

TENTATIVE AGENDA  
STATE WATER CONTROL BOARD MEETING

TUESDAY, DECEMBER 14, 2021

IN PERSON ONLY - GALLERY, COMMUNITY COLLEGE WORKFORCE ALLIANCE, 1651 EAST PARHAM ROAD, RICHMOND, VA 23228

Meeting will be Live-Streamed. Go to: [www.deq.virginia.gov](http://www.deq.virginia.gov)  
Any Updates To Details/Final Arrangements To Be Announced On Virginia Regulatory Town Hall

PERSONS ATTENDING THE MEETING ARE REQUIRED TO WEAR FACE MASKS)

Convene – 10:00 A.M

Agenda Item	Presenter	Tab
<b>Minutes</b> (September 28, 2021)		A
<b>Regulations - Proposed</b>		
<ul style="list-style-type: none"> <li>General Permit for Use of the Surficial Aquifer in a Groundwater Management Area, 9VAC25-920</li> </ul>	Grist	See pg. 5 B
<b>Regulations - Final</b>		
<ul style="list-style-type: none"> <li>General Permit for Use of the Surficial Aquifer on the Eastern Shore, 9VAC25-910 -</li> <li>Water Quality Management Planning Regulation Amendments (9VAC25-720) and General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia Amendments (9VAC25-820)</li> </ul>	Grist	See pg. 11 C
	Brockenbrough	See pg. 17 D
<b>Total Maximum Daily Load (TMDL) Reports and Water Quality Management Planning Regulation (9VAC25-720) Amendments</b>	Williams	See pg. 93 E
<ul style="list-style-type: none"> <li>Three TMDL Reports (Lewis Creek, Staunton; Lynch Creek and Reed Creek Watersheds, Campbell and Pittsylvania Counties; Mattaponi River and Tributaries, Caroline, Essex, King William, and King and Queen Counties)</li> <li>Adoption of 16 new TMDL Wasteload Allocations in 9VAC25-720-50 A, 9VAC25-720-80 A and 9VAC25-720-120 A</li> </ul>		
<b>Significant Noncompliance Report and Chesapeake Bay Preservation Act Program Notices of Violations</b>	Severs	See pg. 97 F
<b>Consent Special Orders</b>		
<ul style="list-style-type: none"> <li>BleachTech LLC (Petersburg) - VPDES Permit Program</li> <li>Cobbs Creek Reservoir Project/Henrico County and MEB Haymes Joint Venture LLC (Cumberland Co.) VWP/VPDES Permit Programs</li> </ul>	Severs	See pg. 99 G
	Severs	See pg. 103 H

Agenda Item	Presenter	Tab
• Henrico County Water Reclamation Facility	Severs	see pg. 107 I

**Permits**

- **Virginia Water Protection Individual Permit No. 21-0146 Mountain Valley Pipeline [Note: A quorum of the Board convened the public hearings and the written public comments were provided to the Board. There is no opportunity for comment on the draft permit at this Board meeting.]**

- Board Memorandum
- Draft Permit (Track-Change and Clean Versions)
- Fact Sheet
- Appendices and Mitigation Framework
- Comments and Responses - Part I - Response to EPA Comments Letter to the USACE Dated 5-27-21
- Comments and Responses - Part II - Additional DEQ Responses to Public Comments
- Sampling of Comment Letters

see pg. 117 J  
 see pg. 135 K  
 — L  
 see pg. 155 M  
 see pg. 223 N  
 see pg. 285 O  
 see pg. 309 P

**Other Business**

- Future Meetings Dates
- FY2022 Virginia Clean Water Revolving Loan Fund - Final Authorizations Doran
- PFAS Study of the Middle Chickahominy Watershed Steers
- Mountain Valley Pipeline - Update
- Public Forum, if time permits (time not to exceed 45 minutes - no public comment on Mountain Valley Pipeline)

see pg. 311 Q

**ADJOURN**

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions on the latest status of the agenda should be directed to Cindy M. Berndt at (804) 698-4378.

**PUBLIC COMMENTS AT STATE WATER CONTROL BOARD MEETINGS:** The Board encourages public participation in the performance of its duties and responsibilities. To this end, the Board has adopted public participation procedures for regulatory action and for case decisions. These procedures establish the times for the public to provide appropriate comment to the Board for its consideration.

For **REGULATORY ACTIONS** (adoption, amendment or repeal of regulations), public participation is governed by the Administrative Process Act and the Board's Public Participation Guidelines. Public comment is accepted during the Notice of Intended Regulatory Action phase (minimum 30-day comment period) and during the Notice of Public Comment Period on Proposed Regulatory Action (minimum 60-day comment period). Notice of these comment periods is announced in the Virginia Register, by posting to the Department of Environmental Quality and Virginia Regulatory Town Hall web sites and by mail to those on the Regulatory Development Mailing List. The comments received during the announced public comment periods are summarized for the Board and considered by the Board when making a decision on the regulatory action.

For **CASE DECISIONS** (issuance and amendment of permits), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft

permit for a period of 30 days. In some cases a public hearing is held at the conclusion of the public comment period on a draft permit. In other cases there may be an additional comment period during which a public hearing is held. In light of these established procedures, the Board accepts public comment on regulatory actions and case decisions, as well as general comments, at Board meetings in accordance with the following:

**REGULATORY ACTIONS:** Comments on regulatory actions are allowed only when the staff initially presents a regulatory action to the Board for final adoption. At that time, those persons who commented during the public comment period on the proposal are allowed up to 3 minutes to respond to the summary of the comments presented to the Board. Adoption of an emergency regulation is a final adoption for the purposes of this policy. Persons are allowed up to 3 minutes to address the Board on the emergency regulation under consideration.

**CASE DECISIONS:** [Note for December 14, 2021 Meeting regarding the draft Virginia Water Protection Permit for the Mountain Valley Pipeline: A quorum of the Board convened the public hearings and the written public comments were provided to the Board. There is no opportunity for comment on the draft permit at the Board meeting.] Comments on pending case decisions at Board meetings are accepted only when the staff initially presents the pending case decision to the Board for final action. At that time the Board will allow up to 5 minutes for the applicant/owner to make his complete presentation on the pending decision, unless the applicant/owner objects to specific conditions of the decision. In that case, the applicant/owner will be allowed up to 15 minutes to make his complete presentation. The Board will then allow others who commented at the public hearing or during the public comment period up to 3 minutes to exercise their rights to respond to the summary of the prior public comment period presented to the Board. No public comment is allowed on case decisions when a FORMAL HEARING is being held.

**POOLING MINUTES:** Those persons who commented during the public hearing or public comment period and attend the Board meeting may pool their minutes to allow for a single presentation to the Board that does not exceed the time limitation of 3 minutes times the number of persons pooling minutes, or 15 minutes, whichever is less.

**NEW INFORMATION** will not be accepted at the meeting. The Board expects comments and information on a regulatory action or pending case decision to be submitted during the established public comment periods. However, the Board recognizes that in rare instances new information may become available after the close of the public comment period. To provide for consideration of and ensure the appropriate review of this new information, persons who commented during the prior public comment period shall submit the new information to the Department of Environmental Quality (Department) staff contact listed below at least 10 days prior to the Board meeting. The Board's decision will be based on the Department-developed official file and discussions at the Board meeting. In the case of a regulatory action, should the Board or Department decide that the new information was not reasonably available during the prior public comment period, is significant to the Board's decision and should be included in the official file, the Department may announce an additional public comment period in order for all interested persons to have an opportunity to participate.

**PUBLIC FORUM:** The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than those on the agenda, pending regulatory actions or pending case decisions. Those persons wishing to address the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentations to 3 minutes or less.

The Board reserves the right to alter the time limitations set forth in this policy without notice and to ensure comments presented at the meeting conform to this policy.

Department of Environmental Quality Staff Contact: Cindy M. Berndt, Director, Regulatory Affairs, Department of Environmental Quality, 1111 East Main Street, Suite 1400, P.O. Box 1105, Richmond, Virginia 23218, phone (804) 698-4378, e-mail: [cindy.berndt@deq.virginia.gov](mailto:cindy.berndt@deq.virginia.gov).

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**Additional Meeting Information:**

- Attendees are not entitled to be disorderly or disrupt the meeting from proceeding in an orderly, efficient, and effective fashion. Disruptive behavior may result in a recess or removal from the meeting.
- Possession or use of any device that may disrupt the conduct of business is prohibited, including but not limited to: voice-amplification equipment; bullhorns; blow horns; sirens, or other noise-producing devices; as well as signs on sticks, poles or stakes; or helium-filled balloons.
- All attendees are asked to be respectful of all speakers.
- Rules will be enforced fairly and impartially not only to ensure the efficient and effective conduct of business, but also to ensure no interference with the business of the hotel, its employees and guests.
- All violators are subject to removal.



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Ann F. Jennings  
Secretary of Natural and Historic Resources

David K. Paylor  
Director  
(804) 698-4000

**MEMORANDUM**

**TO:** Members of the State Water Control Board.

**FROM:** Jutta Schneider, Director, Water Planning Division

**DATE:** November 4, 2021

**SUBJECT:** Proposed General Permit Regulation for Use of Irrigation Withdrawals from the Surficial Aquifer Greater than 300,000 Gallons in any One Month (9VAC25-920)

At the December 14, 2021, meeting of the State Water Control Board (Board), the Board will consider the approval of a proposed General Permit Regulation for Use of Irrigation Withdrawals from the Surficial Aquifer Greater than 300,000 Gallons in any One Month (9VAC25-920). There is significant non-potable groundwater use from the confined aquifer system for non-agricultural irrigation purposes, such as golf courses and community green space. Increasing the use of the surficial aquifer or water table aquifer for non-potable non-agricultural irrigation achieves greater long-term confined aquifer sustainability. This regulatory proposal will create a new general permit to promote use of the surficial aquifer for non-agricultural withdrawal in any Ground Water Management Area. This memorandum provides a brief background on the groundwater management program and the General Assembly action authorizing this regulatory action (Chapter 670 of the 2020 Acts of Assembly), and summarizes the proposed regulatory action.

**BACKGROUND**

The groundwater management program was established in 1973 pursuant to the Groundwater Act of 1973. The first groundwater management area was designated in 1975 as the Southeastern Virginia Groundwater Management Area. The State Water Control Board designated Accomack and Northampton Counties as the Eastern Shore Ground Water Management Area in 1978. The Ground Water Management Act of 1992 (§§ 62.1-254 et seq. of the Code of Virginia) replaced the Groundwater Act of 1973. The current statute requires permits for the withdrawal of 300,000 gallons or more of groundwater in a month in a groundwater management area.

The statute and the regulation do not establish a predetermined aquifer priority for specific end uses of groundwater. In practice, DEQ utilizes a first come first serve approach and does not require the use of specific aquifers unless the aquifer requested by the applicant was fully allocated.

During the 2020 Session of the General Assembly, SB673 (Chapter 670 of the 2020 Acts of Assembly), was passed. It amended the statute, adding new §§62.1-258.1, 62.1-266 H and I, directing the Board to address the impacts of the non-agricultural irrigation on the confined aquifer system by prospectively prohibiting the use of these aquifers unless the quality and quantity of the surficial aquifer is insufficient for the proposed beneficial use. The statute says that the regulations shall require the Department, within 30 days of receipt of a complete request, to make a determination as to the adequacy of the quantity or quality of the ground water in a surficial aquifer.

The Notice of Intended Regulatory Action was published on November 23, 2020. The public comment period was open from November 23, 2020 through December 23, 2020. DEQ received two comments during the comment period. Only one of the comments related to participating on the Technical Advisory Committee (TAC). The Director appointed a TAC and the membership list is included as Attachment A.

The TAC met five times, after the pandemic state of emergency was declared, and all five meetings were virtual. The TAC completed its work on June 22, 2021.

The Office of the Attorney General was sent the regulation for certification of authority to adopt the amendments.

**PROPOSED GENERAL PERMIT REGULATION FOR THE USE OF IRRIGATION  
WITHDRAWALS FROM THE SURFICIAL AQUIFER GREATER THAN 300,000  
GALLONS IN ANY ONE MONTH (9VAC25-920)**

Section 62.1-256 of the Code of Virginia authorizes the Board to adopt such regulations, as it deems necessary to administer and enforce the provision of this chapter. Chapter 670 of the 2020 Acts of the Assembly (new §§ 62.1-258.1, 62.1-266 H and I) directs the Board to address the impacts of non-agricultural irrigation on the confined aquifer system by prohibiting the use of these aquifers unless the quality and quantity of the surficial aquifer is insufficient for the proposed beneficial use. The development of regulations to address this legislative objective are authorized.

Section 62.1-258.1 of the Code of Virginia provides that unless the Department of Environmental Quality had determined that the quantity and quality of the groundwater in the surficial aquifer is not adequate to supply the proposed beneficial use, it shall be unlawful in a ground water management area for any person to construct a well for nonagricultural irrigation purposes except in the surficial aquifer. Section 62.1-266 H provides the Board may adopt regulations to develop a general permit for the regulation of irrigation withdrawals from the surficial aquifer greater than 300,000 gallons in any one month.

The various sections of the proposed regulation (Attachment B) are summarized as follows:

**Section 10 – Definitions** – The majority of the definition in the regulation are program terms that can be applicable to individual permits as well as this general permit. No new definitions are included in the proposal that are not either included in the statute or regulations.

**Section 50– Effective Date of the Permit** – This section specifies the effective date of the general permit (based upon the effective date of the General Permit Regulation), and the expiration date of the general, permit 15 years later. Coverage would be provided under the general permit until expiration of the general permit unless terminated or revoked earlier.

**Section 60– Authorization** – This section grants a person coverage under a general permit to withdraw groundwater from the surficial aquifer of a groundwater management area provided specific conditions are met.

**Section 70– Reasons to deny coverage** – This section provides criteria to deny applications for coverage under this general permit. Reasons to deny coverage include applications for activities outside a groundwater management area; activity in an aquifer other than the surficial aquifer; or an activity that causes or may reasonably be expected to cause or contribute to water level declines in the underlying confined aquifer system or degradation in water quality, stream or wetland hydrology, or other instream beneficial uses.

**Section 80– Exclusions** – This section provides that any person may construct a well for nonagricultural irrigation purposes in a groundwater management area outside of the surficial aquifer if either: a ratio of greater than one surficial well per acre would be required to support the proposed beneficial use water withdrawal volume; or that any two surficial aquifer water quality sample tests, analysis, measurements, or monitoring results, at the proposed or existing water withdrawal site exceeds specific water quality values. However, any person who satisfies one of the exclusions provided, and intends to construct a well for nonagricultural irrigation purposes outside of the surficial aquifer, shall be required to apply for an individual permit prior to for the purposes of withdrawing 300,000 gallons or more of groundwater in any month rather than obtaining coverage under this general permit.

**Section 90 – Application** – This section identifies what an applicant must submit in their application for the general permit. The majority of application requirements are standard and when possible, streamlined to reduce the time and cost of developing an application. Noteworthy application requirements proof of local government notification, documentation of the water volume needed, the submission of geophysical logs and a plan to mitigate where required. Part E allows the application to be administratively withdrawn for failure to submit information requested in writing after 60 days.

**Section 100 – General Permit** – This section contains all the required performances that are included in the general permit and is what the applicant will receive that provides coverage to withdraw surficial groundwater. Identified below are sections that provided regulatory streamlining.

**Section 100.B – Reporting** – The reporting frequency for this general permit was reduced from quarterly reporting (individual permit) to annual reporting. Monthly meter readings are still required and records maintained.

**Section 100.C – Water Conservation and Management Plan** – Individual permits require detailed water conservation and management plans specific to the facility. For this general permit a more generic list of best practices have been identified that comprise an annual audit and will be provided to the applicant as a reporting form with the general permit. The completed audit form will be provided to DEQ annually with the withdrawal volume report.

**Section 100.D – Mitigation Plan** – A permit cannot be issued with unmitigated impacts. An automated online system will provide applicants with an Area of Impact (AOI) map. This map is included with the application form. The mitigation plan has been simplified and will be included in the general permits when dictated by the AOI. This is possible because the likelihood of impacts is less from surficial withdrawals than from confined aquifer withdrawals.

The remainder of the general permit is typical language included in most DEQ general permits.

The proposed regulation agency background document is included as Attachment C.

#### **STAFF RECOMMENDATION**

Staff recommend that the State Water Control Board approve the proposed general permit regulation 9VAC25-920 and authorize staff to proceed to notice of public comment and hearing. Staff further recommend that the Board authorize staff to be the hearing officer for the public hearing.

#### **ATTACHMENTS**

- A. Regulatory Technical Advisory Committee Roster
- B. Draft General Permit for Use of Irrigation Withdrawals from the Surficial Aquifer Greater than 300,000 Gallons in any One Month (9VAC25-920)
- C. Agency Background Document

#### **PRESENTER CONTACT INFORMATION**

**Name:** Joseph Grist, Water Withdrawal Permitting and Compliance Manager  
**Phone:** (804) 698-4031  
**Email:** [joseph.grist@deq.virginia.gov](mailto:joseph.grist@deq.virginia.gov)



**Regulatory Technical Advisory Committee Roster-Chapter 920**

**Brent Graham, Director of Golf Maintenance, Two Rivers Country Club, Williamsburg  
(nominated by Virginia Golf Course Superintendents Association)**

**Scott Vogell, Virginia Department of Health, Private Well Construction Program**

**Jason Early, Cardno, Groundwater Consultant**

**Martha Moore, Farm Bureau, Agriculture**

**Joe Nicholas, Legacy Park HOA (Hanover)**

**John O'Dell, VA Water Well Association**

**Sam Doak, VT Professor and Technical Advisory to the Virginia Turfgrass Council**

**Peggy Sanner, Chesapeake Bay Foundation**





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**MEMORANDUM**

**TO:** Members of the State Water Control Board

**FROM:** Jutta Schneider, Director, Water Planning Division

**DATE:** November 4, 2021

**SUBJECT:** Final amendments to the Groundwater Withdrawal Regulation (9VAC25-610) and promulgation of a new General Permit Regulation for Use of Surficial Aquifer on the Eastern Shore (9VAC25-910)

At the December 14, 2021, meeting of the State Water Control Board (Board), the Board will consider a request to adopt final amendments to the Groundwater Withdrawal Regulation (9VAC25-610) and to promulgate a new General Permit Regulation for Use of the Surficial Aquifer on the Eastern Shore (9VAC25-910). There is significant non-potable groundwater use from the confined aquifer system for agricultural activities such as irrigation and cooling for poultry houses. Various parties on the Eastern Shore, including the Eastern Shore Groundwater Committee, propose that use of the surficial aquifer or water table aquifer for non-potable uses achieves greater long-term aquifer sustainability. This regulatory action will amend the existing groundwater withdrawal regulation to authorize the development of a general permit and create a new general permit regulation to promote use of the surficial aquifer on the Eastern Shore. This memorandum provides a brief background on the groundwater management program and the General Assembly action authorizing this regulatory action (Chapter 755 of the 2019 Acts of Assembly), and summarizes the regulatory process including comments received.

**BACKGROUND**

The groundwater management program was established in 1973 pursuant to the Groundwater Act of 1973. The State Water Control Board designated Accomack and Northampton Counties as the Eastern Shore Ground Water Management Area (ESGMA) in 1978. The Ground Water Management Act of 1992 (§§ 62.1-254 et seq. of the Code of Virginia) replaced the Groundwater Act of 1973. The current statute requires permits for the withdrawal of 300,000 gallons or more of groundwater in a month in a groundwater management area.

Groundwater provides nearly all of the water supply on the Eastern Shore. For a number of years, the Eastern Shore Groundwater Committee, a group of locally appointed officials from Accomack and Northampton County, has been advocating for greater use of the surficial aquifer rather than the deeper confined aquifers, particularly for agricultural purposes. The statute and the regulation do not establish a predetermined aquifer priority for specific end uses of groundwater. In practice, DEQ implemented a first come first served approach and did not require the use of specific aquifers unless the aquifer requested by the applicant did not meet the technical evaluation criteria for issuing a permit.

During the 2019 Session of the General Assembly, SB1599 (Chapter 755 of the 2019 Acts of Assembly), was passed. It amended the statute, adding §62.1-262.1 which directs the State Water Control Board to adopt regulations providing incentives for the withdrawal of water from the surficial aquifer, rather than the deep aquifer, in the ESGMA, as defined in the bill. The primary option to incentivize use of the surficial aquifer was identified to be the development of regulations to create a general permit for use of the surficial aquifer. The regulation did not authorize general permits prior to this final amendment action. The advantages of creating a general permit is that it will be available to facilities with eligible withdrawals to withdraw groundwater in a manner that is protective of the confined aquifers in the ESGMA without the increased cost and more complex application process associated with issuing an individual permit. There are no known disadvantages.

## **REGULATORY PROCESS**

The Notice of Intended Regulatory Action was published on November 11, 2019. The public comment period was open from November 11, 2019 through January 6, 2020. DEQ received seven comments during the comment period. All but one of the comments related to a desire to participate on the Regulatory Advisory Panel (RAP). The Director appointed a RAP and the membership list is included as Attachment A. The participation requests were nearly all accommodated in his appointments. The Accomack-Northampton Planning District Commission provided a substantive comment that included a number of suggestions. The RAP discussed these suggestions and they are included, in large part, in the proposed regulatory text. The RAP met a total of four times with two meetings before the pandemic state of emergency and two after DEQ began virtual meetings. The RAP completed its work on October 9, 2020.

The Board authorized the Director to initiate a public comment period and schedule a public hearing for proposed amendments to the Groundwater Withdrawal Regulation (9VAC25-610) and the proposed General Permit for Use of the Surficial Aquifer on the Eastern Shore (9VAC25-910) during its December 9, 2020 meeting (Attachment B).

The Office of the Attorney General (OAG) reviewed and certified the draft regulations on January 13, 2021. The OAG's opinion was that the State Water Control Board has the authority to promulgate the amendments to the regulations under applicable law including Chapter 3.1 and Chapter 25 of Title 62.1 of the Code of Virginia.

The Department of Planning and Budget completed their review on February 27, 2021.

State Water Control Board – Groundwater Withdrawal Regulation Amendments to Chapter 610  
and Promulgate Chapter 910

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The Secretary of Natural and Historic Resources completed their review on May 4, 2021.

The Governor's Office completed their review on July 22, 2021.

The Virginia Registrar published the draft regulations in The Virginia Register of Regulations on August 30, 2021.

### **PUBLIC COMMENT**

Staff received four public comments, with three in support of the recommended adoption of amendments to 9VAC25-610 and promulgate 9VAC25-910. A public hearing was not requested. All comments and responses are provided in the Agency Background Document (Attachment C).

### **STAFF RECOMMENDATION**

Staff recommend that the State Water Control Board adopt amendments to 9VAC25-610 and adopt 9VAC25-910.

### **ATTACHMENTS**

- A. RAP Panel Members
- B. Amendments to the Groundwater Withdrawal Regulation (9VAC25-610) and General Permit for Use of the Surficial Aquifer on the Eastern Shore (9VAC25-910)
- C. Agency Background Document

### **PRESENTER CONTACT INFORMATION**

**Name:** Joseph Grist, Water Withdrawal Permitting and Compliance Manager

**Phone:** (804) 698-4031

**Email:** [joseph.grist@deq.virginia.gov](mailto:joseph.grist@deq.virginia.gov)



**Regulatory Advisory Panel Roster – Chapter 910/Chapter 610**

**Paul Muhly, Eastern Shore of Virginia Groundwater Committee**

**John Coker, Eastern Shore of Virginia Groundwater Committee**

**Jessica Steelman, Accomack-Northampton Planning District Commission**

**Britt McMillan, Eastern Shore of Virginia Groundwater Committee**

**Curtis Consolvo, GeoResources, Groundwater Consultant**

**Holly Porter, Delmarva Poultry Industry, Inc.**

**Ed Tankard, Tankard Nurseries**

**Dave Lovell, Poultry Grower**

**Brett Mariner, Somerset Well Drilling**

**Mark Patterson, Perdue Farms**

**Susan Mastyl, Virginia Eastern Shore Clean Water Council**

**Jay Ford, Chesapeake Bay Foundation**







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November 15, 2021

**MEMORANDUM**

**TO:** Board Members

**THROUGH:** Melanie Davenport, Director, Division of Water Permitting

**FROM:** Allan Brockenbrough, Manager, Office of VPDES Permits

**SUBJECT:** Proposed Amendments to Water Quality Management Planning Regulation 9VAC25-720

The Water Quality Management Planning Regulation (9VAC25-720) includes waste load allocations (WLAs) for dischargers of pollutants to various river basins throughout the Commonwealth of Virginia including Total Nitrogen (TN) and Total Phosphorus (TP) WLAs necessary for the restoration of water quality in Chesapeake Bay and its tidal tributaries. The staff is bringing this regulation before the Board to request adoption of amendments as outlined below.

The proposed amendments take into consideration the input received from the regulatory advisory panel (RAP) formed for to advise the DEQ on the amendments to the Water Quality Management Planning Regulation (9VAC25-720). The rulemaking also includes a secondary action that amends the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820) in order to implement the amendments to the Water Quality Management Planning Regulation. A technical advisory committee (TAC) was formed to advise the agency on amendments to the general permit and the input from the TAC has also been taken into consideration in these amendments.

