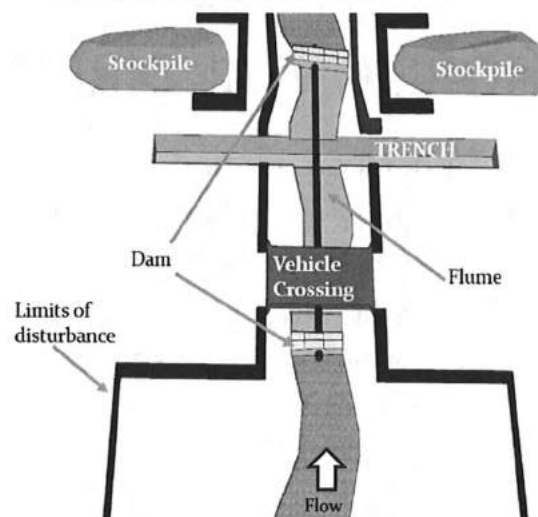
DAM AND PUMP

- ☐ Construct upstream and downstream dams
- ☐ Upstream water ponds
- ☐ Pump allows water to discharge downstream of work area



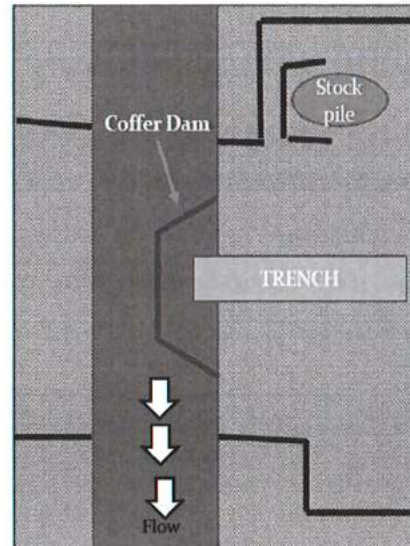
FLUME

- ☐ Construct upstream and downstream dams
- ☐ Stream flow directed through a pipe to discharge downstream of work area
- ☐ Trench dug under flume



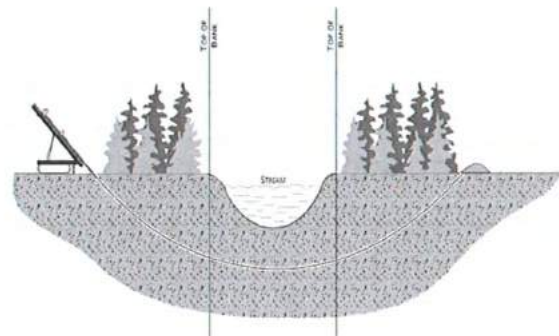
COFFER DAM

- ☐ Riprap or other non-erodible materials used to create semi-circle shaped dam in stream
- ☐ Dewater work area
- ☐ Install pipe in half of area
- ☐ Remove dam materials and repeat on opposite stream bank