The Notice of Public Comment and Hearing for these amendments was approved by the Board on December 9, 2020. Following the Board's authorization legislation was adopted in Special Session I of the 2021 Virginia General Assembly which significantly impacted the amendments presented to the Board on December 9<sup>th</sup>. House Bill 2129 eliminated the floating WLA approach

included in the proposed amendments and Initiative No. 52 of Virginia's Chesapeake Bay TMDL Phase III Watershed Implementation Plan. The legislation created the Enhanced Nutrient Removal Certainty (ENRC) Program which establishes schedules for upgrade/consolidation projects at thirteen publicly owned treatment works, reduces TN and/or TP WLAs at seven Hampton Roads Sanitation District (HRSD) treatment facilities and provides conditions on the transfer of WLAs from the HRSD-Chesapeake/Elizabeth STP and the former JH Miles facility. The Board approved amendments to the Water Quality Management Planning Regulation to incorporate the reduced WLAs and WLA transfers at its June 29, 2021 meeting.

Final draft amendments to the Water Quality Management Planning Regulation and the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia are attached. Changes made to both documents since the public comment period are highlighted in yellow to facilitate your review. The public comment period ran from August 30, 2021 through October 29, 2021. A public hearing was held on October 7, 2021 and no comments were received during the hearing. A detailed summary of the comments received during the public comment period and DEQ's response to the comments is included in the attached Final Regulation Agency Background Document (TH-03). DEQ staff proposes to amend Sections 50.C (Potomac-Shenandoah River Basin), 60.C (James River Basin), 70.C (Rappahannock River Basin) and 120.C (York River Basin) to accomplish two goals:

1. To establish TP waste load allocations necessary to meet water quality criteria for chlorophyll-a in the James River Basin
2. To reallocate unneeded significant industrial discharger allocations to the Nutrient Offset Fund in order to accommodate future growth in accordance with § 62.1-44.19:14.D of the Code of Virginia.

Additional minor modifications including (1) name changes, (2) the correction of one previous technical error, (3) WLA transfers associated with previously approved trades and WWTP consolidation projects, and (4) moving previously adopted WLAs from 9VAC25-820-80 to 9VAC25-720-60 C are also included.

The proposal also includes amendments to the General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820) that are necessary to implement the Water Quality Management Planning Regulation amendments as well as the Enhanced Nutrient Removal Certainty (ENRC) Program WLAs included in House Bill (HB) 2129 adopted in Special Session I of the 2021 Virginia General Assembly.

The Office of the Attorney General will be sent the proposed regulations for certification of statutory authority. On October 4, 2021, the U.S. Environmental Protection Agency provided their approval of the general permit amendments that were advertised for public comment. The final revisions made in response to public comments have been sent to EPA and staff expects to receive their concurrence prior to the December 14, 2021 State Water Control Board meeting.

**Attachments:**

**RAP Membership for Water Quality Management Planning Regulation**

**TAC Membership for Watershed General Permit**

**Draft Amendments to Water Quality Management Planning Regulation**

**Draft Amendments to General VPDES Watershed Permit Regulation for Total Nitrogen and  
Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in  
Virginia**

**Final Regulation Agency Background Document (TH-03)**

**Water Quality Management Planning Amendment (9VAC25-720)  
Regulatory Advisory Panel (RAP) Members**

Jameson Brunkow  
Patrick Calvert  
Timothy Castillo  
Allison Deines  
James Grandstaff  
Frank W. Harksen  
Ted Henifin  
Grace LeRose  
Timothy Mitchell  
Scott Morris  
Theresa O'Quinn  
Andrew Parker  
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Virginia Conservation Network  
Augusta County Service Authority  
Alexandria Renew Enterprises  
Henrico County Department of Public Utilities  
Hanover County  
Hampton Roads Sanitation District (HRSD)  
City of Richmond Department Public Utilities  
City of Lynchburg Water Resources  
Chesterfield County Utilities Department  
Prince William County Service Authority (PWCSA)  
AdvanSix and Virginia Manufacturers Association (VMA)  
Virginia Association of Municipal Wastewater Agencies  
  
Fauquier County Water & Sanitation Authority  
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Office of Ecology  
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**Watershed General Permit Amendments (9VAC25-820)  
Technical Advisory Committee Membership**

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Pat Calvert  
Edwin Edmondson  
James Grandstaff  
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James Pletl  
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City of Richmond Dept. of Public Utilities  
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NRO Compliance  
CO Enforcement  
PRO Compliance  
TRO Compliance  
PRO Permits



9VAC25-720-50. Potomac-Shenandoah River Basin.

C. Nitrogen and phosphorus wasteload allocations to restore the Chesapeake Bay and its tidal rivers. The following table presents nitrogen and phosphorus wasteload allocations for the identified significant dischargers and the total nitrogen and total phosphorus wasteload allocations for the listed facilities.

Virginia Waterbody ID	Discharger Name	VPDES Permit No.	Total Nitrogen (TN) Wasteload Allocation (lbs/yr)	Total Phosphorus (TP) Wasteload Allocation (lbs/yr)
B37R	<del>Coors-Brewing Company</del> Molson Coors – Shenandoah Brewery	VA0073245	54,820	4,112
B14R	ACSA - Fishersville Regional STPWWTP	VA0025291	48,729	3,655
B32R	<del>INVISTA – Waynesboro</del> The Lycra Company (Outfall 101)	VA0002160	78,941	1,009
B39R	Luray STPWWTP	VA0062642	19,492	1,462
B35R	Massanutten <del>PSA</del> STP Public Service Corporation STP	VA0024732	18,273	1,371
B37R	Merck <del>Sharp &amp; Dohme Corp. – Elkton Plant- Stonewall</del> WWTP (Outfall 101) <sup>†</sup>	VA0002178	43,835	4,384

B12R	<u>ACSA - Middle River Regional STPWWTP</u>	VA0064793	82,839	6,213
B23R	North River WWTF <sup>1</sup>	VA0060640	<del>253,391</del> 260,226	<del>19,004</del> 19,574
B22R	<u>VPGC, LLCVA Poultry Growers - Hinton</u>	VA0002313	27,410	1,371
B38R	<u>Pilgrims Pride - Alma Nutrient Offset Fund</u>	<u>Formerly</u> VA0001961	18,273	914
B31R	<u>ACSA - Stuarts Draft WWTP</u>	VA0066877	48,729	3,655
B32R	Waynesboro <u>STPWWTP</u>	VA0025151	48,729	3,655
B23R	<u>ACSA - Weyers Cave STPWWTP</u>	VA0022349	6,091	457
B58R	Berryville <u>STPWWTP</u>	VA0020532	8,528	640
B55R	Front Royal <u>STPWWTP</u>	VA0062812	48,729	3,655
B49R	Georges Chicken LLC	VA0077402	31,065	1,553
B48R	Mt. Jackson STP	VA0026441	8,528	640
B45R	Broadway Regional WWTF	VA0090263	29,481	2,211
B49R	Stoney Creek SD STP	VA0028380	7,309	548
B51R	Strasburg STP	VA0020311	11,939	895
B50R	Woodstock STP	VA0026468	24,364	1,827
A06R	Basham Simms WWTF	VA0022802	18,273	1,371



A09R	Broad Run WRF	VA0091383	134,005	3,350
A08R	Leesburg WPCF	VA0092282	121,822	9,137
A06R	Round Hill Town WWTP <sup>PF</sup>	VA0026212	9,137	685
A25R	<del>DSC-VA</del> <del>American Water</del> <del>Prince William-</del> Section 1 WWTF	VA0024724	42,029	2,522
A25R	<del>DSCVA</del> <del>American Water</del> <del>Prince William -</del> Section 8 WWTF	VA0024678	42,029	2,522
A25E	H L Mooney WWTF	VA0025101	219,280	13,157
A22R	UOSA - Centreville	VA0024988	1,315,682	16,446
A19R	Vint Hill WWTP <sup>PF</sup>	VA0020460	11,573	868
B08R	Opequon WRF <sup>2</sup>	VA0065552	121,851	11,512
B08R	Parkins Mills <del>STPWWTF<sup>PF</sup></del>	VA0075191	60,911	4,568
A13E	Alexandria Renew Enterprises <del>WWTF<sup>3</sup></del>	VA0025160	493,381	29,603
A12E	Arlington County Water PCF	VA0025143	365,467	21,928
A16R	Noman M Cole Jr PCP <sup>PF</sup>	VA0025364	612,158	36,729
A12R	Blue Plains (VA Share)	DC0021199	581,458	26,166

A26R	<u>USMC Quantico Mainside STPWWTF</u>	VA0028363	20,101	1,206
A28R	<u>Aquia WWTPF</u>	VA0060968	73,093	4,386
A31E	<u>Colonial Beach WWTPSTP</u>	VA0026409	18,273	1,827
A30E	<u>KGCSA - Dahlgren District WWTPF</u>	VA0026514	9,137	914
A29E	<u>KGCSA King George County Service Authority - Fairview Beach WWTP</u>	VA0092134	1,827	183
A30E	<u>US NSWC- Dahlgren WWTF Naval Support Facility Dahlgren</u>	VA0021067	6,578	658
A31R	<u>KGCSA - Purkins Corner WWTPSTP</u>	VA0070106	1,096	110
	<u>Unallocated Reserve WLANutrient Offset Fund</u>		9,137	685
	TOTALS:		5,156,169	254,334

Notes:

~~\*Merek Stonewall— (a) these wasteload allocations will be subject to further consideration, consistent with the Chesapeake Bay TMDL, as it may be amended, and possible reduction upon "full scale" results showing the optimal treatment capability of the 4 stage Bardenpho technology at this facility consistent with the level of effort by other dischargers in the region. The "full scale" evaluation will be completed by December 31, 2011, and the results submitted to DEQ for review and subsequent board action; (b) in any year when credits are available after all other exchanges~~

~~within the Shenandoah Potomac River Basin are completed in accordance with § 62.1-44.19:18 of the Code of Virginia, Merck shall acquire credits for total nitrogen discharged in excess of 14,619 lbs/yr and total phosphorus discharged in excess of 1,096 lbs/yr; and (c) the allocations are not transferable and compliance credits are only generated if discharged loads are less than the loads identified in clause (b).~~

<sup>1</sup>The North River WWTF WLA includes 6,835 lbs/yr of TN and 570 lbs/yr of TP from the consolidation of the McGaheysville STP (VA0072931).

<sup>2</sup>Opequon WRF: (a) the TN WLA is derived based on 3 mg/l of TN and 12.6 MGD; (b) the TN WLA includes an additional allocation for TN in the amount of 6,729 lbs/yr by means of a landfill leachate consolidation and treatment project; and (c) the TP WLA is derived based on 0.3 mg/l of TP and 12.6 MGD.

<sup>3</sup>Wasteload allocations for localities served by combined sewers are based on dry weather design flow capacity. During wet weather flow events the discharge shall achieve a TN concentration of 4.0 mg/l and TP concentration of 0.18 mg/l.

9VAC25-720-60. James River Basin.

C. Nitrogen and phosphorus wasteload allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus wasteload allocations for the identified significant dischargers and the total nitrogen and total phosphorus wasteload allocations for the listed facilities.

Virginia Waterbody ID	Discharger Name	VPDES Permit No.	Total Nitrogen (TN) Wasteload Allocation (lbs/yr)	Total Phosphorus (TP) Wasteload Allocation (lbs/yr)
I37R	Buena Vista STP	VA0020991	41,115	<del>3,426</del> 2,778
I09R	Covington STP	VA0025542	54,820	<del>4,568</del> 3,705
H02R	Georgia Pacific	VA0003026	122,489	<del>49,658</del> 40,273
I37R	<del>Lees Carpets</del> Mohawk Industries, Inc.	VA0004677	30,456	<del>12,182</del> 9,880
I35R	Lexington-Rockbridge WQCF	VA0088161	54,820	<del>4,568</del> 3,705
I09R	Low Moor STP	VA0027979	9,137	<del>761</del> 617
I09R	Lower Jackson River STP	VA0090671	<del>63,957</del> 47,516	<del>5,330</del> 3,211
<del>I09R</del>	<del>Nutrient Offset Fund</del>	<del>Formerly</del> <del>VA0090671</del>	<del>16,441</del>	<del>1,112</del>
I04R	<del>MeadWestvaco</del> WestRock Virginia LLC - Covington	VA0003646	394,400	<del>159,892</del> 96,711
H12R	Amherst STP	VA0031321	10,964	<del>914</del> 741
H05R	BWX Technologies Inc.	VA0003697	187,000	<del>1,523</del> 1,235
H05R	Greif Inc.	VA0006408	73,246	<del>29,694</del> 24,082
H31R	Lake Monticello STPWWTP	VA0024945	<del>18,182</del> 14,164	<del>1,515</del> 957
<del>H31R</del>	<del>Nutrient Offset Fund</del>	<del>Formerly</del> <del>VA0024945</del>	<del>4,018</del>	<del>272</del>

H05R	Lynchburg STP <sup>1</sup>	VA0024970	536,019	<u>33,501,271,169</u>
H28R	Moore's Creek <del>Regional</del> <del>STP</del> <u>Advanced WRRF<sup>8</sup></u>	VA0025518	<del>274,100</del> <u>282,994</u>	<del>22,842</del> <u>18,525</u> <u>19,637</u>
H38R	Powhatan CC STP	VA0020699	8,588	<u>716,581</u>
J11R	Crewe WWTP	VA0020303	9,137	<u>761,617</u>
J01R	Farmville WWTP	VA0083135	43,856	<u>3,655</u> <u>2,964</u>
G02E	<del>The Sustainability Park,</del> <del>LLC</del> <u>Nutrient Offset Fund</u>	<u>Formerly</u> VA0002780	25,583	<u>1,919,768</u>
G01E	E I du Pont - Spruance	VA0004669	201,080	<u>7,8166,339</u>
G01E	Falling Creek WWTP	VA0024996	<del>153,801</del> <u>182,738</u>	<u>15,3806,153</u>
G01E	Henrico County WWTP	VA0063690	1,142,085	<u>114,209</u> <u>45,689</u>
G03E	<del>Honeywell—</del> <del>Hopewell</del> <u>AdvanSix</u> <u>Resins and Chemicals</u> <u>LLC</u>	VA0005291	1,090,798	<u>51,592</u> <u>40,541</u>
G03R	Hopewell WWTP	VA0066630	1,827,336	<u>76,139</u> <u>30,459</u>
G15E	HRSD – Boat Harbor STP	VA0081256	<del>740,000</del> <u>473,524</u> 304,593 <sup>3</sup>	<u>76,139</u> <u>43,175</u> 38,074 <sup>3</sup> 30,459 <sup>4</sup> 22,844 <sup>5</sup>
G11E	HRSD – James River STP	VA0081272	<del>1,250,000</del> <u>378,819</u> 243,674 <sup>3</sup>	<u>60,911</u> <u>34,450</u> 30,459 <sup>3</sup> 24,367 <sup>4</sup> 18,276 <sup>5</sup>
G10E	HRSD – Williamsburg STP	VA0081302	<del>800,000</del> <u>426,171</u> 274,133 <sup>3</sup>	<u>68,525</u> <u>38,858</u> 34,267 <sup>3</sup> 27,413 <sup>4</sup> 20,560 <sup>5</sup>
G02E	Philip Morris – Park 500	VA0026557	139,724	<u>2,650</u> <u>1,060</u>
G01E	Proctors Creek WWTP	VA0060194	411,151	<u>41,115</u> <u>16,448</u>

G01E	Richmond WWTP <sup>1</sup>	VA0063177	1,096,402	<del>68,525</del> 27,413
G02E	Dominion-Chesterfield <sup>2</sup>	VA0004146	<del>272,036</del> 243,099	<del>210</del> 170
J15R	South Central WW Authority	VA0025437	350,239	<del>35,024</del> 14,011
<del>G07R</del>	<del>Chickahominy WWTP</del>	<del>VA0088480</del>	<del>6,167</del>	<del>123</del>
G05R	Tyson Foods – Glen Allen	VA0004031	19,552	<del>409</del> 424
G11E	HRSD – Nansemond STP	VA0081299	<del>750,000</del> 568,228 365,511 <sup>3</sup>	<del>91,367</del> 51,811 45,689 <sup>3</sup> 36,551 <sup>4</sup> 27,413 <sup>5</sup>
G15E	HRSD – Army Base STP	VA0081230	<del>610,000</del> 340,937 219,307 <sup>3</sup>	<del>54,820</del> 31,086 27,413 <sup>3</sup> 21,931 <sup>4</sup> 16,448 <sup>5</sup>
G15E	HRSD – VIP WWTP	VA0081281	<del>750,000</del> 757,638 487,348 <sup>3</sup>	<del>121,822</del> 69,081 60,919 <sup>3</sup> 48,735 <sup>4</sup> 36,551 <sup>5</sup>
G15E	HRSD – JH Miles	VA0003263	153,500	17,437
C07E	HRSD – Ches.-Elizabeth STP	VA0081264	1,100,000 454,583 <sup>6,7</sup>	<del>41,450</del> 41,448 <sup>7</sup>
G01E	<del>Tranlin/Vastly Nutrient Offset Fund</del>	<del>Formerly Tranlin/Vastly</del>	80,000	0
	TOTALS		<del>14,901,739</del> 12,949,784	<del>1,354,375</del> 757,068

Notes:

<sup>1</sup>Wasteload allocations for localities served by combined sewers are based on dry weather design flow capacity. During wet weather flow events the discharge shall achieve a TN concentration of 8.0 mg/l and a TP concentration of 1.0 mg/l.

~~<sup>2</sup>Wasteload allocations are "net" loads, based on the portion of the nutrient discharge introduced by the facility's process waste streams, and not originating in raw water intake. Dominion-Chesterfield wasteload~~

allocations shall be transferred to the Nutrient Offset Fund on January 1<sup>st</sup> following the retirement of the last coal fired generating unit. 82,240 lbs/yr of TN WLA shall be held in reserve and may be made available by the Department for an expansion of the Proctor's Creek WWTP provide the expanded facility provides treatment to achieve an annual average TN concentration of 3.0 mg/l or less and the Falling Creek WWTP is designed to meet its individual TN WLA.

<sup>3</sup>Effective January 1, 2026

<sup>4</sup>Effective January 1, 2030

<sup>5</sup>Effective January 1, 2032

<sup>6</sup>Effective January 1, 2022

<sup>7</sup>Effective January 1, 2026, the HRSD – Chesapeake Elizabeth STP wasteload allocations for Total Nitrogen and Total Phosphorus are transferred to the Nutrient Offset Fund.

<sup>8</sup>The Moores Creek Advanced WRRF WLA includes 8,894 lbs/yr of Total Nitrogen and 1,112 lbs/yr of Total Phosphorus from the consolidation of the Camelot WWTP (VA0025488).

1.

9VAC25-720-70. Rappahannock River Basin.

C. Nitrogen and phosphorus wasteload allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus wasteload allocations for the identified significant dischargers and the total nitrogen and total phosphorus wasteload allocations for the listed facilities.

Virginia Waterbody ID	Discharger Name	VPDES Permit No.	Total Nitrogen (TN) Wasteload Allocation (lbs/yr)	Total Phosphorus (TP) Wasteload Allocation (lbs/yr)
E09R	Culpeper WWTP	VA0061590	73,093	5,483
E02R	Marshall WWTP	VA0031763	7,797	585
E13R	Orange STP	VA0021385	36,547	2,741
E11R	Rapidan <del>STP</del> WWTP	VA0090948	7,309	548
E02R	<del>Fauquier County Water &amp; Sewer Authority</del> -Remington WWTP	VA0076805	24,364	1,827
E02R	Clevengers Village WWTP	VA0080527	10,964	822
E02R	Warrenton Town STP	VA0021172	30,456	2,284
E18R	Wilderness WWTP	VA0083411	15,228	1,142
E20E	FMC WWTF	VA0068110	48,737	3,655
E20E	Fredericksburg WWTF	VA0025127	54,820	4,112
E21E	Haymount WWTF	VA0089125	7,066	530
E24E	Haynesville CC WWTP	VA0023469	2,802	210
E21E	<del>KGCSA</del> - Hopyard Farms <del>WWTF</del> STP	VA0089338	6,091	457



E20E	Little Falls Run WWTF	VA0076392	97,458	7,309
E20E	Massaponax WWTF	VA0025658	114,505	8,405,588
E23R	Montross Westmoreland WWTP	VA0072729	1,584	119
E21E	<u>KGCSA</u> - Oakland Park STP	VA0086789	1,706	128
E23E	Tappahannock WWTP	VA0071471	9,746	731
E26E	<u>HRSD</u> - Urbanna <u>STPWWTP</u>	VA0026263	1,218	91
E21R	US Army - Ft. A P Hill WWTP	VA0032034	6,457	484
E23E	Warsaw <u>WWTPAerated</u> <u>Lagoons</u>	VA0026891	3,655	274
C01E	Omega Protein - Reedville	VA0003867	21,213	1,591
C01E	Reedville Sanitary District	VA0060712	2,436	183
C01E	Kilmarnock <u>WWTP</u>	VA0020788	6,091	457
	<u>Unallocated Reserve</u> <u>WLANutrient Offset</u> <u>Fund</u>		22,904	1,900
	TOTALS:		614,2457	46,068251

9VAC25-720-120. York River Basin.

C. Nitrogen and phosphorus wasteload allocations to restore the Chesapeake Bay and its tidal rivers. The following table presents nitrogen and phosphorus wasteload allocations for the identified significant dischargers and the total nitrogen and total phosphorus wasteload allocations for the listed facilities.

Virginia Waterbody ID	Discharger Name	VPDES Permit No.	Total Nitrogen (TN) Wasteload Allocation (lbs/yr)	Total Phosphorus (TP) Wasteload Allocation (lbs/yr)
F20R	Caroline County <a href="#">Regional WWTPSTP</a>	VA0073504	9,137	609
F01R	Gordonsville STP	VA0021105	17,177	1,145
F04R	Ashland WWTP	VA0024899	36,547	2,436
F09R	Doswell WWTP	VA0029521	18,273	1,218
F09R	<a href="#">Bear Island Paper Company</a> 819 <a href="#">Virginia LLC</a>	VA0029521	47,328	10,233
F27E	<a href="#">Plains Marketing L.P.</a> <a href="#">Yorktown Nutrient Offset Fund</a>	<a href="#">Formerly</a> VA0003018	167,128	17,689
F27E	HRSD - York River STP	VA0081311	275,927 228,444 <sup>1</sup>	18,395
F14R	Parham Landing WWTP	VA0088331	36,547	2,436
F14E	<a href="#">Rock Tenn WestRock</a> CP LLC - West Point	VA0003115	259,177	56,038
F12E	Totopotomoy WWTP	VA0089915	182,734	12,182

F25E	HRSD - West Point STP	VA0075434	10,964	731
	TOTALS:		1,060,939	123,112

<sup>1</sup>Effective January 1, 2026



State Water Control Board

2021 Amendment ~~and Reissuance~~ of General Permit Regulation

**9VAC25-820-10. Definitions.**

Except as defined below, the words and terms used in this chapter shall have the meanings defined in the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation ([9VAC25-31](#)).

"Annual mass load of total nitrogen" (expressed in pounds per year) means the sum of the total monthly loads for all of the months in one calendar year. See Part I E 4 of the general permit in [9VAC25-820-70](#) for calculating total monthly load.

"Annual mass load of total phosphorus" (expressed in pounds per year) means the sum of the total monthly loads for all of the months in one calendar year. See Part I E 4 of the general permit in [9VAC25-820-70](#) for calculating total monthly load.

"Association" means the Virginia Nutrient Credit Exchange Association authorized by § [62.1-44.19:17](#) of the Code of Virginia.

"Attenuation" means the rate at which nutrients are reduced through natural processes during transport in water.

"Board" means the Virginia State Water Control Board or State Water Control Board.

"Delivered total nitrogen load" means the discharged mass load of total nitrogen from a point source that is adjusted by the delivery factor for that point source.

"Delivered total phosphorus load" means the discharged mass load of total phosphorus from a point source that is adjusted by the delivery factor for that point source.

"Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus delivered to tidal waters for every pound discharged from a facility, as determined by the specific geographic location of the facility, to account for attenuation that occurs during riverine transport between the facility and tidal waters. Delivery factors shall be calculated using the Chesapeake Bay Program watershed model. For the purpose of this regulation, delivery

factors with a value greater than 1.00 in the Chesapeake Bay Program watershed model shall be considered to be equal to 1.00.

"Department" or "DEQ" means the Department of Environmental Quality.

"Director" means the director of the Department of Environmental Quality.

"Eastern Shore trading ratio" means the ratio of pounds of point source credits from another tributary that can be acquired and applied by the owner of a facility in the Eastern Shore Basin for every pound of point source total nitrogen or total phosphorus discharged from the Eastern Shore Basin facility. Trading ratios are expressed in the form "credits supplied: credits received."

"Equivalent load" means:

2,300 pounds per year of total nitrogen or 300 pounds per year of total phosphorus discharged by an industrial facility are considered equivalent to the load discharged from sewage treatment works with a design capacity of 0.04 million gallons per day,

5,700 pounds per year of total nitrogen or 760 pounds per year of total phosphorus discharged by an industrial facility are considered equivalent to the load discharged from sewage treatment works with a design capacity of 0.1 million gallons per day, and

28,500 pounds per year of total nitrogen or 3,800 pounds per year of total phosphorus discharged by an industrial facility are considered equivalent to the load discharged from sewage treatment works with a design capacity of 0.5 million gallons per day.

"Existing facility" means a facility (i) subject to a current individual VPDES permit from which a discharge has commenced or for which its owner has received a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) for the treatment works used to derive its wasteload allocation on or before July 1, 2005, or (ii) for which the owner has a wasteload allocation listed in [9VAC25-720-50 C](#), [9VAC25-720-60 C](#), [9VAC25-720-70 C](#), [9VAC25-720-110 C](#), and [9VAC25-720-120 C](#) of the Water Quality Management Planning Regulation. Existing facility shall also mean and include any facility, not subject to an individual VPDES permit, for which its owner holds a separate wasteload allocation in [9VAC25-720-120 C](#) of the Water Quality Management Planning Regulation.

"Expansion" or "expands" means (i) initiating construction at an existing treatment works after July 1, 2005, to increase design flow capacity, except that the term does not apply in those cases where a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) was issued on or before July 1, 2005, or (ii) industrial production process changes or the use of new treatment products at industrial facilities that increase the annual mass load of total nitrogen or total phosphorus above the wasteload allocation.

"Facility" means a point source from which a discharge or proposed discharge of total nitrogen or total phosphorus to the Chesapeake Bay or its tributaries exists. This term does not include

confined animal feeding operations, discharges of storm water, return flows from irrigated agriculture, or vessels.

"General permit" means this general permit authorized by § [62.1-44.19:14](#) of the Code of Virginia.

"Industrial facility" means any facility (as defined above) other than sewage treatment works.

"Local water quality-based limitations" means limitations intended to protect local water quality including applicable total maximum daily load (TMDL) allocations, applicable Virginia Pollution Discharge Elimination System (VPDES) permit limits, applicable limitations set forth in water quality standards established under § [62.1-44.15](#) (3a) of the Code of Virginia, or other limitations as established by the State Water Control Board.

"New discharge" means any discharge from a facility that did not commence prior to July 1, 2005, except that the term does not apply in those cases where a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) was issued to the facility on or before July 1, 2005.

"Nonsignificant discharger" means (i) a sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line with a design capacity of less than 0.1 million gallons per day, or less than an equivalent load discharged from industrial facilities, or (ii) a sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line with a design capacity of less than 0.5 million gallons per day, or less than an equivalent load discharged from industrial facilities.

"Offset" means to acquire an annual wasteload allocation of total nitrogen or total phosphorus for a new or expanding facility to ensure that there is no net increase of nutrients into the affected tributary of the Chesapeake Bay.

"Permitted design capacity" or "permitted capacity" means the allowable load (pounds per year) assigned to an existing facility that is a nonsignificant discharger and that does not have a wasteload allocation listed in [9VAC25-720-50 C](#), [9VAC25-720-60 C](#), [9VAC25-720-70 C](#), [9VAC25-720-110 C](#), and [9VAC25-720-120 C](#) of the Water Quality Management Planning Regulation. The permitted design capacity is calculated based on the design flow and installed nutrient removal technology (for sewage treatment works, or equivalent discharge from industrial facilities) at a facility that has either commenced discharge, or for which an owner has received a Certificate to Construct (for sewage treatment works, or equivalent DEQ approval for discharges from industrial facilities) prior to July 1, 2005. This mass load is used for (i) determining whether the owner of the expanding facility must offset additional mass loading of nitrogen and phosphorus and (ii) determining whether the owner of the facility must acquire credits at the end of a calendar year. For the purpose of this chapter, owners of facilities that have installed secondary wastewater treatment (intended to achieve BOD and TSS monthly average concentrations equal to or less than 30 milligrams per liter) are assumed to achieve an annual average total nitrogen effluent concentration of 18.7 milligrams per liter and an annual average total phosphorus effluent concentration of 2.5 milligrams per liter. Permitted design

capacities for facilities that, before July 1, 2005, were required to comply with more stringent nutrient limits shall be calculated using the more stringent values.

"Permitted facility" means a facility whose owner is authorized by this general permit to discharge total nitrogen or total phosphorus. For the sole purpose of generating point source nitrogen credits or point source phosphorus credits, "permitted facility" shall also mean the Blue Plains wastewater treatment facility operated by the District of Columbia Water and Sewer Authority.

"Permittee" means a person authorized by this general permit to discharge total nitrogen or total phosphorus.

"Point source nitrogen credit" means the difference between (i) the wasteload allocation for a permitted facility specified as an annual mass load of total nitrogen and (ii) the monitored annual mass load of total nitrogen discharged from that facility, where clause (ii) is less than clause (i), and where the difference is adjusted by the applicable delivery factor and expressed as pounds per year of delivered total nitrogen load.

"Point source phosphorus credit" means the difference between (i) the wasteload allocation for a permitted facility specified as an annual mass load of total phosphorus and (ii) the monitored annual mass load of total phosphorus discharged from that facility, where clause (ii) is less than clause (i), and where the difference is adjusted by the applicable delivery factor and expressed as pounds per year of delivered total phosphorus load.

"Quantification level" or "QL" means the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence in accordance with [1VAC30-45](#), Certification for Noncommercial Environmental Laboratories, or [1VAC30-46](#), Accreditation for Commercial Environmental Laboratories.

"Registration list" means a list maintained by the department indicating all facilities that are registered for coverage under this general permit, by tributary, including their wasteload allocations, permitted design capacities, and delivery factors as appropriate.

"Significant discharger" means the owner of (i) a sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line with a design capacity of 0.5 million gallons per day or greater, or an equivalent load discharged from industrial facilities; (ii) a sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load discharged from industrial facilities; (iii) a planned or newly expanding sewage treatment works discharging to the Chesapeake Bay watershed upstream of the fall line that was expected to be in operation by December 31, 2010, with a permitted design of 0.5 million gallons per day or greater, or an equivalent load to be discharged from industrial facilities; or (iv) a planned or newly expanding sewage treatment works discharging to the Chesapeake Bay watershed downstream of the fall line that was expected to be in operation by December 31, 2010, with a design capacity of 0.1 million gallons per day or greater, or an equivalent load to be discharged from industrial facilities.

"State-of-the-art nutrient removal technology" means (i) technology that will achieve an annual average total nitrogen effluent concentration of three milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter or (ii) equivalent load



reductions in total nitrogen and total phosphorus through recycle or reuse of wastewater as determined by the department.

"Tributaries" means those river basins listed in the Chesapeake Bay TMDL and includes the Potomac, Rappahannock, York, and James River Basins and the Eastern Shore Basin, which encompasses the creeks and rivers of the Eastern Shore of Virginia that are west of Route 13 and drain into the Chesapeake Bay.

"VPDES" means Virginia Pollutant Discharge Elimination System.

"Wasteload allocation" means the most limiting of (i) the water quality-based annual mass load of total nitrogen or annual mass load of total phosphorus allocated to individual facilities pursuant to [9VAC25-720-50 C](#), [9VAC25-720-60 C](#), [9VAC25-720-70 C](#), [9VAC25-720-110 C](#), and [9VAC25-720-120 C](#) of the Water Quality Management Planning Regulation or its successor, or permitted capacity in the case of nonsignificant dischargers; (ii) the water quality-based annual mass load of total nitrogen or annual mass load of total phosphorus acquired pursuant to § [62.1-44.19:15](#) of the Code of Virginia for new or expanded facilities; or (iii) applicable total nitrogen or total phosphorus wasteload allocations under the Chesapeake Bay total maximum daily loads (TMDLs) to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

**9VAC25-820-15. Applicability of incorporated references based on the dates that they became effective.**

Except as noted, when a regulation of the U.S. Environmental Protection Agency set forth in Title 40 of the Code of Federal Regulations is referenced or adopted in this chapter and incorporated by reference that regulation shall be as it exists and has been published as of July 1, 2014.

**9VAC25-820-20. Purpose, applicability, delegation of authority.**

A. This regulation fulfills the statutory requirement for the General VPDES Watershed Permit for Total Nitrogen and Total Phosphorus discharges and nutrient trading in the Chesapeake Bay watershed issued by the board pursuant to the Clean Water Act (33 USC § 1251 et seq.) and § [62.1-44.19:14](#) of the Code of Virginia.

B. This general permit regulation governs owners of facilities holding individual VPDES permits or otherwise meeting the definition of "existing facility" that discharge or propose to discharge total nitrogen or total phosphorus to the Chesapeake Bay or its tributaries.

C. The director may perform any act of the board provided under this regulation, except as limited by § [62.1-44.14](#) of the Code of Virginia.

**9VAC25-820-30. Relation to existing VPDES permits issued in accordance with 9VAC25-31.**

A. This general permit shall control in lieu of conflicting or duplicative mass loading effluent limitations, monitoring or reporting requirements for total nitrogen and total phosphorus contained in individual VPDES permits for facilities covered by this general permit where these requirements are based upon standards, criteria, wasteload allocations, policy, or guidance

established to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

B. This general permit shall not control in lieu of more stringent water quality-based effluent limitations for total nitrogen or total phosphorus in individual permits where those limitations are necessary to protect local water quality, or more stringent technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction, expansion, or upgrade.

C. The compliance schedule in this general permit shall control in lieu of conflicting or duplicative schedule requirements contained in individual VPDES permits for facilities covered by this general permit where those requirements address mass loading of total nitrogen or total phosphorus and are based upon standards, criteria, wasteload allocations, policy, or guidance established to restore or protect the water quality and beneficial uses of the Chesapeake Bay or its tidal tributaries.

**9VAC25-820-40. Compliance plans.**

A. By ~~July~~February 1, 2023, every owner of a facility subject to reduced individual total nitrogen or total phosphorus wasteload allocations as identified in 9VAC25-820-80 shall either individually or through the Virginia Nutrient Credit Exchange Association submit compliance plans to the department for approval.

1. For facilities listed in 9VAC25-820-80.a, compliance with reduced wasteload allocations established by the Enhanced Nutrient Removal Certainty Program shall be on the effective date of the reduced allocations as established in 9VAC25-720-60 and 9VAC25-720-120. For facilities listed in 9VAC25-820-80.b, compliance with chlorophyll-a based total phosphorus wasteload allocations shall be achieved as soon as possible, but no later than January 1, 2026. The compliance plans shall contain any capital projects and implementation schedules needed to achieve total nitrogen and phosphorus reductions sufficient to comply with the individual and combined wasteload allocations of all the permittees in the tributary as soon as possible. Permittees submitting individual plans are not required to account for other facilities' activities.

2. As part of the compliance plan development for facilities listed in 9VAC25-820-80.b, permittees shall either:

a. Demonstrate that the additional capital projects anticipated by subdivision 1 of this subsection are necessary to ensure continued compliance with these allocations by January 1, 2026, or

b. Request that their individual wasteload allocations become effective on January 1, 2023.

3. The compliance plans may rely on the exchange of point source credits in accordance with this general permit, but not the acquisition of credits through payments into the Nutrient Offset Fund (§ 10.1-2128.2 of the Code of Virginia), to achieve compliance with the individual and combined wasteload allocations in each tributary.

B. Every owner of a facility required to submit a registration statement shall either individually or through the Virginia Nutrient Credit Exchange Association submit annual compliance plan updates to the department for approval as required by Part I D of the general permit.

**9VAC25-820-50. Transfer of permit coverage.**

A. Coverage under the general permit shall be transferred by the current permittee to a new owner concurrently with the transfer of the individual permit or permits in accordance with [9VAC25-31-380](#). If the current permittee holds an aggregated wasteload allocation for multiple facilities in accordance with Part I B 2 of the general permit, the current permittee shall submit a revised registration statement for any facilities retained and the new owner shall submit a registration statement for the facilities transferred.

B. All conditions of the general permit, including, but not limited to, the submittal of a registration statement, annual nutrient allocation compliance and reporting requirements, shall apply to the new owner immediately upon the transfer date.

**9VAC25-820-60. Termination of permit coverage.**

The owner shall terminate coverage under this general permit concurrently with any request for termination of the individual permit or permits in accordance with [9VAC25-31-370](#).

**9VAC25-820-70. General permit.**

Any owner whose registration statement is accepted by the board will receive the following general permit and shall comply with the requirements of the general permit.

General Permit No.: VAN000000  
Effective Date: January 1, 2022

Expiration Date: December 31, 2026

**GENERAL PERMIT FOR TOTAL NITROGEN AND TOTAL PHOSPHORUS DISCHARGES AND NUTRIENT TRADING IN THE CHESAPEAKE WATERSHED IN VIRGINIA AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE WATER CONTROL LAW**

In compliance with the provisions of the Clean Water Act, as amended, and pursuant to the State Water Control Law and regulations adopted pursuant to it, owners of facilities holding a VPDES individual permit or owners of facilities that otherwise meet the definition of an existing facility, with total nitrogen or total phosphorus discharges, or both to the Chesapeake Bay or its tributaries, are authorized to discharge to surface waters and exchange credits for total nitrogen or total phosphorus, or both.

The authorized discharge shall be in accordance with the registration statement filed with DEQ, this cover page, Part I-Special Conditions Applicable to All Facilities, Part II-Special Conditions Applicable to New and Expanded Facilities, and Part III-Conditions Applicable to All VPDES Permits, as set forth herein.

**PART I**

**SPECIAL CONDITIONS APPLICABLE TO ALL FACILITIES**

**A. Authorized activities.**

**1. Authorization to discharge for owners of facilities required to register.**

a. Every owner of a facility required to submit a registration statement to the department by November 1, 2021, and thereafter upon the reissuance of this general permit, shall be authorized to discharge total nitrogen and total phosphorus subject to the requirements of this general permit upon the department's approval of the registration statement.

b. Any owner of a facility required to submit a registration statement with the department at the time he makes application with the department for a new discharge or expansion that is subject to an offset or technology-based requirement in Part II of this general permit, shall be authorized to discharge total nitrogen and total phosphorus subject to the requirements of this general permit upon the department's approval of the registration statement.

c. Upon the department's approval of the registration statement, a facility will be included in the registration list maintained by the department.

2. Authorization to discharge for owners of facilities not required to register. Any owner of a facility authorized by a VPDES permit and not required by this general permit to submit a registration statement shall be deemed to be authorized to discharge total nitrogen and total phosphorus under this general permit at the time it is issued. Owners of facilities that are deemed to be permitted under this subsection shall have no obligation under this general permit prior to submitting a registration statement and securing coverage under this general permit based upon such registration statement.

3. Continuation of permit coverage.

a. Any owner authorized to discharge under this general permit and who submits a complete registration statement for the reissued general permit by November 1, 2026, in accordance with Part III M or who is not required to register in accordance with Part I A 2 is authorized to continue to discharge under the terms of this general permit until such time as the board either:

- (1) Issues coverage to the owner under the reissued general permit, or
- (2) Notifies the owner that the discharge is not eligible for coverage under this general permit.

b. When the owner that was covered under the expiring or expired general permit has violated or is violating the conditions of that permit, the board may choose to do any or all of the following:

- (1) Initiate enforcement action based upon the 2017 general permit,
- (2) Issue a notice of intent to deny coverage under the reissued general permit. If the general permit coverage is denied, the owner would then be required to cease the discharges authorized by the administratively continued coverage under the terms of the 2017 general permit or be subject to enforcement action for operating without a permit, or
- (3) Take other actions authorized by the State Water Control Law.

B. Wasteload allocations.

1. Wasteload allocations allocated to permitted facilities pursuant to 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, or applicable TMDLs, or wasteload allocations acquired by owners of new and expanding facilities to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion under Part II B of this general permit, and existing loads calculated from the permitted design capacity of expanding facilities not previously covered by this general permit, shall be incorporated into the registration list maintained by the department. The wasteload allocations contained in this list shall be enforceable as annual mass load limits in this general permit. Credits shall not be generated by facilities whose operations were previously authorized by a Virginia Pollution Abatement (VPA) permit that was issued before July 1, 2005.

2. Except as described in subdivisions 2 c and 2 d of this subsection, an owner of two or more facilities covered by this general permit and discharging to the same tributary may apply for and receive an aggregated mass load limit for delivered total nitrogen and an aggregated mass load limit for delivered total phosphorus reflecting the total of the water quality-based total nitrogen and total phosphorus wasteload allocations or permitted design capacities established for such facilities individually.

a. The permittee (and all of the individual facilities covered under a single registration) shall be deemed to be in compliance when the aggregate mass load discharged by the facilities is less than the aggregate load limit.

b. The permittee will be eligible to generate credits only if the aggregate mass load discharged by the facilities is less than the total of the wasteload allocations assigned to any of the affected facilities.

c. The aggregation of mass load limits shall not affect any requirement to comply with local water quality-based limitations.

d. Facilities whose operations were previously authorized by a Virginia Pollution Abatement (VPA) permit that was issued before July 1, 2005, cannot be aggregated with other facilities under common ownership or operation.

e. Operation under an aggregated mass load limit in accordance with this section shall not be deemed credit acquisition as described in Part I J 2 of this general permit.

3. An owner that consolidates two or more facilities discharging to the same tributary into a single regional facility may apply for and receive an aggregated mass load limit for total nitrogen and an aggregated mass load limit for total phosphorus, subject to the following conditions:

a. Aggregate mass limits will be calculated accounting for delivery factors in effect at the time of the consolidation.

b. If all of the affected facilities have wasteload allocations in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, the aggregate mass load limit shall be calculated by adding the wasteload allocations of the affected facilities. The regional facility shall be eligible to generate credits.

c. If any, but not all, of the affected facilities has a wasteload allocation in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, the aggregate mass load limit shall be calculated by adding:

(1) Wasteload allocations of those facilities that have wasteload allocations in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation;

(2) Permitted design capacities assigned to affected industrial facilities; and

(3) Loads from affected sewage treatment works that do not have a wasteload allocation in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, defined as the lesser of a previously calculated permitted design capacity, or the values calculated by the following formulae:

Nitrogen Load (lbs/ year) = flow (MGD) x 8.0 mg/l x 8.345 x 365 days/year

Phosphorus Load (lbs/ year) = flow (MGD) x 1.0 mg/l x 8.345 x 365 days/year

Flows used in the preceding formulae shall be the design flow of the treatment works from which the affected facility currently discharges.

The regional facility shall be eligible to generate credits.

d. If none of the affected facilities have a wasteload allocation in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation, the aggregate mass load limit shall be calculated by adding the respective permitted design capacities for the affected facilities.

e. Facilities whose operations were previously authorized by a Virginia Pollution Abatement (VPA) permit that was issued before July 1, 2005, may be consolidated with other facilities under common ownership or operation, but their allocations cannot be transferred to the regional facility.

f. Facilities whose operations were previously authorized by a VPA permit that was issued before July 1, 2005, can become regional facilities, but they cannot receive additional allocations beyond those permitted in Part II B 1 d of this general permit.

4. Unless otherwise noted, the nitrogen and phosphorus wasteload allocations assigned to permitted facilities are considered total loads, including nutrients present in the intake water from the river, as applicable. On a case-by-case basis, an industrial discharger may demonstrate to the satisfaction of the board that a portion of the nutrient load originates in its intake water. This demonstration shall be consistent with the assumptions and methods used to derive the allocations through the Chesapeake Bay models. In these cases, the board may limit the permitted discharge to the net nutrient load portion of the assigned wasteload allocation.

5. Bioavailability. Unless otherwise noted, the entire nitrogen and phosphorus wasteload allocations assigned to permitted facilities are considered to be bioavailable to organisms in the receiving stream. On a case-by-case basis, a discharger may demonstrate to the satisfaction of the board that a portion of the nutrient load is not bioavailable; this demonstration shall not be based on the ability of the nutrient to resist degradation at the wastewater treatment plant, but instead, on the ability of the nutrient to resist degradation within a natural environment for the amount of time that it is expected to remain in the Chesapeake Bay watershed. This demonstration shall also be consistent with the assumptions and methods used to derive the allocations through the Chesapeake Bay models. In these cases, the board may limit the permitted discharge to the bioavailable portion of the assigned wasteload allocation.

#### C. Schedule of compliance.

1. For facilities listed in 9VAC25-820-80.a, compliance with reduced wasteload allocations established by the Enhanced Nutrient Removal Certainty Program shall be on the effective date of the reduced allocations as established in 9VAC25-720-60 and 9VAC25-720-120. For facilities listed in 9VAC25-820-80.b, compliance with chlorophyll-a based total phosphorus wasteload allocations shall be achieved as soon as possible, but no later than January 1, 2026.

2. Following submission of compliance plans and compliance plan updates required by 9VAC25-820-40, the board shall reevaluate the schedule of compliance in subdivision 1 a of this subsection, taking into account the information in the compliance plans and the factors in § 62.1-44.19:14 C 2 of the Code of Virginia. When warranted based on such information and factors, the board shall adjust the schedule in subdivision 1 of this subsection as appropriate by modification or reissuance of this general permit.

3. The registration list shall contain individual dates for compliance with wasteload allocations for dischargers, as follows:

a. Owners of facilities listed in 9VAC25-820-80.b will have individual dates for compliance based on their respective compliance plans that may be earlier than the schedule listed in subdivision 1 of this subsection.

b. Owners of facilities listed in 9VAC25-820-80.b that waive their compliance schedules in accordance with 9VAC25-820-40 A 2 b shall have an individual compliance date of January 1, 2023.

c. Upon completion of the projects contained in their compliance plans, owners of facilities listed in 9VAC25-820-80.b may receive a revised individual compliance date of January 1 for the calendar year immediately following the year in which a Certificate to Operate was issued for the capital projects, but not later than January 1, 2026.

d. Owners of new and expanded facilities will have individual dates for compliance corresponding to the date that coverage under this general permit was extended to discharges from the facility.

~~The significant dischargers in the James River Basin shall meet aggregate discharged wasteload allocations of 8,968,864 lbs/yr TN and 545,558 lbs/yr TP by January 1, 2023.~~

D. Annual update of compliance plan. Every owner of a facility required to submit a registration statement shall either individually or through the Virginia Nutrient Credit Exchange Association submit updated compliance plans to the department no later than February 1 of each year. The compliance plans shall contain sufficient information to document a plan to achieve and maintain compliance with applicable total nitrogen and total phosphorus individual wasteload allocations on the registration list and aggregate wasteload allocations in Part I C 3. Compliance plans for owners of facilities that were required to submit a registration statement with the department under Part I G 1 a may rely on the acquisition of point source credits in accordance with Part I J of this general permit, but not the acquisition of credits through payments into the Nutrient Offset Fund, to achieve compliance with the individual and combined wasteload allocations in each tributary. Compliance plans for expansions or new discharges for owners of facilities that are required to submit a registration statement with the department under Part I G 1 b and c may rely on the acquisition of allocation in accordance with Part II B of this general permit to achieve compliance with the individual and combined wasteload allocations in each tributary.

E. Monitoring requirements.

1. Discharges shall be monitored by the permittee during weekdays as specified in the table below unless the department determines that weekday only sampling results in a non-representative load. Weekend monitoring or alternative monthly load calculations to address production schedules or seasonal flows shall be submitted to the department for review and approval on a case-by-case basis. Facilities that exhibit instantaneous discharge flows that vary from the daily average discharge flow by less than 10% may submit a proposal to the department to use an alternative sample type; such proposals shall be reviewed and approved by the department on a case-by-case basis.

Parameter	Sample Type and Collection Frequency				
STP design flow	≥20.0 MGD	1.0 - 19.999 MGD	0.5 - 0.999 MGD	0.040 - 0.499 MGD	< 0.040 MGD
Effluent TN load limit for industrial facilities		≥100,000 lb/yr	50,000 - 99,999 lb/yr	487 - 49,999 lb/yr	< 487 lb/yr

Effluent TP load limit for industrial facilities	≥10,000 lb/yr	5,000 - 9,999 lb/yr	37 - 4,999 lb/yr	< 37 lb/yr	
Flow	Totalizing, Indicating, and Recording			1/Day, see individual VPDES permit for sample type	
Nitrogen Compounds (Total Nitrogen = TKN %2B NO <sub>2</sub> <sup>-</sup> (as N) %2B NO <sub>3</sub> <sup>-</sup> (as N))	24 HC 3 Days/Week	24 HC 2 Days/Week*	8 HC 2 Days/Week*	8 HC 2/Month, > 7 days apart	1/Month Grab
Total Phosphorus	24 HC 3 Days/Week	24 HC 2 Days/Week*	8 HC 2 Days/Week*	8 HC 2/Month, > 7 days apart	1/Month Grab

\*Two flow composited samples taken in the same calendar week that are then composited by flow into a single weekly composite sample for analysis shall be considered to be in compliance with this requirement.

2. Monitoring for compliance with effluent limitations shall be performed in a manner identical to that used to determine compliance with effluent limitations established in the individual VPDES permit unless specified otherwise in subdivisions 3, 4, and 5 of Part I E. Monitoring or sampling shall be conducted according to analytical laboratory methods approved under 40 CFR Part 136, unless other test or sample collection procedures have been requested by the permittee and approved by the department in writing. All analysis for compliance with effluent limitations shall be conducted in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories. Monitoring may be performed by the permittee at frequencies more stringent than listed in subdivision 1 of Part I E; however, the permittee shall report all results of such monitoring.

3. Loading values greater than or equal to 10 pounds reported in accordance with Part I E and F of this general permit shall be calculated and reported to the nearest pound without regard to mathematical rules of precision. Loading values of less than 10 pounds reported in accordance with Part I E and F of this general permit shall be calculated and reported to at least two significant digits with the exception that all complete calendar year annual loads shall be reported to the nearest pound.