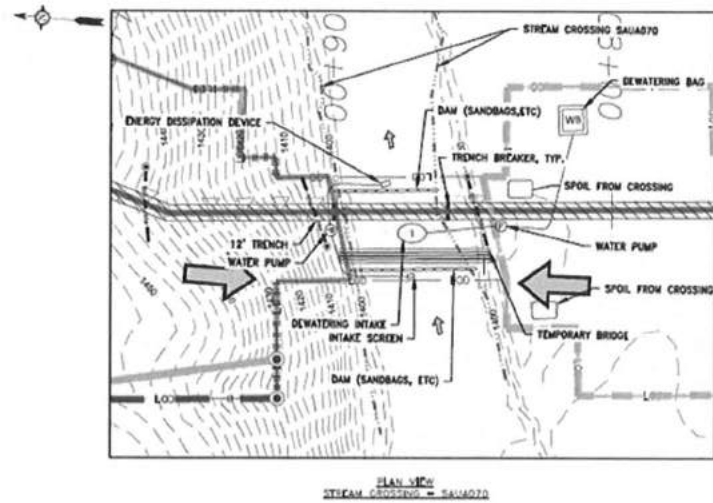


HORIZONTAL DIRECTIONAL DRILLING

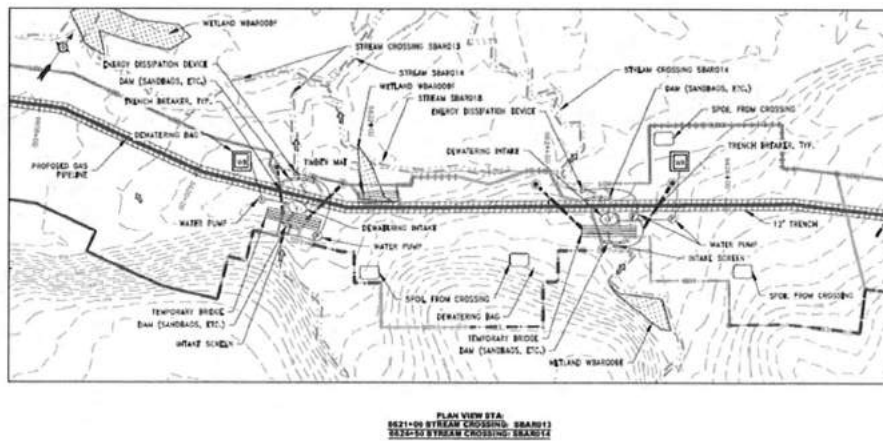
- ☐ Trenchless method
- ☐ Pilot hole drilled in directional path under stream bed
- ☐ Pilot hole enlarged to diameter to facilitate pipe installation
- ☐ Work conducted in upland
- ☐ Borings from both sides to eventually meet

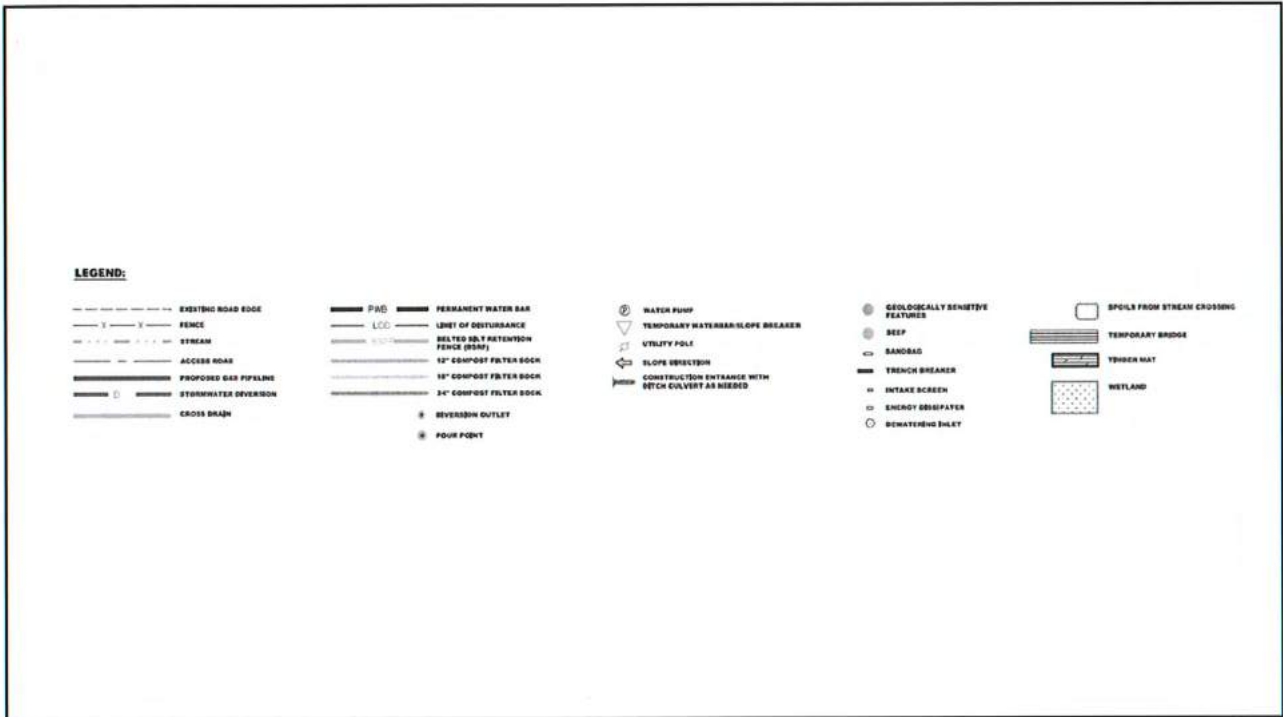


DRAFT Example
Middle River
Augusta County



DRAFT Example
Bath County





North Fork
Roanoke River