4. Data shall be reported on a form provided by the department, by the same date each month as is required by the owner's individual VPDES permit. The total monthly load shall be calculated in accordance with the following formula:

$$ML = \left( \frac{\sum DL}{s} \right) \times d$$

where:

ML = total monthly load (lb/mo) = average daily load for the calendar month multiplied by the number of days of the calendar month on which a discharge occurred



DL = daily load = daily concentration (expressed as mg/l to the nearest 0.01 mg/l) multiplied by the flow volume of effluent discharged during the 24-hour period (expressed as MGD to at least the nearest 0.01 MGD and in no case less than two significant digits), multiplied by 8.345. Daily loads greater than or equal to 10 pounds may be rounded to the nearest whole number to convert to pounds per day (lbs/day). Daily loads less than or equal to 10 pounds may be rounded to no fewer than two significant figures.

s = number of days in the calendar month in which a sample was collected and analyzed

d = number of discharge days in the calendar month

For total phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used shall be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported. If all data are below the QL, then the average shall be reported as half the QL.

For total nitrogen (TN), if none of the daily concentration data for the respective species (i.e., TKN, nitrates/nitrites) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point as reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

The quantification levels shall be less than or equal to the following concentrations:

Parameter	Quantification Level
TKN	0.50 mg/l
Nitrite	0.10 mg/l
Nitrate	0.20 mg/l
Nitrite %2B Nitrate	0.20 mg/l

Higher QLs may be approved on a case-by-case basis where a higher QL routinely results in reportable results of the species in question or is otherwise technically appropriate based on standard lab practices.

The total year-to-date mass load shall be calculated in accordance with the following formula:

$$AL_{YTD} = \sum_{Jan-present} ML$$

where:

AL-YTD = calendar year-to-date annual load (lb/yr)

ML = total monthly load (lb/mo)

The total annual mass load shall be calculated in accordance with the following formula:

$$AL = \sum_{Jan-Dec} ML$$

where:

AL = calendar year annual load (lb/yr)

ML = total monthly load (lb/mo)

5. The department may authorize a chemical usage evaluation as an alternative means of determining nutrient loading for outfalls where the only source of nutrients is that found in the surface water intake and chemical additives used by the facility. Such an evaluation shall be submitted to the department for review and approval on a case-by-case basis. Implementation of approved chemical usage evaluations shall satisfy the requirements specified under Part I E 1 and 2.

F. Annual reporting. On or before February 1, annually, each permittee shall file a discharge monitoring report with the department identifying the annual mass load of total nitrogen and the annual mass load of total phosphorus discharged by the permitted facility during the previous calendar year.

G. Requirement to register; exclusions.

1. The following owners are required to register for coverage under this general permit:

a. Every owner of an existing facility authorized by a VPDES permit to discharge 100,000 gallons or more per day from a sewage treatment work, or an equivalent load from an industrial facility, directly into tidal waters, or 500,000 gallons or more per day from a sewage treatment works, or an equivalent load from an industrial facility, directly into nontidal waters shall submit a registration statement to the department by November 1, 2016, and thereafter upon the reissuance of this general permit in accordance with Part III M. The conditions of this general permit will apply to such owner upon approval of a registration statement.

b. Any owner of a facility authorized by a Virginia Pollutant Discharge Elimination System permit to discharge 40,000 gallons or more per day from a sewage treatment works, or an equivalent load from an industrial facility, directly into tidal or nontidal waters shall submit a registration statement with the department at the time he makes application for an individual permit with the department for a new discharge or expansion that is subject to an offset requirement in Part II of this general permit or to a technology-based requirement in 9VAC25-40-70, and thereafter upon the reissuance of this general permit in accordance with Part III M. The conditions of this general permit will apply to such owner beginning January 1 of the calendar year immediately following approval of a registration statement and issuance or modification of the individual permit.

c. Any owner of a facility treating domestic sewage authorized by a VPDES permit with a discharge greater than 1,000 gallons per day up to and including 39,999 gallons per day that did not commence the discharge of pollutants prior to January 1, 2011, and is subject to offset requirements in accordance with Part II A 1 c of this general permit shall submit a registration statement with the department at the time the owner makes application for an individual permit with the department or prior to commencing a discharge, whichever occurs first, and thereafter upon the reissuance of this general permit in accordance with Part III M.

2. All other categories of discharges are excluded from registration under this general permit.

H. Registration statement.

1. The registration statement shall contain the following information:

a. Name, mailing address and telephone number, email address, and fax number of the owner (and facility operator, if different from the owner) applying for permit coverage;

b. Name (or other identifier), address, city or county, contact name, phone number, email address, and fax number for the facility for which the registration statement is submitted;

c. VPDES permit numbers for all permits assigned to the facility, or pursuant to which the discharge is authorized;

d. If applying for an aggregated wasteload allocation in accordance with Part I B 2 of this permit, a list of all affected facilities and the VPDES permit numbers assigned to these facilities;

e. For new and expanded facilities, a plan to offset new or increased delivered total nitrogen and delivered total phosphorus loads, including the amount of wasteload allocation acquired. Wasteload allocations or credits sufficient to offset projected nutrient loads must be provided for period of at least five years; and

f. For existing facilities, the amount of a facility's wasteload allocation transferred to or from another facility to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion.

2. The registration statement shall be submitted to the DEQ Central Office, Office of VPDES Permits. Following notification from the department of the start date for the required electronic submission of Notices of Intent to Discharge forms (i.e., registration statements), as provided for in 9VAC25-31-1020, such form submitted after that date shall be electronically submitted to the department in compliance with this section and 9VAC25-31-1020. At least three months' notice shall be provided between the notification from the department and the date after which such forms must be submitted electronically.

3. An amended registration statement shall be submitted to DEQ immediately upon the acquisition or transfer of a facility's wasteload allocation to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion.

I. Public notice for registration statements proposing modifications or incorporations of new wasteload allocations or delivery factors.

1. All public notices issued pursuant to a proposed modification or incorporation of a (i) new wasteload allocation to offset new or increased delivered total nitrogen and delivered total phosphorus loads from a new discharge or expansion or (ii) delivery factor shall be published once a week for two consecutive weeks in a local newspaper of general circulation serving the locality where the facility is located informing the public that the owner of the facility intends to apply for coverage under this general permit. At a minimum, the notice shall include:

a. A statement of the owner's intent to register for coverage under this general permit;

b. A brief description of the facility and its location;

c. The amount of wasteload allocation that will be acquired or transferred if applicable;

d. The delivery factor for a new discharge or expansion;

e. If applicable, any proposed nonpoint source to point source trading ratio less than 2:1 proposed under Part II B 1 b (1);

f. A statement that the purpose of the public participation is to acquaint the public with the technical aspects of the facility and how the standards and the requirements of this chapter will be met, to identify issues of concern, to facilitate communication, and to establish a dialogue between the owner and persons who may be affected by the discharge from the facility;

g. An announcement of a 30-day comment period and the name, telephone number, and address of the owner's representative who can be contacted by the interested persons to answer questions;

h. The name, telephone number, and address of the DEQ representative who can be contacted by the interested persons to answer questions, or where comments shall be sent; and

i. The location where copies of the documentation to be submitted to the department in support of this general permit notification and any supporting documents can be viewed and copied.

2. The owner shall place a copy of the documentation and support documents in a location accessible to the public in the vicinity of the proposed facility.

3. The public shall be provided 30 days to comment on the technical and the regulatory aspects of the proposal. The comment period will begin on the date the notice is published in the local newspaper.

J. Compliance with wasteload allocations.

1. Methods of compliance. The owner of the permitted facility shall comply with its wasteload allocation contained in the registration list maintained by the department. The owner of the permitted facility shall be in compliance with its wasteload allocation if:

a. The annual mass load is less than or equal to the applicable wasteload allocation assigned to the facility in this general permit (or permitted design capacity for expanded facilities without allocations);

b. The owner of the permitted facility acquires sufficient point source nitrogen or phosphorus credits in accordance with subdivision 2 of this subsection; provided, however, that the acquisition of nitrogen or phosphorus credits pursuant to this section shall not alter or otherwise affect the individual wasteload allocations for each permitted facility; or

c. In the event he is unable to meet the individual wasteload allocation pursuant to subdivision 1 a or 1 b of this subsection, the owner of the permitted facility acquires sufficient nitrogen or phosphorus credits through payments made into the Nutrient Offset Fund pursuant to subdivision 3 of this subsection; provided, however, that the acquisition of nitrogen or phosphorus credits pursuant to this section shall not alter or otherwise affect the individual wasteload allocations for each permitted facility.

2. Credit acquisition from owners of permitted facilities. A permittee may acquire point source nitrogen credits or point source phosphorus credits from one or more owners of permitted facilities only if:

a. The credits are generated and applied to a compliance obligation in the same calendar year;

b. The credits are generated by one or more permitted facilities in the same tributary, except that owners of permitted facilities in the Eastern Shore Basin may also acquire credits from owners of permitted facilities in the Potomac and Rappahannock tributaries. Owners of Eastern Shore Basin facilities may acquire credits from the owners of Potomac tributary facilities at a trading ratio of 1:1. A trading ratio of 1.3:1 shall apply to the acquisition of credits from the owners of a Rappahannock tributary facility by the owner of an Eastern Shore Basin facility;

c. The exchange or acquisition of credits does not affect any requirement to comply with local water quality-based limitations as determined by the board;

- d. The credits are acquired no later than June 1 immediately following the calendar year in which the credits are applied;
  - e. The credits are generated by a facility that has been constructed, and has discharged from treatment works whose design flow or equivalent industrial activity is the basis for the facility's wasteload allocations (until a facility is constructed and has commenced operation, such credits are held, and may be sold, by the Nutrient Offset Fund; and
  - f. No later than June 1 immediately following the calendar year in which the credits are applied, the permittee certifies on a credit exchange notification form supplied by the department that he has acquired sufficient credits to satisfy his compliance obligations. The permittee shall comply with the terms and conditions contained in the credit exchange notification form submitted to the department.
3. Credit acquisitions from the Nutrient Offset Fund. Until such time as the board finds that no allocations are reasonably available in an individual tributary, permittees that cannot meet their total nitrogen or total phosphorus effluent limit may acquire nitrogen or phosphorus credits through payments made into the Nutrient Offset Fund established in § 10.1-2128.2 of the Code of Virginia only if, no later than June 1 immediately following the calendar year in which the credits are to be applied, the permittee certifies on a form supplied by the department that he has diligently sought, but has been unable to acquire, sufficient credits to satisfy his compliance obligations through the acquisition of point source nitrogen or phosphorus credits with other permitted facilities, and that he has acquired sufficient credits to satisfy his compliance obligations through one or more payments made in accordance with the terms of this general permit. Such certification may include providing a record of solicitation or demonstration that point source allocations are not available for sale in the tributary in which the permittee's facility is located. Payments to the Nutrient Offset Fund shall be in the amount of \$5.08 for each pound of nitrogen and \$11.15 for each pound of phosphorus and shall be subject to the following requirements:
- a. The credits are generated and applied to a compliance obligation in the same calendar year.
  - b. The credits are generated in the same tributary, except that owners of permitted facilities in the Eastern Shore Basin may also acquire credits from the owners of facilities that discharge to the Potomac and Rappahannock tributaries. Owners of Eastern Shore Basin facilities may acquire credits from the owners of facilities that discharge to a Potomac tributary at a trading ratio of 1:1. A trading ratio of 1.3:1 shall apply to the acquisition of credits from owners of facilities that discharge to a Rappahannock tributary by the owners of an Eastern Shore Basin facility.
  - c. The acquisition of credits does not affect any requirement to comply with local water quality-based limitations, as determined by the board.
4. This general permit neither requires nor prohibits a municipality or regional sewerage authority's development and implementation of trading programs among industrial users, which are consistent with the pretreatment regulatory requirements at 40 CFR Part 403 and the municipality's or authority's individual VPDES permit.

#### Part II

#### SPECIAL CONDITIONS APPLICABLE TO NEW AND EXPANDED FACILITIES

- A. Offsetting mass loads discharged by new and expanded facilities.
  1. An owner of a new or expanded facility shall comply with the applicable requirements of this section as a condition of the facility's coverage under this general permit.

- a. An owner of a facility authorized by a VPDES permit first issued before July 1, 2005, that expands the facility to discharge 40,000 gallons or more per day, or an equivalent load, shall demonstrate to the department that he has acquired wasteload allocations sufficient to offset any increase in his delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond his permitted capacity as of July 1, 2005.
- b. An owner of a facility authorized by a VPDES permit first issued on or after July 1, 2005, to discharge 40,000 gallons or more per day, or an equivalent load, shall demonstrate to the department that he has acquired wasteload allocations sufficient to offset his delivered total nitrogen and delivered total phosphorus loads.
- c. An owner of a facility treating domestic sewage authorized by a VPDES permit with a discharge greater than 1,000 gallons per day up to and including 39,999 gallons per day that did not commence the discharge of pollutants prior to January 1, 2011, shall demonstrate to the department that he has acquired wasteload allocations sufficient to offset his delivered total nitrogen and delivered phosphorus loads prior to commencing the discharge, except when the facility is for short-term temporary use only as determined by the department or when treatment of domestic sewage is not the primary purpose of the facility.

2. Offset calculations shall address the proposed discharge that exceeds:

- a. The applicable wasteload allocation assigned to discharges from the facility in this general permit, for expanding significant dischargers with a wasteload allocation listed in 9VAC25-720-50 C, 9VAC25-720-60 C, 9VAC25-720-70 C, 9VAC25-720-110 C, and 9VAC25-720-120 C of the Water Quality Management Planning Regulation;
- b. The permitted design capacity, for all other expanding dischargers; and
- c. Zero, for facilities with a new discharge.

3. An owner of multiple facilities that discharge into the same tributary, and assigned an aggregate mass load limit in accordance with Part I B 2 of this general permit, that undertakes construction of new or expanded facilities shall be required to acquire wasteload allocations sufficient to offset any increase in delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond the aggregate mass load limit assigned these facilities.

B. Acquisition of wasteload allocations. Wasteload allocations required by this section to offset new or increased delivered total nitrogen and delivered total phosphorus loads shall be acquired in accordance with this section.

1. Such allocations may be acquired from one or a combination of the following:

- a. Acquisition of all or a portion of the wasteload allocations or point source nitrogen or point source phosphorus credits from the owners of one or more permitted facilities, based on delivered pounds by the respective trading parties as listed by the department;
- b. Acquisition of credits certified by the board pursuant to § 62.1-44.19:20 of the Code of Virginia. Credits used to offset new or increased nutrient loads under this subdivision shall be:

(1) Subject to a trading ratio of two pounds reduced for every pound to be discharged if certified as a nonpoint source credit by the board pursuant to § 62.1-44.19:20 of the Code of Virginia. On a case-by-case basis the board may approve nonpoint source to source trading ratios of less than 2:1 (but not less than 1:1) when the applicant demonstrates factors that ameliorate the presumed 2:1 uncertainty ratio for credits generation by nonpoint sources such as:

(a) When direct and representative monitoring of the pollutant loadings from a nonpoint source is performed in a manner and at a frequency similar to that performed at VPDES point sources and there is consistency in the effectiveness of the operation of the nonpoint source best management practice (BMP) approaching that of a conventional point source.

(b) When nonpoint source credits are generated from land conservation that ensures permanent protection through a conservation easement or other instrument attached to the deed and when load reductions can be reliably determined;

(2) Calculated using best management practices efficiency rates and attenuation rates, as established by the latest science and relevant technical information, and approved by the board;

(3) Based on appropriate delivery factors, as established by the latest science and relevant technical information, and approved by the board;

(4) Demonstrated to have achieved reductions beyond those already required by or funded under federal or state law, or by Virginia's Chesapeake Bay TMDL Watershed Implementation Plan;

(5) Generated in accordance with conditions of the facility's individual VPDES permit; and

(6) In the case of credits generated by land use conversions and urban source reduction controls (BMPs), the credits shall represent nutrient reductions beyond those in place as of July 1, 2005;

c. Until such time as the board finds that no allocations are reasonably available in an individual tributary, acquisition of allocations through payments made into the Nutrient Offset Fund established in § 10.1-2128.2 of the Code of Virginia; or

d. Acquisition of allocations through such other means as may be approved by the department on a case-by-case basis. This includes allocations granted by the board to an owner of a facility that is authorized by a VPA permit to land apply domestic sewage if:

(1) The VPA permit was issued before July 1, 2005;

(2) The allocation does not exceed the facility's permitted design capacity as of July 1, 2005;

(3) The waste treated by the facility that is covered under the VPA permit will be treated and discharged pursuant to a VPDES permit for a new discharge; and

(4) The owner installs state-of-the-art nutrient removal technology at such a facility.

2. Acquisition of allocations or point source nitrogen or point source phosphorus credits is subject to the following conditions:

a. The allocations or credits shall be generated and applied to an offset obligation in the same calendar year in which the credit is generated;

b. The allocations or credits shall be generated in the same tributary;

c. Such acquisition does not affect any requirement to comply with local water quality-based limitations, as determined by the board;

d. The allocations are authenticated (i.e., verified to have been generated) by the permittee as required by the facility's individual VPDES permit, utilizing procedures approved by the board, no later than February 1 immediately following the calendar year in which the allocations are applied; and

e. If obtained from the owner of a permitted point source, the allocations shall be generated by a facility that has been constructed, and has discharged from treatment works whose design flow or equivalent industrial activity is the basis for the facility's wasteload allocations.

f. Such allocations or credits shall be secured for a period of five years with each registration under the general permit.

3. Priority of options. The board shall give priority to allocations or credits acquired in accordance with subdivisions 1 a, b, and d of this subsection. The board shall approve allocations acquired in accordance with subdivision 1 c of this subsection only after the owner has demonstrated that he has made a good faith effort to acquire sufficient allocations in accordance with subdivisions 1 a and 1 b of this subsection, and that such allocations are not reasonably available taking into account timing, cost and other relevant factors. Such demonstration may include providing a record of solicitation, or other demonstration that point source allocations or nonpoint source allocations are not available for sale in the tributary in which the permittee's facility discharge is located.

4. Annual allocation acquisitions from the Nutrient Offset Fund. The cost for each pound of nitrogen and each pound of phosphorus shall be determined at the time payment is made to the Nutrient Offset Fund, based on the higher of (i) the estimated cost of achieving a reduction of one pound of nitrogen or phosphorus at the facility that is securing the allocation, or comparable facility, for each pound of allocation acquired; or (ii) the average cost, as determined by the department on an annual basis, of reducing two pounds of nitrogen or phosphorus from nonpoint sources in the same tributary for each pound of allocation acquired.

### Part III

#### CONDITIONS APPLICABLE TO ALL VPDES PERMITS

##### A. Monitoring.

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will ensure accuracy of measurements.
4. Samples taken as required by this permit shall be analyzed in accordance with 1VAC30-45 (Certification for Noncommercial Environmental Laboratories) or 1VAC30-46 (Accreditation for Commercial Environmental Laboratories).

##### B. Records.

1. Records of monitoring information shall include:
  - a. The date, exact place, and time of sampling or measurements;
  - b. The individuals who performed the sampling or measurements;
  - c. The dates and times analyses were performed;
  - d. The individuals who performed the analyses;
  - e. The analytical techniques or methods used; and
  - f. The results of such analyses.



2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the registration statement for this permit, for a period of at least three years from the date of the sample, measurement, report, or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee or as requested by the board.

C. Reporting monitoring results.

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to the department's regional office.

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved, or specified by the department.

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted on the DMR or reporting form specified by the department.

4. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to provide information. The permittee shall furnish to the department, within a reasonable time, any information that the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating coverage under this permit or to determine compliance with this permit. The board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from the discharge on the quality of state waters or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the department, upon request, copies of records required to be kept by this permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized discharges. Except in compliance with this permit or another permit issued by the board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or

2. Otherwise alter the physical, chemical, or biological properties of such state waters and make them detrimental to the public health, to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, for recreation, or for other uses.

G. Reports of unauthorized discharges. Any permittee that discharges or causes or allows a discharge of sewage, industrial waste, other wastes, or any noxious or deleterious substance into or upon state waters in violation of Part III F, or that discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part III F, shall notify the department of the discharge immediately upon discovery of the discharge, but in no case later

than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the department within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate, and prevent a recurrence of the present discharge or any future discharge not authorized by this permit.

Discharges reportable to the department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse effects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the department within five days of discovery of the discharge in accordance with Part III I 2. Unusual and extraordinary discharges include, but are not limited to, any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of noncompliance. The permittee shall report any noncompliance that may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information that shall be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass; and
- b. Any upset that causes a discharge to surface waters.

2. A written report shall be submitted within five days and shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The board may waive the written report on a case-by-case basis for reports of noncompliance under Part III I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Part III I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part III I 2.

NOTE: The immediate (within 24 hours) reports required in Part III G, H, and I may be made to the department's regional office. Reports may be made by telephone, FAX, or online at <https://portal.deq.virginia.gov/prep/Report/Create>. For reports outside normal working hours, a message may be left and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Management maintains a 24-hour telephone service at 1-800-468-8892.

4. Where the permittee becomes aware that it failed to submit any relevant facts in a permit registration statement or submitted incorrect information in a permit registration statement or in any report to the department, the permittee shall promptly submit such facts or information.

**J. Notice of planned changes.**

1. The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(1) After promulgation of standards of performance under § 306 of the Clean Water Act (33 USC § 1251 et seq.) that are applicable to such source; or

(2) After proposal of standards of performance in accordance with § 306 of the Clean Water Act that are applicable to such source, but only if the standards are promulgated in accordance with § 306 of the Clean Water Act within 120 days of their proposal;

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

c. The alteration or addition results in a significant change in the permittee's sludge use or of disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or of disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the department of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

**K. Signatory requirements.**

1. Registration statement. All registration statements shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary

systems are established or other actions taken to gather complete and accurate information for permit registration requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits and other information requested by the board shall be signed by a person described in Part III K 1 or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part III K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and

c. The written authorization is submitted to the department.

3. Changes to authorization. If an authorization under Part III K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part III K 2 shall be submitted to the department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Part III K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action, permit coverage termination, or denial of a permit coverage renewal application.

The permittee shall comply with effluent standards or prohibitions established under § 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under § 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall submit a new registration statement at least 60 days before the expiration date of the existing permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing permit.

N. Effect of a permit. This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights or any infringement of federal, state, or local law or regulations.

O. State law. Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to, any other state law or regulation or under authority preserved by § 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part III U) and "upset" (Part III V), nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities, or penalties to which the permittee is or may be subject under §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges. Solids, sludges, or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions of Part III U 2 and 3.

2. Notice.

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible, at least 10 days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part III I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the board may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part III U 2.

b. The board may approve an anticipated bypass after considering its adverse effects if the board determines that it will meet the three conditions listed in Part III U 3 a.

#### V. Upset.

1. An upset, defined in 9VAC25-31-10, constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of Part III V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause or causes of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in Part III I; and

d. The permittee complied with remedial measures required under Part III S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The permittee shall allow the director, or an authorized representative, including an authorized contractor acting as a representative of the administrator, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit actions. Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance,

termination, or notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permit coverage. Permit coverage is not transferable to any person except after notice to the department. Coverage under this permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the department within 30 days of the transfer of the title to the facility or property, unless permission for a later date has been granted by the board;
2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
3. The board does not notify the existing permittee and the proposed new permittee of its intent to deny the new permittee coverage under the permit. If this notice is not received, the transfer is effective on the date specified in the agreement described in Part III Y 2.

Z. Severability. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**9VAC25-820-80. Facilities subject to reduced individual total nitrogen and total phosphorus wasteload allocations.**

A. Enhanced Nutrient Removal Certainty Program Facilities

<u>Facility</u>	<u>VPDES No.</u>
<u>HRSD – York River STP</u>	<u>VA0081311</u>
<u>HRSD – Boat Harbor STP</u>	<u>VA0081256</u>
<u>HRSD – James River STP</u>	<u>VA0081272</u>
<u>HRSD – Williamsburg STP</u>	<u>VA0081302</u>
<u>HRSD – Nansemond STP</u>	<u>VA0081299</u>
<u>HRSD – Army Base STP</u>	<u>VA0081230</u>
<u>HRSD – VIP WWTP</u>	<u>VA0081281</u>

B. Chlorophyll-a Based Total Phosphorus Wasteload Allocation Facilities

<u>Facility</u>	<u>VPDES No.</u>
<u>Richmond WWTP</u>	<u>VA0063177</u>
<u>Falling Creek WWTP</u>	<u>VA0024996</u>
<u>Proctor's Creek WWTP</u>	<u>VA0060194</u>
<u>Henrico County WWTP</u>	<u>VA0063690</u>
<u>Philip Morris – Park 500</u>	<u>VA0026557</u>
<u>Hopewell WWTP</u>	<u>VA0066630</u>
<u>South Central Wastewater Authority WWTP</u>	<u>VA0025437</u>

~~The James River facilities identified in this section are subject to reduced individual total nitrogen and total phosphorus wasteload allocations as indicated.~~

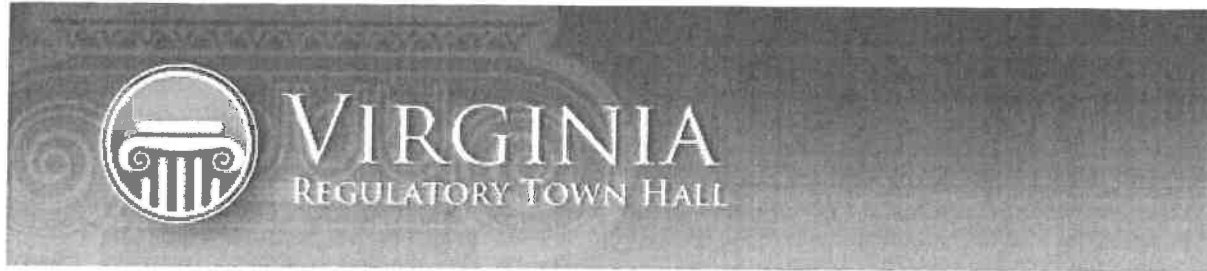
<u>Facility</u>	<u>VPDES No.</u>	<u>Phase <del>1</del> Total Nitrogen (lbs/yr)</u>	<u>Phase <del>2</del> Total Nitrogen (lbs/yr)</u>	<u>Phase <del>2</del> Total Phosphorus (lbs/yr)</u>
<u>Buena Vista STP</u>	<u>VA0020994</u>	<u>N/A</u>	<u>N/A</u>	<u>2,778</u>
<u>Covington STP</u>	<u>VA0025542</u>	<u>N/A</u>	<u>N/A</u>	<u>3,705</u>

GP Big Island LLC	VA0003026	N/A	N/A	40,273
Mohawk Industries, Inc.	VA0004677	N/A	N/A	9,880
Lexington Rockbridge Regional WQCF	VA0088161	N/A	N/A	3,705
Alleghany County Low Moor STP	VA0027979	N/A	N/A	617
Lower Jackson River STP	VA0090671	N/A	N/A	1,852
Clifton Forge STP	VA0022772	N/A	N/A	2,470
MeadWestvaco	VA0003646	N/A	N/A	96,771
Amherst Rutledge Creek WWTP	VA0031321	N/A	N/A	741
BWX Technologies Inc.	VA0003697	N/A	N/A	1,235
Greif Inc.	VA0006408	N/A	N/A	24,082
Lake Monticello STP	VA0024945	N/A	N/A	1,229
Lynchburg STP (DWF only)	VA0024970	N/A	N/A	27,169
RWSA Moores Creek Regional STP	VA0025518	N/A	N/A	18,525
Powhatan CG STP	VA0020699	N/A	N/A	581
Crewe WWTP	VA0020303	N/A	N/A	617
Farmville WWTP	VA0083135	N/A	N/A	2,964
Richmond WWTP (DWF only)	VA0063177	N/A	N/A	55,574
E. I. DuPont Spruance	VA0004669	N/A	N/A	6,339
Chesterfield County Falling Creek WWTP	VA0024996	N/A	N/A	12,473
Chesterfield County Proctors Creek WWTP	VA0060194	N/A	N/A	33,344



Dominion Chesterfield (Net)	VA0004146	N/A	N/A	170
Henrico County WWTTP	VA0063690	N/A	N/A	92,623
The Sustainability Park LLC	VA0002780	N/A	N/A	1,556
Philip Morris USA Park 500	VA0026557	N/A	N/A	2,149
Honeywell Hopewell	VA0005291	N/A	N/A	41,841
Hopewell Regional WTF	VA0066630	N/A	N/A	61,749
South Central WVA Authority WWTFF	VA0025437	N/A	N/A	28,404
Tyson Foods Glen Allen	VA0004031	N/A	N/A	409
Chickahominy WWTTP	VA0088480	N/A	N/A	123
HRSD Boat Harbor STP	VA0081256	N/A	N/A	43,177
HRSD James River STP	VA0081272	N/A	N/A	34,541
HRSD Williamsburg STP	VA0081302	N/A	N/A	38,859
HRSD Nansemond STP	VA0081299	N/A	N/A	51,812
HRSD Army Base STP	VA0081230	N/A	N/A	31,087
HRSD Virginia Initiative Plant WWTTP	VA0081281	N/A	N/A	69,083
HRSD Chesapeake Elizabeth STP	VA0081264	N/A	N/A	41,450
HRSD Aggregate Nutrient Discharge*	N/A	4,400,000	3,400,000	310,010
JH Miles and Company	VA0003263	N/A	N/A	17,437
*HRSD James River Aggregate includes Boat Harbor STP (VA0081256), James River STP (VA0081272), Williamsburg STP (VA0081302), Nansemond STP (VA0081299), Army Base				

~~STP (VA0081230), Virginia Initiative STP (VA0081281), and Chesapeake-Elizabeth STP (VA0081264).~~



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## Final Regulation Agency Background Document

<b>Agency name</b>	State Water Control Board
<b>Virginia Administrative Code (VAC) Chapter citation(s)</b>	9VAC25-720 Primary Chapter 9VAC25-720-50C, 60C, 70C and 120C Secondary Chapters 9VAC25-820
<b>VAC Chapter title(s)</b>	Water Quality Management Planning Regulation General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia
<b>Action title</b>	Amend Existing Regulations
<b>Date this document prepared</b>	November 12, 2021

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 14 (as amended, July 16, 2018), the Regulations for Filing and Publishing Agency Regulations (1VAC7-10), and the *Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code*.

### Brief Summary

*Provide a brief summary (preferably no more than 2 or 3 paragraphs) of this regulatory change (i.e., new regulation, amendments to an existing regulation, or repeal of an existing regulation). Alert the reader to all substantive matters. If applicable, generally describe the existing regulation.*

This regulation includes waste load allocations (WLAs) for dischargers of pollutants to various river basins throughout the Commonwealth of Virginia including total nitrogen (TN) and total phosphorus (TP) waste load allocations necessary for the restoration of water quality in the Chesapeake Bay and its tidal tributaries. DEQ proposes to amend Sections 50.C (Potomac-Shenandoah River Basin), 60.C (James River Basin), 70.C (Rappahannock River Basin), and 120.C (York River Basin) to accomplish two goals:

1. To establish TP WLAs to meet revised water quality criteria for chlorophyll-a in the tidal James River Basin.
2. To reassign unneeded TN and TP WLAs from industries that have either closed or otherwise eliminated their need for a WLA to the Nutrient Offset Fund for future use.

Minor modifications including (1) name changes, (2) the correction of one previous technical error, (3) WLA transfers associated with previously approved trades and WWTP consolidation projects, and (4) moving previously adopted WLAs from 9VAC25-820-80 to 9VAC25-720-60 C are also included.

The proposal also includes amendments to the General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820) that are necessary to implement the Water Quality Management Planning Regulation amendments as well as the Enhanced Nutrient Removal Certainty (ENRC) Program WLAs included in House Bill (HB) 2129 adopted in Special Session I of the 2021 Virginia General Assembly.

## Acronyms and Definitions

*Define all acronyms used in this form, and any technical terms that are not also defined in the "Definitions" section of the regulation.*

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ACSA: Augusta County Service Authority  
 APA: Administrative Process Act  
 Board: State Water Control Board  
 COV: Code of Virginia  
 DEQ: Department of Environmental Quality  
 EPA (U.S. EPA): United States Environmental Protection Agency  
 HRSD: Hampton Roads Sanitary District  
 MGD: Millions of gallons per day  
 MG/L: Milligrams per liter  
 MS4: Municipal Separate Storm Sewer System  
 NOIRA: Notice of Intended Regulatory Action  
 NPDES: National Pollutant Discharge Elimination System  
 POTW: Publicly Owned Treatment Works  
 PCP: Pollution Control Plant  
 STP: Sewage Treatment Plant  
 TMDL: Total Maximum Daily Load  
 TN: Total Nitrogen  
 TP: Total Phosphorus  
 USC: United States Code  
 VAC: Virginia Administrative Code  
 VAMWA: Virginia Association of Municipal Wastewater Agencies  
 VIP: Virginia Initiative Plant  
 VPA: Virginia Pollutant Abatement  
 VPDES: Virginia Pollutant Discharge Elimination System  
 WIP: Watershed Implementation Plan  
 WLA: Waste Load Allocation  
 WPCP: Water Pollution Control Plant  
 WRF: Water Reclamation Facility  
 WRRF: Water Resource Recovery Facilities  
 WWTF: Wastewater Treatment Facility  
 WWTP: Wastewater Treatment Plant

## Statement of Final Agency Action

*Provide a statement of the final action taken by the agency including: 1) the date the action was taken; 2) the name of the agency taking the action; and 3) the title of the regulation.*

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On December 14, 2021, the State Water Control Board adopted amendments the Water Quality Management Planning Regulation 9VAC25-720 and the General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia 9VAC25-820 as final regulations.

## Mandate and Impetus

*List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding the mandate for this regulatory change, and any other impetus that specifically prompted its initiation. If there are no changes to previously reported information, include a specific statement to that effect.*

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The State Water Control Law (Code of Virginia) at § 62.1-44.15(10) mandates the Board to adopt such regulations as it deems necessary to enforce the general water quality management program of the Board in all or part of the Commonwealth. In addition, § 62.1-44.15(14) requires the Board to establish requirements for the treatment of sewage, industrial wastes and other wastes that are consistent with the purposes of this chapter. Code of Virginia (COV) § 62.1-44.19:14.D requires that the Board review, during 2020 and every 10 years thereafter, the basis for allocations granted in the Water Quality Management Planning Regulation (9VAC25-720) and as a result of the review propose for inclusion in the regulation either the reallocation of unneeded allocations to other facilities registered under the general permit or the reservation of such allocations for future use. Further impetus prompting this action includes the Board's adoption of water quality criteria for chlorophyll-a in the tidal portion of the James River (approved by EPA and effective 1/9/20), the need to adopt waste load allocations that are protective of the new criteria.

The periodic review of this regulation is mandated by Executive Order 14 (as amended July 16, 2018). <http://TownHall.Virginia.Gov/EO-14.pdf>.

## Legal Basis

*Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia and Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency's overall regulatory authority.*

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The Commonwealth's mandate in § 62.1-44.15(10) of the Code of Virginia is the source of legal authority identified to promulgate these amendments. The promulgating entity is the State Water Control Board.

The scope and purpose of the State Water Control Law is to protect and to restore the quality of state waters, to safeguard the clean waters from pollution, to prevent and to reduce pollution and to promote water conservation. Setting the specific effluent limits needed to meet the water quality goals is within the purview of the Board. Section 62.1-44.19:14.D of the Code of Virginia requires that the Board review during 2020 and every 10 years thereafter the basis for allocations granted in the Water Quality Management Planning Regulation (9VAC25-720) and as a result of the review propose for inclusion in the regulation either the reallocation of unneeded allocations to other facilities registered under the general permit or the reservation of such allocations for future use. This provision establishes the legal basis for any proposed reallocation of significant industrial discharger allocations. COV § 62.1-44.19:14.D.3 establishes that review of significant municipal discharger allocations will begin in 2030.

The correlation between the proposed regulatory action and the legal authority identified above is that the amendments being considered are modifications of the current requirements for the treatment of wastewater that will contribute to the protection of Virginia's water quality.

## Purpose

*Explain the need for the regulatory change, including a description of: (1) the rationale or justification, (2) the specific reasons the regulatory change is essential to protect the health, safety or welfare of citizens, and (3) the goals of the regulatory change and the problems it's intended to solve.*

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The purpose of this rulemaking is to protect State waters by adopting regulations that establish new or revised limitations on the amount of nutrients (TN and TP) that are discharged to the Chesapeake Bay watershed. Discharges from wastewater treatment plants contribute to the overall loading of nutrients to the Chesapeake Bay and its tributaries. These nutrients have been identified as pollutants causing adverse impacts on large portions of the Bay and its tidal rivers, which are included in the list of impaired waters required under §303(d) of the Clean Water Act and §62.1-44.19:5 of the Code of Virginia. Waters not meeting standards require development of a Total Maximum Daily Load (TMDL), also mandated under the same sections of federal and state law. EPA adopted the Chesapeake Bay TMDL in December 2010, and Virginia is now following a Watershed Implementation Plan to meet the requirements of that TMDL, in part by setting regulatory nutrient WLAs. The proposed amendments to the regulation are meant to accomplish two goals:

1. To incorporate final chlorophyll-a based TP WLAs for a subset of significant dischargers in the tidal James River Basin. The regulation currently includes WLAs adopted in 2005 that are not consistent with the TMDL for the Chesapeake Bay or the amended water quality criteria for chlorophyll-a developed in accordance with Appendix X to the Chesapeake Bay TMDL, approved by the Board on June 27, 2019, then approved by EPA and effective on January 9, 2020. DEQ has used the results of updated water quality modeling to establish TP WLAs to meet the recently adopted chlorophyll-a criteria. This amendment also incorporates additional TN and TP WLAs previously included in 9VAC25-820-80 into 9VAC25-720-60C.
2. To reassign unneeded TN and TP WLAs from industries that have either closed or otherwise eliminated their need for WLAs to the Nutrient Offset Fund for future use. This evaluation and reallocation is required by § 62.1-44.19:14.D of the Code of Virginia.

NOTE: The original proposed amendments authorized for public notice by the State Water Control Board on December 9, 2020 also included the addition of floating WLAs for 36 significant municipal dischargers with design flows greater than or equal to 5 MGD west of the fall line and 3 MGD or greater east of the fall line. The floating WLAs were proposed in accordance with Initiative No. 52 in the Commonwealth of Virginia's Chesapeake Bay TMDL Phase III Watershed Implementation Plan dated August 23, 2019. The proposed floating WLAs were superseded by House Bill (HB) 2129 passed by the General Assembly during the 2021 Special Session 1 and have been removed from the final regulation.

## Substance

*Briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both. A more detailed discussion is provided in the "Detail of Changes" section below.*

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Substantive changes to the Water Quality Management Planning Regulation (9VAC25-720) being considered include:

1. New chlorophyll-a based WLAs for TP for eight significant wastewater dischargers addressed in 9VAC25-720-60.C (James River Basin).

2. Reallocating TN and TP WLAs for five significant industrial facilities in Sections 50.C (Potomac-Shenandoah River Basin), 60.C (James River Basin) and 120.C (York River Basin). These are facilities that have closed or otherwise altered their operations so that the allocations are no longer necessary. The proposed amendments will move the WLAs to the DEQ held Nutrient Offset Fund and are in response to a review of current WLAs performed by DEQ staff in accordance with § 62.1-44.19:14.D of the Code of Virginia.

Minor changes including (1) name changes, (2) the correction of one previous technical error, (3) WLA transfers associated with previously executed trades and WWTP consolidation projects, and (4) moving previously adopted WLAs from 9VAC25-820-80 to 9VAC25-720-60 C are also included.

Changes to the General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820) are necessary to implement the above changes to the Water Quality Management Planning Regulation (9VAC25-720) as well as the Enhanced Nutrient Removal Certainty (ENRC) Program WLAs included in House Bill (HB) 2129 adopted in Special Session I of the 2021 Virginia General Assembly. On June 29, 2021, the State Water Control Board adopted amendments to 9VAC25-820 authorizing the reissuance of the general permit for a new five year term. These amendments are effective January 1, 2022. Substantive changes to the January 1, 2022 version of 9VAC25-820 include:

1. Adding requirements to 9VAC25-820-40 and 9VAC25-820-70 Part 1.C for facilities subject to new chlorophyll-a based TP WLAs and ENRC Program WLAs to submit compliance plans to meet a new schedule of compliance. The requirements are consistent with the approach used in previous versions of 9VAC25-820 as well as the ENRC Program adopted in HB 2129 of Special Session 1 of the 2021 Virginia General Assembly.
2. Removed the requirements from 9VAC25-820-40 and 9VAC25-820-70 Part 1.C for the significant dischargers in the James River Basin to meet aggregate TN and TP WLAs established in Appendix X to the 2010 Chesapeake Bay TMDL. These aggregate WLAs are superseded by the individual chlorophyll-a based TP WLAs included in this rulemaking.
3. Removed the TN and TP WLAs for significant dischargers in the James River Basin from 9VAC25-820-80. These WLAs were previously adopted in accordance with Appendix X to the 2010 Chesapeake Bay TMDL and are all being either moved to 9VAC25-720-60 C or superseded by new chlorophyll-a based TP WLAs in 9VAC25-720-60 C as part of this rulemaking.
4. Added the list of facilities subject to reduced WLAs (either chlorophyll-a based TP WLAs or ENRC Program TN and TP WLAs) to 9VAC25-820-80. This listing establishes what facilities are subject to the new compliance plan and schedule of compliance requirements in 9VAC25-820-40 and 9VAC25-820-70 Part 1.C.

## Issues

*Identify the issues associated with the regulatory change, including: 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions; 2) the primary advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, include a specific statement to that effect.*

Regarding the amended TP WLAs for James River significant dischargers to meet chlorophyll a criteria, the primary advantage to the public is protection of the aquatic life designated use through attainment of both the seasonal geometric mean and short-duration summer chlorophyll water quality criteria. Reduced annual TP loads are proposed to be targeted at the dischargers into the Upper James tidal fresh region, which has been shown to be effective through water quality modeling while also limiting the impact to the least number of affected facilities in the river basin. Limiting the number of facilities subject to chlorophyll-

a based TP WLAs and allowing facilities to meet the reductions through Virginia's nutrient trading program potentially reduces total implementation costs for all of the facilities impacted as well as the Commonwealth's obligation for cost share funding of POTW capital upgrades under Virginia's Water Quality Improvement Fund. Reassignment of unneeded industrial WLAs to the Nutrient Offset Fund benefits the Commonwealth by providing opportunity to accommodate future economic development projects.

### **Requirements More Restrictive than Federal**

*List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding any requirement of the regulatory change which is more restrictive than applicable federal requirements. If there are no changes to previously reported information, include a specific statement to that effect.*

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None of the requirements of the proposed regulatory changes are more restrictive than applicable federal requirements. The chlorophyll-a based TP WLAs in the James River Basin are necessary to meet the Commonwealth's commitments under EPA's 2010 TMDL for Chesapeake Bay.

### **Agencies, Localities, and Other Entities Particularly Affected**

*List all changes to the information reported on the Agency Background Document submitted for the previous stage regarding any other state agencies, localities, or other entities that are particularly affected by the regulatory change. If there are no changes to previously reported information, include a specific statement to that effect.*

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#### **Other State Agencies Particularly Affected**

There are no other state agencies particularly affected.

#### **Localities Particularly Affected**

The proposed amendments are expected to impose a disproportionate material financial impact on any locality served by treatment facilities subject to new chlorophyll-a based WLAs (the Cities of Richmond, Hopewell, Petersburg and Colonial Heights and the Counties of Goochland, Henrico, Hanover, Chesterfield, Prince George and Dinwiddie) or ENRC Program WLAs (the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach and Williamsburg and the Counties of Gloucester, Isle of Wight, James City, Mathews, Surry, and York).

#### **Other Entities Particularly Affected**

The following industries and wastewater treatment facilities are particularly affected by the proposed amendments: J. P. Salyards-Alma Plant, Plains Marketing LP Yorktown, The Sustainability Park LLC, Dominion Energy Chesterfield Power Station, Tranlin/Vastly, Philip Morris-Park 500 WWTP, Falling Creek WWTP, Proctor's Creek WWTP, Richmond WWTP, South Central Wastewater Authority WWTP, Henrico County WWTP, Hopewell WWTP, HRSD-Boat Harbor STP, HRSD-James River STP, HRSD-Williamsburg STP, HRSD-Nansemond STP, HRSD-Army Basis STP, HRSD-VIP WWTP, HRSD-York River STP, New Kent Chickahominy WWTP, Lower Jackson River STP and Aqua Virginia Inc.'s Lake Monticello WWTP.

## **Periodic Review and Small Business Impact Review Report of Findings**



*Indicate whether the regulatory change meets the criteria set out in Executive Order 14 (as amended, July 16, 2018), e.g., is necessary for the protection of public health, safety, and welfare; minimizes the economic impact on small businesses consistent with the stated objectives of applicable law; and is clearly written and easily understandable. In addition, as required by § 2.2-4007.1 E and F of the Code of Virginia, include a discussion of the agency's consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation from the public; (3) the complexity of the regulation; (4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and (5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation.*

This regulation enhances the Department's ability to ensure compliance with all applicable federal requirements under the CWA and specific requirements under the Code of Virginia by ensuring nutrient discharges conform to the Chesapeake Bay TMDLs and state regulations. The regulation has been effective in protecting public health, safety, and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.

This regulation continues to be needed. It provides the necessary requirements for controlling discharges of nutrients into the rivers and tributaries leading to the Chesapeake Bay and for achieving the Chesapeake Bay TMDLs.

No comments were received during the public comment period that indicate a need to repeal the regulation. Comments were received during the comment period indicating that the regulation should be revised and that the regulation should not be revised. Revisions are proposed in this regulatory action to ensure that point source nutrient reductions necessary to meet chlorophyll-a based WLAs in the James River Basin are accomplished by January 1, 2026 and that additional nutrient reductions necessary to meet the ENRC Program requirements are accomplished in accordance with the requirements of HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly.

The department has determined that the regulation, with the proposed revisions, is clearly written and is easily understandable by the individuals and entities affected. It is written so as to permit only one reasonable interpretation, is written to adequately identify the affected entity, and, insofar as possible, is written in non-technical language.

### Public Comment

*Summarize all comments received during the public comment period following the publication of the previous stage, and provide the agency response. Include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. If no comment was received, enter a specific statement to that effect.*

A public hearing was held on October 7, 2021 at the DEQ Piedmont Regional Office. No comments were received from the public at the public hearing. Comments received during the public comment period include:

Commenter	Comment	Agency response
Mary Eure, Spotsylvania County Utilities	An error has been noted in the waste load allocations found in 9VAC25-720-70 C assigned to the Massaponax WWTF, VA0025658. The Massaponax WWTF has been assigned a TP waste load allocation of 8,405 lbs./yr rather than the correct 8,588 lbs./yr. This	DEQ agrees with this correction of this technical error which occurred in a previous modification to the WQMP Regulation and proposes to include a TP WLA of 8,588 lbs/yr for the Massaponax WWTP.

	<p>error occurred during the last rulemaking when TN and TP allocations were transferred from the FMC WWTF to the Massaponax WWTF to accommodate an expansion at that time. DEQ has noted the discrepancy as well and advised us to request that the allocation be restored to the Massaponax WWTF.</p>	
<p>Michael T. McEvoy, Virginia Association of Municipal Wastewater Agencies (VAMWA)</p>	<p>Notes in the email notice and notice in the Virginia Register for this action indicate that no comment is requested concerning proposed amendments that address floating WLAs because the proposed amendments have been suspended by House Bill (HB) 2129. Since the "floating allocation" concept has been rendered moot by a change in state law, all floating cap provisions in the proposal must be removed.</p>	<p>DEQ agrees that the concept of a floating WLAs included in Initiative #52 of the Phase III WIP has been superseded by HB 2129 of the 2021 General Assembly and is not included in the final proposal.</p>
<p>Michael T. McEvoy, Virginia Association of Municipal Wastewater Agencies (VAMWA)</p>	<p>VAMWA supports Scenario 3C which spreads the reductions equally among all municipal and industrial facilities in the tidal fresh segment and upriver to the headwaters.</p> <p>The proposal to concentrate the burden of TP reductions in the tidal fresh rather than a lesser reduction at a greater number of facilities is unfair</p> <p>VAMWA is unaware of any data or information that supports concentrating the burden in the tidal fresh area to the exclusion of the above fall line area. To the extent that DEQ views the proposal as less expensive in the aggregate, the nutrient trading program is available to mitigate the expense and likely achieve a financially comparable outcome in the aggregate. There is also potential savings in the tidal fresh area under Scenario 3C.</p>	<p>DEQ supports Scenario 3B(i) for the reasons outlined to the Board in December 2020 including (1) Scenario 3B(i) limits any capital upgrades to 6 POTWs and 1 industrial discharger rather than including an additional 12 POTWs and 5 industrial dischargers at slightly less stringent TP concentrations, (2) the 6 tidal fresh POTWs represent 81% of the total municipal design flow for facilities in the tidal fresh and upriver segments creating greater economies of scale, (3) smaller potential applicant pool and state expenditures from the Water Quality Improvement Fund, and (4) the approach is consistent with the concept of adaptive management.</p> <p>As of 2020, there were adequate credits on the market to cover all of the reductions required by the proposal. Use of the nutrient trading program allows for optimizing the capabilities of existing infrastructure and deferral of some capital upgrade expenses.</p>
<p>Michael T. McEvoy, Virginia</p>	<p>The difference of approximately 40,000 lbs of delivered TP between Scenarios 3B(i) and 3C</p>	<p>While the water quality model projects that chlorophyll criteria will be attained under Scenario 3B(i) and Scenario 3C(i), the margin</p>

<p>Association of Municipal Wastewater Agencies (VAMWA)</p>	<p>should be reserved in the Nutrient Offset Fund and available for future point source use.</p>	<p>of attainment is predicted to be quite narrow for both scenarios. The modeling runs have consistently demonstrated that criteria attainment is very sensitive to TP. Thus, it is quite possible that the alternative scenario being proposed by VAMW (Scenario B(i) with an additional 40,000 lbs of TP allocated) would not result in attainment. The Department will not consider this option without a formal demonstration that it will result in water quality standards attainment.</p>
<p>Michael T. McEvoy, Virginia Association of Municipal Wastewater Agencies (VAMWA)</p>	<p>VAMWA requests aligning the compliance plan submittal deadline in 9VAC25-820-40A for facilities subject to the reduced individual total nitrogen or total phosphorus waste load allocations with the Virginia Nutrient Credit Exchange Association's Compliance Plan Annual Update submittal deadline of February 1, 2023 (rather than July 1, 2022). This request is based on (and compelled by) the statute: "The compliance plans due beginning February 1, 2023, shall address the requirements of the ENRC Program." Va. Code § 62.1-44.19:14 C 3.</p>	<p>DEQ agrees with this comment and has made the change in the final proposed regulation at 9VAC25-820-40 A.</p>
<p>Michael T. McEvoy, Virginia Association of Municipal Wastewater Agencies (VAMWA)</p>	<p>Request effective date for facilities that determine they are capable of complying with the reduced individual allocations without the need for a schedule of compliance to January 1, 2023 rather than January 1, 2022 to match the February 21, 2023 compliance plan submittal deadline.</p>	<p>DEQ agrees with the January 1, 2023 compliance date as reflected in Exhibit 15 to the public hearing record (see 9VAC25-820-70 I C 3 b).</p>
<p>Michael T. McEvoy, Virginia Association of Municipal Wastewater Agencies (VAMWA)</p>	<p>VAMWA supports the proposed deletion of James River Basin aggregate waste load allocations as proposed.</p>	<p>Comment noted</p>
<p>Joseph Wood, Chesapeake Bay Foundation Jamie Brunkow, James River Association</p>	<p>Virginia has made significant strides towards addressing nutrient pollution to the James River and the Chesapeake Bay. Still, significant additional efforts are needed to achieve a restored system by 2025. Lack of progress in unregulated sectors, increasing development, and growing pressures from climate change</p>	<p>The Clean Water Act (CWA) section 303(d) requires that a TMDL be "established at a level necessary to implement the applicable water quality standard." Documenting adequate reasonable assurance increases the likelihood that regulatory and voluntary mechanisms will be applied such that the pollution reduction levels specified in the TMDL are achieved and, therefore, applicable WQS are attained. EPA's "Supplemental</p>

	<p>have limited our progress. As a result, the proposal before the State Water Control Board (Board) is unlikely to achieve the necessary nutrient reductions to attain water quality standards by the 2025 deadline, especially in the James River. Request that DEQ perform modeling runs that assume historical nonpoint source loadings and climate change projections through 2035 so that the public can be provided reasonable assurance that limits set out in the Chesapeake Bay TMDL will be met and water quality standards attained.</p>	<p>information for reviewing the Reasonable Assurance section in a TMDL” describes the elements that demonstrate reasonable assurance. DEQ believes the documentation produced by the Chesapeake Bay Program Office for the watershed model input deck explains the process for quantifying, classifying, and temporally linking point and nonpoint allocations. Additionally, Virginia’s annual reporting of nutrient and sediment milestones is a part of EPA’s accountability framework, which is designed to ensure that the allocations of the Bay TMDL, including those for the James River, will be met.</p> <p>Given the narrow margin of attainment projected for the four “attaining” scenarios, which assume WIP3 NPS controls, it is not expected that any of these scenarios would result in attainment under historical NPS loadings. Nonpoint sources are a major contributor of nitrogen and phosphorus pollution in the James River estuary. Through the years Virginia has invested considerable resources to cost-share programs for NPS pollution controls. This investment is likely to continue. DEQ believes that the importance of this investment is demonstrated when it is accounted for in modeling scenarios.</p> <p>It also has to be recognized that the point source sector consistently outperforms its TMDL reduction goals and the additional reductions help to offset any lagging reductions from more difficult nonpoint source sectors. James River dischargers registered under the watershed general permit operated at 63% of their current aggregate delivered nitrogen waste load allocation and at 71% of their current aggregate delivered phosphorus waste load allocation in 2020. This resulted in 4.5 million lbs of excess TN reduction and 242,000 lbs of excess TP reduction. Additional upgrades are being completed to meet the reduced waste load allocations established to meet the chlorophyll-a water quality criteria and the Enhanced Nutrient Reduction Certainty Program requirements. With reducing waste load allocations, the excess point source nutrient reductions are expected to decrease, however the sector is expected to continue to outperform its waste load allocation creating additional reductions that help offset any shortfall in the nonpoint source sector.</p>
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<p>Joseph Wood, Chesapeake Bay Foundation Jamie Brunkow, James River Association</p>	<p>In order to provide the public with reasonable assurance that the limits set out in the Chesapeake Bay TMDL will be achieved, we contend that several reasonable options remain that should be included in the proposal:</p> <ul style="list-style-type: none"> <li>• Perform modeling runs that evaluate attainment under historical levels of nonpoint source implementation and climate change extending beyond 2025.</li> <li>• As proposed in the draft WQMPR, require the eight facilities in the tidal-fresh portion of the James River to achieve a 0.2 mg/L phosphorus effluent.</li> <li>• Require all facilities throughout the watershed to achieve a 0.25 mg/L phosphorus effluent, in addition to requiring 0.2 mg/L effluent for facilities that discharge directly to the tidal fresh segment.</li> <li>• Identify and require additional industrial reductions in the tidal fresh James River.</li> </ul>	<p>See previous comment for discussion of modeling runs under historical levels of nonpoint source implementation and climate change extending beyond 2025.</p> <p>The proposed waste load allocations under Scenario 3B(i) include six municipal treatment facilities with phosphorus waste load allocations based on a concentration of 0.2 mg/l and one industrial treatment facility with a corresponding 50% reduction in phosphorus waste load allocation. The TP WLA reduction at the eighth facility reflects a minor difference between model inputs and the existing WLA and does not represent a significant reduction.</p> <p>The modeling work performed in support of the rulemaking involved staff from EPA, the Virginia Institute of Marine Science and DEQ. The work was completed in late 2020 and included the modeling and post processing of a total of 32 scenarios. The requested scenario was not identified while the work was being performed. DEQ has proposed the adoption of Scenario 3B(i) which achieves all of the necessary reductions in the critical tidal fresh segment of the James River.</p> <p>Additional industrial reductions in the tidal fresh section of the James River were evaluated but none were identified because the existing WLAs were based on TP concentrations considered to be "state-of-the-art nutrient removal technology" under 9VAC25-820-10.</p>

<p>Joseph Wood, Chesapeake Bay Foundation Jamie Brunkow, James River Association</p>	<p>We urge the agency to develop a policy to automatically reclaim allocations when facilities close (when consolidation of sources is not implicit in the closure). Virginia law is very clear that no facility has a property right in WLAs assigned to it. The trading program should incentivize actual pollutant reduction performance. WLAs are intended to be based on need as determined by DEQ. Thus, when a facility closes, DEQ should reclaim such facility's allocations, thereby prohibiting the closed facility from generating tradable credits.</p>	<p>DEQ agrees that a VPDES permits and waste load allocations listed in the Water Quality Management Planning Regulation are generally not considered to be property rights. However with the creation of the nutrient trading program the Virginia General Assembly created a category of quasi-property rights when it allowed for nutrient credits and WLAs to be bought and sold. Revoking nutrient WLAs assigned in 9VAC25-720 may not be performed automatically and must follow the abbreviated requirements of Administrative Process Act at § 2.2-4006.A.14.</p>
<p>Joseph Wood, Chesapeake Bay Foundation Jamie Brunkow, James River Association</p>	<p>Several large municipal facilities that are not covered by the legislation's requirement to achieve additional nutrient reductions still have great potential for reduced nutrient concentrations through facility operational upgrades. The Board should consider taking advantage of this opportunity to achieve additional reductions from these facilities through the requirement of optimized treatment.</p>	<p>Prior to the adoption of the Chesapeake Bay TMDL, DEQ required Interim Optimization Plans for significant dischargers that were not yet subject to final water quality based effluent limits for TN and TP. With the adoption of final WLAs, the watershed general permit has simply required compliance with the water quality based WLAs. The nutrient trading program itself incentivizes optimized treatment by allowing any credits generated to be sold and by minimizing the number of credits that must be acquired for facilities operating over their WLA. DEQ will continue to consider approaches that encourage optimal operation of existing treatment works.</p>
<p>Joseph Wood, Chesapeake Bay Foundation Jamie Brunkow, James River Association</p>	<p>With the adoption of this regulation, Virginia will implement nutrient reductions to meet the chlorophyll criteria for the James River that are beyond what Chesapeake Bay mainstream dissolved oxygen targets require. There is no reason that the York River, similarly impaired, should not have the same level of protection as the James River. We urge the agency to initiate development of York River chlorophyll criteria.</p>	<p>There is currently no plan to develop numeric chlorophyll criteria specific to the York River. The impetus behind numeric chlorophyll criteria for the James River was the need for a TMDL endpoint given the absence of chronic hypoxia in the estuary. There is no similar need in the York River since chronic hypoxia occurs there, which is why dissolved oxygen criteria attainment is being used to drive nutrient reductions. Working with the Chesapeake Bay Partnership through the Criteria Assessment Protocols Workgroup, DEQ hopes to develop a process for implementing existing narrative chlorophyll criteria that are applicable to the mainstem Bay and tidal tributaries like the York. Ideally, the chlorophyll threshold(s) developed by the workgroup will be tied to harmful effects caused by algal blooms that aren't explicitly addressed by the TMDL.</p>
<p>James Pletl, Hampton</p>	<p>The proposal in the Virginia Register announcement is</p>	<p>DEQ agrees that the documentation is confusing due to multiple rulemakings</p>

<p>Roads Sanitary District (HRSD)</p>	<p>contradictory and confusing, and makes it difficult for the public to understand what is being proposed in this action and what is not being proposed. It is HRSD's understanding that Initiative No. 52 and the concept of "floating WLAs" are no longer part of the Phase III Watershed Plan, and instead are now based on House Bill 2129. If this is incorrect, HRSD strongly opposes the use of Initiative No. 52 and the floating WLA approach in the WQMPR and the General Permit that is being proposed.</p>	<p>occurring at the same time. HB 2129 (ENRC) waste load allocation reductions were approved by the Board on June 29, 2021. The final proposed amendments to 9VAC25-720 and 9VAC25-820 are included as Exhibits 14 and 15 to the public hearing record. These proposed amendments implement the HB 2129 waste load allocations and do not include the floating waste load allocations presented to the Board on December 9, 2020.</p>
<p>James Pletl, Hampton Roads Sanitary District (HRSD)</p>	<p>The proposed regulation states that the WLAs currently referenced as JH Miles &amp; Company will be referenced as "HRSD-MS4" and the accompanying footnote states that these WLAs may only be used to support HRSD commitments to provide nutrient credits to municipal separate storm sewer systems. This proposed change is inappropriate and must be modified before adopting final amendments. This MS4-only provision does not reflect HRSD's understanding of how the WLAs originally owned by JH Miles but acquired by HRSD can be used. It would be unfair to severely restrict HRSD's use of the WLAs after-the-fact when the WLAs were acquired in accordance with controlling law and regulations setting no such limitation, and the trading agreement by which HRSD accomplished the JH Miles consolidation was approved by DEQ without an MS4-only use restriction. Also, as a result of HB 2129, HRSD now has an unrestricted statutory right to the JH Miles WLAs, because the new law requires the State Water Control Board to "Transfer the total nitrogen (153,500 lbs/yr) and total phosphorous (17,437 lbs/yr) waste load allocations for the HRSD-J.H. Miles Facility consolidation to HRSD in accordance with the approved registration list December 21, 2015, transfer." The 2015 transfer of the WLAs to</p>	<p>The quoted language reflects the language presented to the Board in December 2020, prior to the adoption of HB 2129. The Board approved transfer of the former JH Miles waste load allocations to HRSD (with no restrictions on the use) on June 29, 2021 in accordance with HB 2129 and those amendments to 9VAC25-720-60 C became effective on October 27, 2021. No further amendments to the allocation are proposed in this final action.</p>

	<p>HRSD included no restrictions of the type now proposed by DEQ. Accordingly, the reference to "HRSD-MS4" needs to be removed and should be replaced with "HRSD-JH Miles (HB2129 Consolidation)". Similarly, the proposal's associated footnote (9) limiting use of the WLAs to MS4 purposes only must also be removed and replaced with the following based on HB 2129: "The total nitrogen (153,500 lbs/yr) and total phosphorous (17,437 lbs/yr) waste load allocations for the HRSD-J.H. Miles Facility consolidation under the approved registration list December 21, 2015, transfer are continued as statutorily assigned to HRSD by Code of Virginia § 62.1-44.19:14 G 3."</p>	
<p>James Plett, Hampton Roads Sanitary District (HRSD)</p>	<p>The proposed regulation 9VAC25-820-40 requires compliance with allocations by January 1, 2026. However, House Bill 2129 has multiple compliance dates for HRSD facilities that replace this requirement in the proposed regulation. Those complex revisions are incorporated into the Board's exempt final amendments that took effect October 21, 2021. Those prior revisions should be maintained consistent with HB 2129.</p>	<p>The January 1, 2026 compliance date in the proposed 9VAC25-820-40 only applies to facilities with reduced Total Phosphorus waste load allocations under 9VAC25-820-80 b. In response to the comment however, amendments have been made to 9VAC25-820-40 A 1 to clarify that the compliance dates for reduced WLAs in HB 2129 are established in 9VAC25-720-60 and 9VAC25-720-120 as discussed in Part I C 1 of the proposed general permit (9VAC25-820-70).</p>

### Detail of Changes Made Since the Previous Stage

*List all changes made to the text since the previous stage was published in the Virginia Register of Regulations and the rationale for the changes. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. \* Put an asterisk next to any substantive changes.*

**Table 1a: Changes Since the Previous Stage 9VAC25-720**

Current chapter-section number	New chapter-section number, if applicable	New requirement from previous stage	Updated new requirement since previous stage	Change, intent, rationale, and likely impact of updated requirements
720-50	N/A	Footnotes requiring TN and TP floating WLAs for municipal	Floating WLA footnotes deleted	The floating WLA approach was superseded by ENRC Program



		facilities greater than or equal to 5 MGD west of the fall line and 3 MGD or greater east of the fall line		requirements included in HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly. On June 29, 2021, the State Water Control Board approved amendments to 9VAC25-720 incorporating the ENRC Program WLAs.
720-60	N/A	Footnotes requiring TN and TP floating WLAs for municipal facilities greater than or equal to 5 MGD west of the fall line and 3 MGD or greater east of the fall line	Floating WLA footnotes deleted	The floating WLA approach was superseded by ENRC Program requirements included in HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly. On June 29, 2021, the State Water Control Board approved amendments to 9VAC25-720 incorporating the ENRC Program WLAs.
720-60	N/A	J H Miles- HRSD footnote allowed for the former J H Miles WLA acquired by HRSD to be used solely to fulfill commitments to provide nutrient credits to municipal separate storm sewer systems (MS4s)	Footnote deleted	Conditions on the transfer of the WLA were established by HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly. On June 29, 2021, the State Water Control Board approved amendments to 9VAC25-720 incorporating the WLA transfer.
720-60	N/A	HRSD – Ches/Elizabeth STP footnote transferred the TN and TP WLAs to the Nutrient Offset Fund effective January 1, 2023.	Footnote deleted	HB 2129 established that the transfer of the TN and TP WLAs will occur on January 1, 2026. On June 29, 2021, the State Water Control Board approved amendments to 9VAC25-720 incorporating the transfer of the WLAs on January 1, 2026.
720-70	N/A	Footnotes requiring TN and TP floating WLAs for municipal facilities greater than or equal to 5 MGD west of the fall line and 3 MGD or greater east of the fall line	Floating WLA footnotes deleted	The floating WLA approach was superseded by ENRC Program requirements included in HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly. On June 29, 2021, the State Water Control Board approved amendments to 9VAC25-

				720 incorporating the ENRC Program WLAs.
720-70	N/A	N/A	Massaponax WWTF TP WLA set to 8,588 lbs/yr	The TP WLA was increased by 183 lbs/yr. This change corrects an error created in a previous rulemaking when a temporary WLA trade to the Rush River WWTP was inadvertently treated as a permanent WLA transfer
720-120	N/A	Footnotes requiring TN and TP floating WLAs for municipal facilities greater than or equal to 5 MGD west of the fall line and 3 MGD or greater east of the fall line	Floating WLA footnotes deleted	The floating WLA approach was superseded by ENRC Program requirements included in HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly. On June 29, 2021, the State Water Control Board approved amendments to 9VAC25-720 incorporating the ENRC Program WLAs.

Table 1b: Changes Since the Previous Stage 9VAC25-820

Current chapter-section number	New chapter-section number, if applicable	New requirement from previous stage	Updated new requirement since previous stage	Change, intent, rationale, and likely impact of updated requirements
820-40.A	N/A	July 1, 2022 deadline for submission of compliance plan	February 1, 2023 deadline for submission of compliance plan	Deadline amended to comply with the provisions of HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly
820-40.A 1	N/A	Compliance plan requires compliance "as soon as possible"	Compliance plan requires compliance with ENRC WLAs by dates established in HB 2129 and 9VAC25-720-60 and 9VAC25-720-120. Compliance plan for chlorophyll-a based TP WLAs in the James River Basin must require compliance "as soon as possible".	The "as soon as possible" criteria for meeting effluent limits is established in 9VAC25-31-250 and is applicable to the chlorophyll-a based TP WLAs. However the ENRC WLAs are not effective until the dates established in HB 2129 and 9VAC25-720-60 and 9VAC25-720-120. The provisions in 820-40.A 1 have been modified accordingly.

820-40.A 2 b	N/A	Facilities that do not demonstrate that additional capital projects are necessary to meet new WLAs must request an individual WLA compliance date of January 1, 2022.	Condition was amended to recognize that the early compliance date only applies to chlorophyll-a based TP WLAs and to establish a compliance date of January 1, 2023.	The condition was amended to recognize that the early compliance date for facilities that do not demonstrate the need for additional capital projects is not applicable to ENRC Program WLAs adopted in HB 2129. The early compliance date was also pushed back to recognize the amended February 1, 2023 deadline for submission of the compliance plan.
820-70.I.C.1	N/A	Compliance with floating WLAs shall be no later than the January 1, 2026 effective date of the allocations	Reference to floating WLAs have been eliminated. Compliance with ENRC Program WLAs shall be on the effective date of the reduced allocations as established in 9VAC25-720-60 and 9VAC25-720-120.	The floating WLA approach was superseded by ENRC Program requirements included in HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly and on June 29, 2021, the State Water Control Board approved amendments to 9VAC25-720 incorporating the ENRC Program WLAs and effective dates. The requirements in the general permit have been amended accordingly.
820-70.I.C.3 a	N/A	Owners of facilities listed in 820-80 will have individual dates of compliance based on their compliance plans	Owners of facilities listed in 820-80 b will have individual dates of compliance based on their compliance plans	Condition amended to recognize that the individual compliance dates apply to the chlorophyll-a based WLAs and not the ENRC Program WLAs included in HB 2129.
820-70.I.C.3 b	N/A	Owners of facilities listed in 820-80 that waive their compliance schedules in accordance with 820-40 A 2 b shall have an individual compliance date of January 1, 2022	Owners of facilities listed in 820-80 b that waive their compliance schedules in accordance with 820-40 A 2 b shall have an individual compliance date of January 1, 2023	Condition was amended to recognize that the individual compliance dates apply to the chlorophyll-a based WLAs and not the ENRC Program WLAs included in HB 2129 and to match the amended compliance date of January 1 2023 in 820-40 A 2 b.
820-70.I.C.3 c	N/A	Upon completion of compliance plan projects, owners of facilities listed in 820-80 may receive	Upon completion of compliance plan projects, owners of facilities listed in 820-80 b may receive a	Condition was amended to recognize that the individual compliance dates apply to the chlorophyll-a based WLAs

		a revised individual compliance date of January 1 for the calendar year following the year in which a Certificate to Operate is issued.	revised individual compliance date of January 1 for the calendar year following the year in which a Certificate to Operate is issued.	and not the ENRC Program WLAs included in HB 2129.
820-70.I.D	N/A	Annual compliance plan updates for facilities subject to reduced waste load allocations in 820-80 may not rely on the acquisition of nutrient credits from the Nutrient Offset Fund.	Annual compliance plan updates for any existing facilities may not rely on the acquisition of nutrient credits from the Nutrient Offset Fund.	Under the current general permit, annual compliance plans for any existing facilities may not rely on the acquisition of nutrient credits from the Nutrient Offset Fund. The Nutrient Offset Fund is available as a backstop at the end of a compliance year in the event that the market is short of credits but existing permittees may not plan on the use of the Nutrient Offset Fund up front. In the proposed stage, the requirement was amended to address the concern that existing facilities relying on the acquisition of credits from other dischargers may experience a shortage of credits due to new floating WLAs being applied to the credit supplier.
820-70.E.6	N/A	Required reporting of flows discharged to a reuse distribution system for facilities basing their floating WLA on treated flow	820.70.E.6 deleted	Provision allowed for an alternative calculation of floating WLA for facilities with a reclamation and reuse system. This provision was deleted with the elimination of the floating WLA concept.
820-70.H.1.g	N/A	Establish registration statement requirements for reclamation and reuse facilities	820-70.H.1.g deleted	This provision established additional information that must be submitted for reclamation and reuse systems in order to accurately calculate floating WLAs. This provision was deleted with the elimination of the floating WLA concept.
820-70.III.1.3	N/A	Provides website for 24 hour reporting requirements	Website link updated	Link updated to reflect current DEQ website.

### Detail of All Changes Proposed in this Regulatory Action

List all changes proposed in this action and the rationale for the changes. For example, describe the intent of the language and the expected impact. Describe the difference between existing requirement(s) and/or agency practice(s) and what is being proposed in this regulatory change. Explain the new requirements and what they mean rather than merely quoting the text of the regulation. \* Put an asterisk next to any substantive changes.

**Table 1a: Changes to Existing VAC Chapter 9VAC25-720**

Note: Amendments to 9VAC25-720 were approved by the State Water Control Board on June 29, 2021 to incorporate the ENRC Program WLA reductions included in HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly. The amendments became effective October 27, 2021. The changes below reflect the changes to the version of 9VAC25-720 that is in effect as of October 27, 2021.

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
720-50.C Potomac Basin	N/A	TN and TP waste load allocations for the protection of Chesapeake Bay	<ul style="list-style-type: none"> <li>• Transferred TN and TP WLAs from the former Pilgrims Pride Alma facility to the DEQ held Nutrient Offset Fund. The poultry processing facility which was originally granted these WLAs has permanently closed and no process wastewater is discharged from the facility. This allocation is being moved to the Nutrient Offset Fund in accordance with § 62.1-44.19:14.D and will be made available for future economic development.</li> <li>• Updating TN and TP WLAs for the North River WWTF to address the consolidation with the McGaheysville STP.</li> <li>• Eliminating a footnote requiring Merck to acquire nutrient credits, if available, for loads over their original WLA. This footnote provision was approved by the Board when it previously approved increased WLAs for Merck not knowing whether adequate capacity existing under the TMDL. All TMDL modeling scenarios in recent years have included the increased WLAs approved by the Board so there is no longer a need for the outdated credit purchase requirement.</li> <li>• Updated numerous facility names.</li> </ul>

<p>720-60.C James Basin</p>	<p>N/A</p>	<p>TN and TP waste load allocations for the protection of Chesapeake Bay</p>	<ul style="list-style-type: none"> <li>• Establishing chlorophyll-a based TP WLAs for 8 facilities located in the tidal fresh section of the James River Basin. These allocations cut the existing allocations for 7 facilities by approximately 50%. The TP WLA reduction at the 8<sup>th</sup> facility reflected a minor difference between model inputs and the existing WLA and does not represent a significant reduction.</li> <li>• Incorporated TN and TP WLAs previously included in 9VAC25-820-80. These WLAs were previously established within the watershed general permit regulation to address additional nutrient reductions necessary to meet dissolved oxygen criteria under the terms of Appendix X of EPA's 2010 Chesapeake Bay TMDL. This consolidation ensures that all of the WLAs are included in the same regulation. These same WLAs will be deleted from 9VAC25-820-80 as noted below.</li> <li>• Moved excess TN and TP WLAs for two municipal facilities to the Nutrient Offset Fund. The original WLAs for these two facilities were based upon design flows greater than the design flow of the treatment plants actually constructed and moving the excess portions of the WLAs provides for more equitable WLAs and allows for additional economic development.</li> <li>• Transferred TN and TP WLAs from The Sustainability Park LLC to the DEQ held Nutrient Offset Fund. This allocation was originally granted for a cigarette manufacturing facility which closed prior to the 2010 Chesapeake Bay TMDL. This allocation is being moved to the Nutrient Offset Fund in accordance with § 62.1-44.19:14.D and will be made available for future economic development.</li> <li>• Transferred TN WLA from Tranlin/Vastly to the DEQ held Nutrient Offset Fund. This allocation was originally obtained</li> </ul>
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			<p>by Tranlin/Vastly from Dominion Chesterfield for the construction of a proposed paper mill in Chesterfield County. The proposed mill was never constructed. This allocation is being moved to the Nutrient Offset Fund in accordance with § 62.1-44.19:14.D and will be made available for future economic development.</p> <ul style="list-style-type: none"> <li>• Established a condition that will result in the automatic transfer of TN and TP WLAs for the Dominion Chesterfield Power Station to the DEQ held Nutrient Offset Fund as of January 1<sup>st</sup> following the retirement of the last coal fired generating unit. This allocation was originally granted account for the nutrient loads generated by planned air pollution control equipment on Dominion's coal fired power units. The last of the coal fired units is expected to be retired in the coming years and facility will no longer have a need for the WLAs. This allocation is being moved to the Nutrient Offset Fund in accordance with § 62.1-44.19:14.D and will be made available for future economic development. A footnote designating these WLAs as "net" WLAs has been removed. Additionally, the proposed regulation notes that a portion of the TN WLA may be made available for a future treatment plant capacity constructed at the Proctor's Creek WWTP. This provision was included in recognition of an existing agreement between Dominion and Chesterfield County in which the county retained a right of first refusal if Dominion were to ever sell any of their WLA</li> <li>• Moved 28,937 lbs/yr of TN WLA from Dominion to the Falling Creek WWTP in recognition of a previous trade agreement which accommodated a rerating of the Falling Creek WWTP design flow.</li> <li>• Deleted WLAs for the Chickahominy WWTP in New Kent</li> </ul>
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			<p>County. This facility has gone offline and the existing WLAs were not included in the water quality model runs used to establish chlorophyll-a based WLAs.</p> <ul style="list-style-type: none"> <li>• Updated numerous facility names</li> </ul>
720-70.C Rappahannock Basin	N/A	TN and TP waste load allocations for the protection of Chesapeake Bay	<ul style="list-style-type: none"> <li>• Updated numerous facility names</li> <li>• Assigned "Unallocated Reserve WLA" to the Nutrient Offset Fund.</li> <li>• Increased the TP WLA assigned to the Massaponax WWTF by 183 lbs. This change corrects an error created in a previous rulemaking when a temporary WLA trade to the Rush River WWTP was inadvertently treated as a permanent WLA transfer.</li> </ul>
720-120.C York Basin	N/A	TN and TP waste load allocations for the protection of Chesapeake Bay	<ul style="list-style-type: none"> <li>• Transferred TN and TP WLAs from the former Plains Marketing L.P. Yorktown refinery to the DEQ held Nutrient Offset Fund. The refinery facility which was originally granted these WLAs has permanently closed and no longer generates significant nutrient loads. This allocation is being moved to the Nutrient Offset Fund in accordance with § 62.1-44.19:14.D and will be made available for future economic development.</li> <li>• Updated numerous facility names</li> </ul>

**Table 1b: Changes to Existing VAC Chapter 9VAC25-820 – The intent and rationale for the following changes are to implement the amendments to 9VAC25-720 outlined above in a cost effective manner. The likely impacts are increased costs to one industrial facility and six municipal treatment facilities subject to proposed chlorophyll-a based TP WLAs as well as seven facilities subject to ENRC upgrades as required by HB 2129 adopted in Special Session I of the 2021 Virginia General Assembly.**

Note: Amendments to 9VAC25-820 were approved by the State Water Control Board on June 29, 2021 to reissue the general permit for another five year term. These amendments and the new permit term are effective January 1, 2022. The changes below reflect the changes to the version of 9VAC25-820 that is effective January 1, 2022.

Current chapter-section number	New chapter-section number, if applicable	Current requirements in VAC	Change, intent, rationale, and likely impact of new requirements
820-40	820-40.A and B	Requires submittal of an annual compliance plan update in accordance with Part I D of the general permit.	New provisions in 820-40.A require facilities subject to reduced WLAs to submit compliance plans by February 1, 2023 including capital projects and schedules necessary to achieve compliance.



			<p>Facilities subject to the ENRC Program must meet compliance dates established in HB 2129 and included in 9VAC25-720 60 and 9VAC25-720-120.</p> <p>Facilities subject to reduced chlorophyll-a based TP WLAs must meet WLAs as soon as possible but no later than January 1, 2026. Facilities not requiring additional capital projects are required to meet a compliance date of January 1, 2023.</p> <p>Compliance plans may be submitted individually or through the Virginia Nutrient Credit Exchange Association and may rely on the exchange of point source credits with other facilities but not the acquisition of credits from the Nutrient Offset Fund. The new provisions in 820-40.A are consistent with compliance plan requirements in previous versions of the general permit as well as Article 4.02 of the State Water Control Law.</p> <p>Current requirement for annual compliance plan update moved to 820-40.B.</p>
<p>820-70.I.C</p>	<p>820-70.I.C.1, 2 and 3</p>	<p>Establishes a January 1, 2023 compliance date for significant dischargers in the James River Basin to meet aggregate discharged TN and TP WLAs.</p>	<p>820-70.I.C.1 establishes schedule of compliance requirements consistent with the compliance plan requirements included in 820-40.A.</p> <p>Facilities subject to the ENRC Program must meet compliance dates established in HB 2129 and included in 9VAC25-720 60 and 9VAC25-720-120. Facilities subject to reduced chlorophyll-a based TP WLAs must meet WLAs as soon as possible but no later than January 1, 2026. Facilities not requiring additional capital projects are required to meet a compliance date of January 1, 2023.</p> <p>820-70-I.C.2 requires the Board to reevaluate the schedules of compliance in 820-7-.I.C.1 following submittal of the compliance plans and compliance plan updates required by 820-40 taking into account the factors in § 62.1-44.19:14 C 2 of the Code of Virginia. If warranted the Board shall adjust the</p>

			<p>schedule by modification or reissuance of the general permit</p> <p>820-70.I.C.3 establishes that facilities subject to chlorophyll-a based TP WLAs will have individual compliance dates based on their respective compliance plans and may be earlier than January 1, 2026. Facilities not requiring capital upgrades that waive their compliance schedule in accordance with 820-40 A 2 b will have an individual compliance date of January 1, 2023. Facilities that receive a Certificate to Operate for their capital projects prior to 2025 will have an individual compliance date of January 1 of the calendar year following issuance of the Certificate to Operate.</p> <p>The new provisions in 820-70.I.C.1 - 3 are consistent with schedule of compliance requirements in previous versions of the general permit as well as Article 4.02 of the State Water Control Law.</p> <p>The current January 1, 2023 compliance date for significant dischargers in the James River Basin to meet aggregate discharged TN and TP WLAs is superseded by the individual chlorophyll-a based TP WLAs in the corresponding amendments to 9VAC25-720-60 and are removed from the regulation.</p>
<p>820-80</p>	<p>820-80.A and B</p>	<p>Facilities Subject to Reduced Individual Total Nitrogen and Total Phosphorus Waste load Allocations.</p> <p>This section previously included a list of significant facilities in the James River Basin along with reduced TN and TP WLAs necessary to meet water quality criteria for dissolved oxygen. These WLAs were implemented in accordance with Appendix X to EPA's 2010 Chesapeake Bay TMDL.</p>	<p>Upon the January 1, 2022 effective date of the proposed amendments to the watershed general permit (9VAC25-820), all of the previous schedules of compliance for dissolved oxygen-based WLAs will have been completed. Upon adoption of the proposed amendments to the Water Quality Management Planning Regulation (9VAC25-720), all of the dissolved oxygen-based WLAs previously listed in Section 80 will have been incorporated in 9VAC25-720 or replaced been replaced by new chlorophyll-a based WLAs in 9VVAC25-720. The WLAs previously listed in Section 80 have been deleted and replaced by lists of facilities subject to the ENRC Program WLAs (Section</p>

			<p>80.A) and chlorophyll-a based WLAs (Section 80.B). Section 80 now serves as a reference to determine which facilities are subject to the compliance plan requirements in 9VAC25-820-40.A and the schedule of compliance requirements in Part I.C. of the general permit (9VAC25-820-70).</p>
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### Regulatory Flexibility Analysis

*Pursuant to § 2.2-4007.1B of the Code of Virginia, please describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) establishing less stringent compliance or reporting requirements; 2) establishing less stringent schedules or deadlines for compliance or reporting requirements; 3) consolidation or simplification of compliance or reporting requirements; 4) establishing performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the regulatory change.*

DEQ has evaluated a range of alternative regulatory methods to accomplish the objectives of applicable law while minimizing impact on small business.

The TP WLA reductions to meet water quality criteria for chlorophyll-a are the minimum reductions required to meet water quality criteria. The agency evaluated numerous reduction alternatives and selected the alternative that impacted the fewest facilities and no small businesses. This alternative is expected to maximize the return on the Commonwealth's investment in partially funding nutrient removal upgrades at eligible POTWs under the Water Quality Improvement Fund program.

One small business is subject to reduced WLAs. The business was mistakenly granted WLAs in excess of their design capacity when WLAs were originally established in 2005 and has historically relied of the purchase of nutrient credits. The impact of the regulation will be that the facility would have to purchase additional nutrient credits unless treatment plant performance is improved. The WLAs for two additional small businesses are being transferred to the Nutrient Offset Fund. Both businesses held WLAs that were originally granted for industries that previously occupied the properties. Both industries closed well over ten years ago. The properties do not currently include operations in need of the discharge allocations and the transfer of the WLAs to the Nutrient Offset Fund is not expected to adversely impact the small businesses.

### Family Impact

*In accordance with § 2.2-606 of the Code of Virginia, please assess the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.*

The regulatory amendments are not expected to 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-

sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; or 3) strengthen or erode the marital commitment. The amendments may result in increased sewer rates in some jurisdictions which could result in a minor decrease in disposable family income.



*Commonwealth of Virginia*

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Secretary of Natural and Historic Resources

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Director  
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**MEMORANDUM**

**TO:** State Water Control Board Members

**FROM:** Jutta Schneider  
Director, Water Planning Division *Jutta Schneider*

**DATE:** November 12, 2021

**RE:** Approval of three TMDL reports and amendment of the Water Quality Management Planning regulation to include the corresponding TMDL wasteload allocations.

**Executive Summary**

Staff will ask the Board to approve portions of three TMDL reports and adopt the corresponding amendments to Virginia's Water Quality Management Planning regulation. As of July 1, 2014, TMDL waste load allocations receive State Water Control Board approval prior to EPA approval due to amendments outlined in §2.2-4006.A.14 of the Code of Virginia. The TMDL reports have been reviewed by EPA for required TMDL elements; however, they remain in draft form until State Water Control Board approval.

**I. Background**

The Clean Water Act ("CWA") and the U.S. EPA Water Quality Management and Planning Regulation (40 CFR §130) require states to identify waters that are in violation of water quality standards and to place these waters on the state's 303(d) List of Impaired Waters. Also, the CWA and EPA's enabling regulation require that a TMDL be developed for those waters identified as impaired. In addition, the Code of Virginia, §62.1-44.19:7.C requires the State Water Control Board ("the Board") to develop TMDLs for impaired waters. A TMDL is a determination of the amount of a specific pollutant that a water body is capable of receiving without violating water quality standards for that pollutant. TMDLs are required to identify all sources of the pollutant and calculate the pollutant loads from each source that are necessary for the attainment of water quality standards.

Every TMDL consists of three basic components. They are the point source component called the wasteload allocation (“WLA”), the nonpoint source component called the load allocation (“LA”), and the margin of safety component (“MOS”). The TMDL is equal to the sum of these three components.

The U.S. EPA’s Water Quality Management and Planning Regulation 40 CFR §130.7(d) (2) directs the states to incorporate TMDLs in the state’s Water Quality Management Plan. Also, U.S. EPA’s Water Quality Management and Planning Regulation 40 CFR §122.44(d) (1) (vii) (B) requires that new or reissued VPDES permits be consistent with the TMDL WLA. This means that the WLA component of the TMDL will be implemented through the requirements specified in the VPDES permits, for example through numeric water quality based effluent limitations or in certain cases best management practices (“BMPs”). Virginia implements the LA component using existing voluntary, incentive and regulatory programs such as the Virginia Agricultural Cost-Share Program and Federal Section 319(h) TMDL implementation funding. Specific management actions addressing the LA component are compiled in a TMDL implementation plan (“TMDL IP”).

## II. Proposed Actions

Staff will propose the following Board actions:

### **Approval of three TMDL reports (Attachment I), Amendment of Water Quality Management Planning regulation to incorporate sixteen new WLAs (Attachment II)**

1. The report titled, “*PCB Total Maximum Daily Load Development for Lewis Creek, Staunton, Virginia,*” proposes PCB reductions for the Lewis Creek watershed and provides a new PCB waste load allocation of 3,040 mg/yr.
2. The report titled, “*Benthic TMDL Development for the Lynch Creek and Reed Creek Watersheds Located in Campbell and Pittsylvania Counties,*” proposes sediment reductions for the Lynch Creek and Reed Creek watersheds and provides new sediment waste load allocations of 8,069 lb/yr and 22,250 lb/yr.
3. The report titled, “*Bacteria Total Maximum Daily Load (TMDL) Development for the Mattaponi River and Tributaries Located in Caroline, Essex, King William, and King and Queen Counties, Virginia,*” proposes *E. coli* reductions for the Aylett Creek, Courthouse Creek, Dickey’s Swamp, Dogwood Fork, Dorrell Creek, Garnetts Creek, Gravel Run, Herring Creek, Market Swamp, Mattaponi River (non-tidal), Mattaponi River (tidal), XDN-Garnetts Creek, UT, XJG-Dickey’s Swamp, UT watersheds and provides new *E. coli* waste load allocations of 2.42E+11 counts/year, 1.41E+11 counts/year, 2.22E+11 counts/year, 1.79E+10 counts/year, 5.75E+10 counts/year, 8.72E+10 counts/year, 1.10E+11 counts/year, 6.30E+11 counts/year, 1.10E+11 counts/year, 1.00E+12 counts/year, 1.87E+11 counts/year, 2.65E+10 counts/year, and 2.01E+10 counts/year.

The specific portions of the TMDL report to be approved include the TMDL itself and all the TMDL allocation components, the pollutant reduction scenarios, implementation strategies, reasonable assurance that the TMDL can be implemented, and a summary of the public participation process. These portions are included in Attachment I.

The process for amending the Water Quality Management Planning regulation is specified in §2.2-4006A.14 and §2.2-4006B of the Code of Virginia. The amendments consist of adding sixteen new WLAs that are included in the TMDL reports reviewed by EPA. Staff will therefore propose that the Board, in accordance with §2.2-4006A.14 and §2.2-4006B of the Code of Virginia, adopt the amendments to the Water Quality Management Planning regulation (9 VAC 25-720) as provided in

Attachment II. The associated Virginia Regulatory Town Hall document is included as Attachment III.

### **III. Public Participation**

The TMDL reports listed in Attachment I were developed in accordance with Federal Regulations (40 CFR §130.7). The TMDL reports were subject to the public participation process contained in §2.2-4006.A.14 of the Code of Virginia and DEQ's "Public Participation Procedures for Water Quality Management Planning" that the Board approved in September 2014. Written comments provided by stakeholders as well as the Commonwealth's responses are submitted to EPA together with the TMDL report. TMDL reports are also made available to the public on DEQ's web site under <https://www.deq.virginia.gov/water/water-quality/tmdl-development/draft-tmdls>.

The proposed final amendments to the Water Quality Management Planning regulation are exempt from the provisions of Article II of the Administrative Process Act. The TMDL WLAs listed in Attachment II were published in the Virginia Register (Volume 38, Issue 4) on October 11, 2021, with a public comment period ending on November 10, 2021. Staff received no comments

### **IV. Presenter Contact Information:**

#### **Wasteload Allocation Changes to the Water Quality Management Planning Regulation**

Contact: Justin Williams, Office of Watershed & Local Government Assistance Director

Phone Number: (804) 698-4185

E-mail: [Justin.Williams@DEQ.Virginia.gov](mailto:Justin.Williams@DEQ.Virginia.gov)

### **V. Attachments**

- **Attachment I** – Portions of three TMDL reports (with sixteen new TMDL waste load allocations) for approval by the Board
- **Attachment II** – Amended Water Quality Management Planning regulation proposed for Board adoption
- **Attachment III** – Virginia Regulatory Town Hall – Exempt Action Final Regulation







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**TO: The Members of the State Water Control Board**  
**FROM: Kristen Sadtler, Division of Enforcement**  
**DATE: December 14, 2021**  
**RE: REPORT ON FACILITIES IN SIGNIFICANT NONCOMPLIANCE AND  
CHESAPEAKE BAY PRESERVATION ACT PROGRAM NOTICES OF  
VIOLATION**

**Significant Noncompliance**

One new permittee was reported to EPA on the Quarterly Noncompliance Report as being in significant noncompliance (SNC) for the quarter ending June 30, 2021. The permittee, the facility and the reported instances of noncompliance are as follows:

**1. Permittee/Facility: Advansix Resins & Chemicals LLC/Advansix Resins & Chemicals LLC**  
**Type of Noncompliance: Failure to Meet Permit Effluent Limit (Total Suspended Solids)**  
**City/County: Hopewell, Virginia**  
**Receiving Water: Gravelly Run**  
**Impaired Water: The fish consumption use is fully supporting with observed effects due to a VDH fish consumption advisory for kepone. The recreation, aquatic life, and wildlife uses were not assessed. The facility was addressed in the Chesapeake Bay TMDL.**  
**River Basin: Lower James River Basin**  
**Dates of Noncompliance: April and May 2021**  
**Requirements Contained In: VPDES Permit**  
**DEQ Region: Piedmont Regional Office**

The Permittee attributes the violations to samples that were not representative of the outfall's effluent for the April and May monitoring periods. The Permittee typically would have escalated the sample results in accordance with internal facility procedures and then collected additional samples to demonstrate that the reported data was not representative. Facility personnel have been re-trained in escalation procedures so that samples can be properly evaluated for

representativeness in the future. In addition, as a proactive measure, the facility cleaned the separator and surrounding drainage area of debris and loose materials to ensure those areas would not contribute to elevated TSS results in the future. The facility has not had any exceedances of total suspended solids since May 2021. DEQ's Piedmont Regional Office has issued a Notice of Violation to the Permittee and DEQ anticipates entering into a consent order with the Permittee to address the violations.

**Chesapeake Bay Preservation Act Program Notice of Violation**

DEQ has not issued any CBPA Program NOV's from August 24, 2021 to November 11, 2021.

**ENFORCEMENT ITEM SUMMARY FORM  
STATE WATER CONTROL BOARD MEETING  
ON DECEMBER 14, 2021**

**ITEM:** BleachTech L.L.C.

**DEQ CONTACT:** Piedmont Regional Office  
Jeff Reynolds  
(804)527-5080  
[Jefferson.Reynolds@DEQ.Virginia.gov](mailto:Jefferson.Reynolds@DEQ.Virginia.gov)

**FACILITY/SITE ADDRESS:** 2020 Bessemer Road, Petersburg VA.

**TYPE OF PERMIT OR PROGRAM:** Industrial Stormwater General Permit No. VAR051963;  
reissued in 2014 and 2019.

**STATE WATER AFFECTED:** Lieutenant Run and Unnamed Tributary of Lieutenant Run (“UT”). During the 2018 305(b)/303(d) Integrated Water Quality Assessment, the tributary was not assessed for any designated use and is a Category 3A waterbody. The discharge was not addressed in the Appomattox River Basin Bacterial Total Maximum Daily Load (“TMDL”). The Appomattox River Basin Bacterial TMDL was approved by the U.S. Environmental Protection Agency (“EPA”) on August 30, 2008 and by the Virginia State Water Control Board on December 20, 2005.

The Chesapeake Bay TMDL was approved by EPA on December 29, 2010. The TMDL allocates loads for total nitrogen, total phosphorus, and total suspended solids to protect the dissolved oxygen and submerged aquatic vegetation criteria in the Chesapeake Bay and its tidal tributaries. Lieutenant Run drains to the Appomattox Tidal Freshwater estuary. The unnamed tributary is shown as ephemeral on U.S. Geological Service topographical mapping and is considered a Tier 1 water.

DEQ staff conducted a stream evaluation of the UT on October 20, 2020, and found that specific conductance and salinity measurements were “orders of magnitude higher” in comparison to adjacent reference stream segments. Further, the aquatic community was significantly degraded. The community was characterized by a severe lack of sensitive organisms and dominance by pollution tolerant organisms (Chironomidae and Hydropsychidae).

**PROPOSED BOARD ACTION:** Consent Special Order w/ Civil Charges and Schedule of Compliance.

**BACKGROUND:** BleachTech L.L.C. (“BleachTech”) is a limited liability company operating in Virginia as a bleach manufacturer. BleachTech has operated at the Site since 2010, and receives deliveries and transports product using the services of Kenan Advantage Group (“KAG”). BleachTech allows KAG trucks and storage trailers to be stored at the Site. The Facility consists of a main building (the “Plant”), maintenance garage, four tank farms, multiple cooling towers, a salt storage dome, two brine pits, a truck loading/unloading area, a rail loading/unloading area, and multiple open areas for parking. The surfaces of the outside portion of the Site are largely gravel with some grassy areas and other small sections of impervious surface.

In 2010, BleachTech first obtained coverage under VPDES Industrial Stormwater General Permit No. VAR051963 (the “Permit”) for discharge of stormwater associated with industrial activity at the Facility. Coverage under the Permit was re-issued in 2014 and 2019.

BleachTech has numerous stormwater drains throughout the Site. The site map included in its initial registration statement in May of 2010 identifies approximately 27 secondary drains that flow to a single primary drain (“DI-6”) prior to flowing into a stormwater retention pond (the “Pond”) located northeast of the Site. The Pond is equipped with a riser that allows water to flow through cement pipes into an unnamed tributary (“UT”) of Lieutenant Run. The Facility’s only outfall (“Outfall 001”) is located where the cement pipes discharge to the UT.

**DISCUSSION:**

On March 19, 2020, DEQ was notified of a release of approximately 300 gallons of sodium hydroxide flowing into a stormwater drain near the truck loading area. The release was due to a tanker truck valve being left open after cleaning, and the subsequent loading of product while the valve remained open (the “March Release”). The sodium hydroxide flowed into the stormwater drain, through the Facility’s stormwater system and into the Pond. BleachTech and KAG retained third-party contract services for release response and remediation. As of May 21, 2020, remediation activities associated with the March release were completed.

On May 5, 2020, DEQ staff conducted an inspection of the Facility and observed: (1) housekeeping and operational deficiencies including a hose attached to a water storage tank associated with the non-contact cooling system discharging to the facility’s storm sewer collection system; three hoses from the interior of the building were situated to discharge municipal filtered water into plumbing of downspouts; white staining in the brine area and AST storage area; petroleum staining near garage structure; and salt tracking observed near a stormwater drain that was reportedly closed in 2014, but records indicate that it discharges to the oil/water separator near the brine pits; (2) documentation and monitoring deficiencies including annual non-stormwater discharge evaluations and routine site inspections were not available for review; 2nd quarter of 2019 quarterly visual monitoring report not available for review; Chesapeake Bay TMDL Monitoring stormwater calculations were not submitted and there was no accounting for increased impervious surface in 2019; 2016 and 2017 samples were not analyzed within holding times; 2018 and 2019 lab notes indicate samples not received on ice; and DMRs from 2<sup>nd</sup> half of 2016 & 2018 and 1<sup>st</sup> half of 2017 & 2019 had errors, and (3) stormwater pollution prevention plan (SWPPP) deficiencies including the November 26, 2018 benchmark for Al was exceeded but the SWPPP not updated to reflect potential deficiencies that may have caused the exceedance; the SWPPP indicates that a preventative maintenance program exists, but no specific document or plan is referenced; the SWPPP’s site location and drainage map do not include clear depiction of receiving stream, locations of significant spills/leaks, properly identified outfall, and location/description of non-stormwater discharges; training material relevant to facility’s SWPPP was not provided for review; and control measures to minimize off-site tracking of raw, final or waste materials was not included in SWPPP.

On May 11, 2020, BleachTech staff notified DEQ that a release occurred from one of the brine pits at the Facility. The release occurred when the Facility failed to properly operate the brine pump coming into the Plant. On May 21, 2020, BleachTech reported to DEQ staff that as brine was being pumped from DI-6 to on-site tanks, another release occurred allowing brine and contaminated stormwater in the drain to spill into the Pond.

On May 22, 2020, DEQ staff conducted an inspection and observed (1) multiple pools of green-yellow substance, likely sodium hypochlorite, was present on the ground near the truck holding station and the area is not listed in the SWPPP as a potential source of pollution; (2) there have been conflicting reports on the amount of brine release on May 11, 2020; (3) the stormwater retention pond readings taken at inspection indicate a non-stormwater discharge to storm sewer system (near influent pipe

10.01 pH; near riser/outlet structure 8.25 pH); (4) elevated specific conductivity and salinity levels, particularly at DI-6, indicate a non-stormwater discharge to the storm sewer system; and (5) a hose from a water storage tank associated with non-contact cooling water system was placed to discharge to a drop inlet.

On June 15, 2020, DEQ staff conducted an inspection and observed (1) salt was accumulating behind the facility's salt storage dome and was exposed to stormwater; (2) vehicle tracking of salt from the storage dome was present and the area was graded to drain to a stormwater drain in the parking area; (3) the following pH levels at "Outfall to Creek" were provided by the facility: 6/9/2020 – 3.52 S.U., 6/10/2020 – 5.06 S.U., 6/11/2020 – 5.85 S.U; (4) No 24-hour notification or 5-day report was provided for releases; and (5) a hose from a water storage tank associated with a non-contact cooling water system was placed to discharge to a drop inlet.

On June 30, 2020, DEQ staff conducted an inspection and observed (1) the following measurements were collected on the date of inspection at four different points in the stormwater retention pond: a) Center of Pond – 9.53 S.U.; b) Southwest Quadrant – 10.42 S.U.; c) Southeast Quadrant – 9.79 S.U.; and d) Northwest Quadrant – 10.28 S.U; (2) accumulated salt was observed on the ground and exposed to stormwater; (3) water was discharging from the basin of a cooling tower onto the ground near a drain that was discharging to the storm sewer system, and water discharging from a pipe on a water storage tank associated with the non-contact cooling water system was running down the tank onto the ground in an area that drains to the storm sewer system; (4) normal conditions allow permit monitoring samples to be collected from Outfall 001, but that Outfall and the riser/outlet structure [were] both fitted with inflatable plugs, and a pumping system and siphon hose were installed in the stormwater retention pond.

BleachTech staff responded to and/or clarified many items identified in the Inspection Reports. DEQ issued a Notice of Violation No. W2020-07-P-0003 to BleachTech on July 14, 2020 ("July NOV").

BleachTech provided a written response dated August 3, 2020 to the July NOV, indicating some progress toward key corrective action measures necessary to address the observations identified in DEQ's inspection reports and July NOV. On August 11, 2020, DEQ staff conducted an inspection and observed: (1) an area of sediment accumulation outside of the filter press containment area and requested documentation of cleanup; (2) BleachTech staff indicated historical groundwater data for the facility was available for review and was asked to provide it; (3) BleachTech staff indicated previous addition of citric acid to the stormwater retention pond, and was requested to provide any information regarding the approval of the action, details as to how the material was added to the pond, volume of acid added, as well as the Material Safety Data Sheet of any chemicals used for pH adjustment; (4) a leaking process wastewater line adjacent to a loading bay on the east side of the main building; and (5) a partially buried plastic storage tank next to the cooling tower. BleachTech staff indicated that the storage tank was for the cooling tower's backwash collection; however, the destination of the discharged backwash water could not be determined.

BleachTech reported a release occurring between the morning of September 7, 2020 and the afternoon of September 8, 2020 of approximately 16.7 lbs. (dry) of sodium hydroxide (NaOH) from the caustic storage dike. A 15% caustic storage tank in the dike was leaking, and a line with blowdown water from the cooling tower had filled the dike. This collected in the lowest part of the dike, and was reported by BleachTech to have likely escaped through the fractured containment. BleachTech discovered pH 11.98 in DI-6, and immediately traced it to suspected cracks in the caustic storage dyke along the North and West wall where there was seepage from beneath the dike walls.

BleachTech reported a release discovered on September 10, 2020 of approximately 0.69 to 2.42 lbs. (dry) of HC1 over a 24-hour period. The HC1 was mixed with stormwater during a rain event, and discharged into DI-6 where pH measured 5.39 S.U. BleachTech staff determined the source of the low pH by testing storm drains and the loading area where lower pH in the storm drains was ranging from 3.13 to 3.34 S.U. Two large puddles near the collection basins and the basin sump pump measured a pH of approximately 2.48 S.U. After further investigation, it was determined that the release likely occurred from railcar loading operations. In addition, a sump pump designed to drain capture basins in the loading area failed and overflowed.

BleachTech also informed DEQ staff of releases occurring on September 14, 2020, September 17, 2020, October 12, 2020, October 16, 2020, October 26, 2020, January 4, 2021, March 15, 2021, March 29, 2021, April 5, 2021, April 17, 2021, May 12, 2021, May 18, 2021, May 26, 2021, June 29, 2021, June 30, 2021, July 1, 2021, July 7, 2021, July 12, 2021, and August 5, 2021. DEQ staff evaluated each release for volume, material, containment, risk to human health and the environment, and need for remediation.

**CIVIL CHARGE AND CORRECTIVE ACTION:** BleachTech is required to pay a civil charge in the amount of \$252,652. The schedule of compliance in Appendix A includes: 1) development of a release, pollution prevention and compliance infrastructure; 2) comprehensive investigation and characterization of release and pollutant risks; 3) facility-wide repair and maintenance; and 4) development and/or updating of operating manuals and plans (e.g. SWPPP). All requirements of the order must be complete within 180 days of the date of execution. BleachTech is presently on schedule to fully comply with the order.

**PREVIOUS ENFORCEMENT ACTIONS: Enforcement History:** BleachTech entered into a Consent Order with DEQ on July 8, 2014 for operating without a minor new source review (NSR) permit pursuant to 9 VAC 5-80-1210 and was issued a civil charge in the amount of \$7,826. BleachTech entered into a Consent Agreement with EPA (Region III) on November 25, 2014 to resolve certain release, release reporting, and chemical inventory violations at the Facility.

**PUBLIC COMMENT:** The consent order was signed by BleachTech on June 29, 2021. A public notice for this proposed consent order was run on August 2, 2021 in the Petersburg Progress Index, in the *Virginia Register* on August 2, 2021 and on the Department's website. The 30 day public comment period ended on September 1, 2021. No comments were received.

**ENFORCEMENT ITEM SUMMARY FORM  
STATE WATER CONTROL BOARD MEETING  
ON DECEMBER 14, 2021**

**ITEM:** Cobbs Creek Reservoir Project / Henrico County and MEB Haymes Joint Venture LLC

**DEQ CONTACT:** Piedmont Regional Office  
Jeff Reynolds  
804-527-5080  
Jefferson.Reynolds@deq.virginia.gov

**FACILITY ADDRESS:** 1617 Columbia Road, Cumberland County, Virginia

**TYPE OF PERMIT OR PROGRAM:** VWP Permit No. 05-0852 / VPDES General Permit No. VAR10I703

**STATE WATER AFFECTED:** During the 2018 305(b)/303(d) Water Quality Assessment Integrated Report, the James River was considered a Category 5A waterbody, meaning “A Water Quality Standard is not attained. The water is impaired or threatened for one or more designated uses by a pollutant(s) and requires a TMDL.” The segment is impaired of Recreation Use due to E. coli exceedances and impaired of the Fish Consumption Use due to a VDH Advisory for PCBs. The Wildlife Use and Aquatic Life Use are fully supporting. Cobbs Creek and its tributaries were not assessed for any designated use; therefore, the streams are considered Category 3A waterbodies.

The site is located in the Chesapeake Bay watershed. The Chesapeake Bay Total Maximum Daily Load (“TMDL”) was approved by the U.S. Environmental Protection Agency (“EPA”) on December 29, 2010. The TMDL allocates loads for total nitrogen, total phosphorus, and total suspended solids to protect the dissolved oxygen and submerged aquatic vegetation criteria in the Chesapeake Bay and its tidal tributaries. The James River, Cobbs Creek, and perennial tributaries are considered Tier 2 waters. Intermittent tributaries are Tier 1 waters.

**PROPOSED BOARD ACTION:** Consent Special Order with civil charge and corrective action.

**BACKGROUND:** The Cobbs Creek Reservoir Project (“Project”) is a large earth-moving project in Cumberland County with limits of disturbance encompassing over 1,700 acres of land near Columbia, Virginia. In development since 2002 with targeted completion in 2025, the Project reaches from the James River to the entire drainage basin of Cobbs Creek. The Project involves construction of concrete outlet structures and pipe networks in the Cobbs Creek basin just before the creek’s confluence with the James River. After the structures and pipes are placed, an earthen dam is planned for construction. The last phase is dam structure stabilization with vegetation, clearing the reservoir bottom, and allowing water to rise in the cleared reservoir space to create a withdrawal pool.

*Virginia Water Protection Individual Permit No. 05-0852 (“VWP Permit”)* was issued to Cumberland County with an effective date of October 12, 2007 and expiration date of October 12, 2022. A minor modification for change of ownership to Henrico County was approved on

September 14, 2010.

*Virginia Pollutant Discharge Elimination System Construction Stormwater General Permit No. VAR10I703* (“VPDES Permit”). VPDES Permit coverage was issued to MEB Haymes Joint Venture LLC (“JV”) with an effective date of July 1, 2019 and expiring June 30, 2024 for discharge of stormwater associated with construction activities at the Project. JV was previously approved for 2014 VPDES Permit coverage effective July 1, 2014 and expiring on June 30, 2019. Henrico County also obtained similar VPDES Permit coverage for the same term.

**DISCUSSION:** Due to the lengthy construction timeline and size of the construction area, DEQ staff conducted a series of VWP inspections associated with this enforcement action, including on March 7, June 19, July 12, August 17 and September 7, 2018; February 6, March 13, June 21, October 3, 2019 and October 22, 2020. VPDES inspections were also conducted on July 24, September 23, October 18 and December 10, 2019, and January 23, 2020.

During the September 7, 2018 inspection, DEQ staff observed that the SWPPP did not record when concrete washout repairs were made; large deposits of sediment were in Sediment Basin 1A1; sediment basins were installed onsite prior to obtaining approval to begin land disturbance by the Virginia Stormwater Management Program (“VSMP”) authority; and the channel for Sediment Basin 1A1 was not stabilized and was feeding into the sediment basin.

During the September 7, 2018 inspection, DEQ staff also observed rill erosion on several unstable slopes; a sediment basin and associated dam structure that were not stabilized; and the access road for the James River construction area was not stabilized. Inspections conducted on February 6, March 13, June 21, October 3, 2019 and October 22, 2020 indicate the same, similar and/or ongoing violations. DEQ staff also observed that water from a sediment trap filter bag used for dewatering operations at the James River was cutting a channel into the slope and causing erosion and sediment discharge. Erosion and sedimentation controls and other best management practices were not installed and/or properly maintained to minimize secondary impacts to state waters. DEQ staff also observed cement and grout washout from upslope drilling entering into the channel diversion and fuel leaking from the nozzle of a fueling tank. No secondary containment for the fuel tank or spill kit were observed.

During site inspections on March 7, 2018, June 19, 2018, July 12, 2018, August 17, 2018, and September 7, 2018, DEQ staff observed that sediment was discharged into Cobbs Creek at the outlet of the diversion channel and was flowing downstream approximately one mile to the confluence with the James River. The discharge resulted from inadequate, uninstalled and/or unmaintained erosion and sediment controls. Inspections conducted on February 6, March 13, June 21, and October 3, 2019 indicate the same, similar and/or ongoing violations. Reporting also indicates additional impacts to two un-named tributaries characterized as intermittent stream channels. The channels are adjacent to Cobbs Creek where construction activities to install a 72” pipeline were also occurring. Inspections indicate impacts to Cobbs Creek and the adjacent channels were variable based on site activity and conditions. Stream impacts at Cobbs Creek were reported as approximately 4,545 linear feet and stream impacts to the two un-named tributaries exceeded 100 linear feet but were less than 1,500 linear feet.

During site inspections on February 6, March 13 and June 21, 2019, DEQ staff observed that boundary flagging was not placed within 50 ft. of land disturbance activity.

During the July 24, 2019 inspection, DEQ staff observed that Site inspection reports for June 20, 2019 and June 26, 2019 indicated that existing controls were failing to minimize pollutants in stormwater discharges from the Site, and modifications to the control measures were necessary.



During the July 24, October 18, December 10, 2019; and January 23, 2020 inspections, DEQ staff observed unstable slopes, rill and gully erosion at various portions of the rim improvements area, and unstable slopes and conveyance channels in Borrow Area 4B exhibiting erosion. Subsequent inspections indicate similar and ongoing violations at or near Borrow Areas 1, 1A, 2, and other areas. DEQ staff consistently observed a failure to stabilize slopes, outfalls, channels, basins and other areas throughout the site during the term of inspections.

During the July 24, 2019 inspection, DEQ staff observed silt fence with sediment accumulation greater than half the height of the fence in the rim improvement area and in Borrow Area 4B. In addition, staff observed onsite sediment basins 3 and 4, as well as the sediment trap and associated conveyance channel in Borrow Area 1 exhibited erosion and sediment deposition. Erosion and sediment controls, and other best management practices were not installed and properly maintained as required by the approved plans.

On November 28, 2018, NOV No. 2018-09-PRO-201 (VWP) was issued. On August 14, 2019, NOV No. 2019-07-PRO-204 (VPDES Construction Stormwater) was issued. DEQ staff and the Responsible Parties communicated regularly to monitor corrective action at the Project. Additional compliance visits were conducted by DEQ to specifically discuss the NOVs, progress toward compliance, and enforcement. The Responsible Parties initiated an independent evaluation of site compliance, providing regular reporting progress to DEQ beginning in November 2018.

**CIVIL CHARGES/CORRECTIVE ACTION:** Section D of the Order imposes a civil charge of \$114,368. An amount of \$66,333 shall be deposited in the Virginia Environmental Emergency Response Fund and \$48,035 shall be deposited in the Virginia Stormwater Management Fund.

A Corrective Action Plan (“CAP”) was developed to address impacted water resources resulting from the land disturbing activities described above. The CAP describes common remediation strategies to restore impacted areas to their original condition except where conversion is part of a permitted impact. The goal of these measures is to restore the function and water quality benefits to preconstruction condition. The CAP also describes monitoring requirements with success criteria to ensure installed measures remain in place and are effective. The CAP is incorporated by reference as part of Appendix A of the Order.

**PREVIOUS ENFORCEMENT ACTIONS:** No previous enforcement actions.

**PUBLIC COMMENT:** The Consent Order was signed on July 27, 2021 by JV and July 29, 2021 by Henrico County. A public notice for this proposed Consent Order was run on August 30, 2021, in *Farmville Herald*, in the *Virginia Register* and on the Department’s website for a 30 day public comment period ending on September 29, 2021. No public comments were received during the comment period.



**ENFORCEMENT ITEM SUMMARY FORM  
STATE WATER CONTROL BOARD MEETING  
ON DECEMBER 14, 2021**

**ITEM:** Henrico County Water Reclamation Facility

**DEQ CONTACT:** Piedmont Regional Office / Enforcement  
Frank Lupini and Jeff Reynolds  
804-527-5093  
Frank.Lupini@deq.virginia.gov

**FACILITY ADDRESS:** 9101 WRVA Road in Henrico County, Virginia

**TYPE OF PERMIT OR PROGRAM:** VPDES Permit No. VA0063690

**STATE WATER AFFECTED:** James River in the Lower James River Basin. The receiving streams influenced by Henrico's collection system overflows are the James River and the following tributaries: Almond Creek, Almond Creek UT, Chickahominy River UTs, Gillies Creek, Horse Swamp Creek, Hungary Creek, Lake Overton, North Run, North Run UT, Rooty Branch, Meredith Branch UT, Piney Branch UT, Upham Brook, and Upham Brook UT in the Lower James River Sub-basin; as well as Tuckahoe Creek, Deep Run, Deep Run UT, Georges Branch, and the Kanawha Canal in the Middle James River Sub-basin.

**PROPOSED BOARD ACTION:** Consent Special Order with Civil Charge, Corrective Action and a Supplemental Environmental Project.

**BACKGROUND:** Henrico County ("Henrico") owns and operates the Henrico County Water Reclamation Facility ("Facility") and associated collection system in Henrico County, Virginia. The Department of Environmental Quality ("DEQ" or "Department") issued VPDES Permit No. VA0063690 ("Permit") to Henrico for the discharge of treated sewage and other municipal wastes in strict compliance with the Permit. The Permit was issued on June 1, 2017 and expires on May 31, 2022. The collection system serves Henrico residents and conveys sewage and municipal wastes to the Facility.

**DISCUSSION OF CURRENT ENFORCEMENT ACTION FOR SSO EVENTS:** On July 19, 2018, DEQ's Piedmont Regional Office ("PRO") was notified by Henrico of an unpermitted discharge/stormwater sewer overflow event ("SSO") located at 6705 Northbury Court, Henrico, Virginia. Henrico subsequently reported a series of SSOs from September 28, 2016 to August 18, 2018. The Department issued NOV No. W2018-09-P-0002 on September 18, 2018 citing Henrico for 59 reported SSO events.

On February 21, 2019, the Department issued NOV No. W2019-02-P-0002 to Henrico for 28 SSO events reported from September 17, 2018, through January 15, 2019. On April 18, 2019, the Department issued NOV No. W2019-04-P-0001 to Henrico for 13 additional sanitary sewer overflows reported from January 17, 2019, through April 15, 2019. On August 15, 2019, the Department issued an NOV No. W2019-08-P-0002 to Henrico for 5 additional sanitary sewer overflows reported from April 19, 2019, through July 8, 2019.

The foregoing SSO events are described in more detail in Appendix A of the draft Consent Order. Henrico asserts that a significant number of SSO events coincide with extraordinary precipitation events.

**DISCUSSION OF CURRENT ENFORCEMENT ACTION FOR EFFLUENT LIMIT VIOLATIONS:** Between October 16, 2019 and March 29, 2020, Henrico notified the Department that 164 “partial filter bypass events” occurring at the Facility. On April 3, 2020, the Department issued NOV No. W2020-04-P-0001 to Henrico citing effluent and bypass violations reported on their February 2020 DMR. On June 3, 2020, the Department issued NOV No. W2020-06-P-0001 to Henrico citing effluent and bypass violations reported on their March and April 2020 DMRs.

On June 24, 2020, the Department held an enforcement conference to discuss the violations. During the meeting, Henrico stated that they recognize the need for final filter rehabilitation at the Facility and initiated both an interim and a long term corrective action plan.

**CIVIL CHARGES/SUPPLEMENTAL ENVIRONMENTAL PROJECT:** Section D of the Order imposes a civil charge of \$207,680. The sum of \$51,920 will be deposited in the Virginia Environmental Emergency Response Fund and \$155,760 allocated to a Supplemental Environmental Project (“SEP”). The SEP replaces private septic systems discharging on-site with line connections conveying to wastewater treatment plants for advanced treatment, including nitrogen and phosphorus removal. Henrico is required to spend \$155,760 on septic system replacement.

**PREVIOUS ENFORCEMENT ACTIONS:** Similar to other large localities, Henrico has an enforcement history. The most recent and closely associated enforcement action occurred on December 17, 2010. The Department issued a Consent Order to Henrico to address a history of SSO events. The Consent Order contained a project schedule for collection system improvements running from December 15, 2010 to June 15, 2018. Henrico completed all required projects in April of 2018.

**PUBLIC COMMENT:** The Consent Order was signed by Henrico on July 14, 2021. A public notice for the proposed Consent Order was run in *Style Weekly* on September 8, 2021, the *Virginia Register* on September 13, 2021, and on the Department’s website. The 30-day public comment period ended on October 13, 2021. There were 36 public comments received during the comment period which are attached with Department responses.

**CONSOLIDATED RESPONSE TO COMMENTS FROM EIP, JRA, CBF AND  
INDIVIDUAL CONSTITUENTS FOR HENRICO COUNTY WRF CONSENT ORDER**

ISSUE	COMMENT	AGENCY RESPONSE
Disapprove /Remand Order	Commenters request that the SWCB decline to approve the proposed Consent Order and remand it to DEQ for necessary modifications.	The proposed order is fully consistent with DEQ's Enforcement Manual and process. No modifications are considered necessary or appropriate at this time, as further explained in the context of specific comments and responses below.
Involve U.S. EPA	Commenters request DEQ to include U.S. EPA to assist in securing a consent decree with long-term, sustainable solutions.	DEQ has delegated authority and is the authorized primary agency to administer the federal Clean Water Act in Virginia. While DEQ regularly coordinates compliance and enforcement activities with U.S. EPA, DEQ is operating within its authority and capability to resolve the Henrico matter in an appropriate and well-planned manner. Additionally, coordinating a consent decree with EPA at this time would further delay corrective action, as dual matters require significant time, renegotiation, and multiple approvals prior to entry. The administrative record associated with Henrico demonstrates a substantial effort over time to employ the agency's enforcement authority effectively as conditions change. The remedies embodied in the Schedule of Compliance for the Consent Order are significant, and demonstrate DEQ's continuing effort towards Henrico achieving long-term, sustainable compliance.
Combined Sewer Lines	Commenters note that the City of Richmond's sewers connected to Henrico's system are "combined" sanitary and storm sewer lines.	The minor and limited areas of Richmond's sewer system that tie into Henrico's system at points near the City-County boundary are separate sanitary sewers. Even if any of the limited tied-in Richmond sewers were combined rather than separate, DEQ would not support extending to Henrico the type of regulatory relief typically associated with combined sewers in the context of Henrico's large separate sewer system.
Past Consent Orders	Commenters state that past orders issued to Henrico failed to include long-term projects, and the proposed order requires Henrico only to undertake the same type of temporary measures.	The DEQ orders issued over a span of nearly 30 years were each tailored for the specific capital needs of the treatment facility and sewer system at the relevant point in time. The proposed Consent Order requires completion of 38 projects at an estimated cost of \$224 million. All earlier Henrico orders combined equate to \$157 million in total capital investment. Environmental conditions and the Henrico system have changed significantly over 30 years, and DEQ enforcement actions have been revised and/or updated to maximize corrective action. Henrico faces the same type of aging infrastructure, resource, and rainfall volume challenges as other Virginia localities, which, like Henrico, are subject to Consent Orders. The projects required by the proposed Consent Order are designed to address identified needs with long-term infrastructure solutions, water quality, and climate conditions in mind. Similar to previous orders, this Consent Order may be subject to further revision or additional

SSO Volumes	<p>Commenters identify annual SSO volumes from September 2016 through August 2021, and express concerns that the proposed order is inadequate because it requires the same projects that have been required in past orders.</p>	<p>orders may be required based on changing conditions (e.g. climate, population, development, emergent project prioritization, etc.).</p> <p>DEQ initiates enforcement actions when deemed necessary and appropriate to resolve noncompliance, including SSOs, and has done so with Henrico. DEQ has taken an approach in the proposed order to aggressively address SSOs through updated requirements for upgrades, maintenance, and construction. The approach is similar to previous orders as it effectively addresses system upgrade needs over time. The following data also provide relevant context as to the nature and extent of the SSOs that are the subject of the enforcement action.</p> <p>The average rainfall in the Richmond region is 43.6 inches per year. In 2020, 2018, and 2016, the region experienced extreme rainfall amounts totaling 63.5 inches (including two named storms, Isaias and Zeta), 63.75 inches (including three named storms, Alberto, Florence, and Michael), and 52.77 inches (including two named storms, Hermine and Matthew), respectively. 2018 was the third wettest year on record followed by 2020. Furthermore, during the same time, three different areas of Henrico County experienced “100 year storms” on separate occasions.</p> <p>Required corrective actions resulted in significant progress in managing these record rainfall years as demonstrated by the following data. For the three worst SSO years identified in the comments, the Henrico system reports the following SSO volumes:</p> <ul style="list-style-type: none"> <li>• 2016 – 12.7 million gallons (Rainfall: 52.77”)</li> <li>• 2018 – 49.2 million gallons (Rainfall: 63.75”)</li> <li>• 2020 – 4.7 million gallons (Rainfall: 63.5”)</li> </ul> <p>While there were similarly high rainfall amounts in 2018 and 2020, SSO volume was significantly reduced over this period. Henrico attributes reduction in overflow volumes to system improvements and use of wet weather storage for containing and pacing peak storm flows through the system.</p> <p>To provide additional context to the Richmond region, the above 2020 overflow volume from the Henrico system (4.7 million gallons) is 0.09% of the overflow volume from the adjacent City of Richmond system (5.2 billion gallons / 2020 DPU Annual Report) which is also the subject of continuing enforcement (December 2, 2020). The Consent Order will appropriately require high performance from the Henrico system; however, the Henrico system is one consideration in a larger effort to improve James River water quality in the Richmond area.</p>
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<p>Civil Charge Amount</p>	<p>Commenters note that numerous violations are resolved by a civil charge of \$207,680; Henrico is required to pay \$51,920 for a civil charge and to conduct a Supplemental Environmental Project for \$155,760. Commenters note that there is no provision in the order for "stipulated penalties."</p>	<p>DEQ identifies specific factors when calculating the penalty and the civil charge applied in this Consent Order is consistent with the Enforcement Guidance calculations. Due to the significant number of violations (overflows, bypasses, permit exceedances, etc.) and extent of deviation from permit limits, Henrico's penalty is one of the largest in comparison with other orders entered against local governments for violations at the wastewater treatment facilities. Recurring TSS and CBOD5 effluent limitation violations from 2020 were addressed in the civil charge calculation.</p> <p>Similarly, the SEP was calculated and approved based on applicable agency guidance. The SEP directly addresses a significant statewide problem to reduce private septic system discharges through connection to centralized advanced treatment, including nutrient removal. The SEP benefits the community by dedicating funds to extend wastewater infrastructure to un-served and under-served properties, which is consistent with the new universal wastewater treatment access goal of Va. Code § 62.1-223.2. If the proposed SEP is not approved, the amount of \$155,760 allocated to the SEP will be deposited into the Virginia Environmental Emergency and Restoration Fund (VEERF), which allows for other expenditures.</p>
<p>Scope and Timeline of Treatment Facility Upgrades</p>	<p>Commenters state with respect to treatment facility effluent violations that the proposed Consent Order consists of only perfunctory mechanical controls, without mention of pretreatment procedures and better technology, and provides an overly generous timetable to complete upgrades.</p>	<p>DEQ lacks expressed authority under State Water Control Law authorizing the use of a "stipulated penalties". DEQ reserves the right to take enforcement action against Henrico if future violations occur and DEQ retains its full enforcement authority.</p> <p>The requirements of the Consent Order, Appendix C establish a comprehensive scope of work for the rehabilitation and upgrade of the treatment facility, which was developed with the substantial assistance of reputable national professional engineering firms. Specific information or explanation substantiating any engineering deficiencies in the planned improvements is not provided by the comment. Should any plan deficiency be discovered that results in a failure to demonstrate full compliance with Appendix C, an amendment or similar modification to the order may be initiated.</p> <p>Henrico's current cost estimate for the scope of work for upgrades at the plant is over \$96 million, including: Supervisory Control and Data Acquisition (SCADA) System Replacement (\$9,515,000); Clarifier Replacements (\$18,000,000); Filter Renewal Project (\$60,000,000); Return Activated Sludge (RAS) Pump Replacement (\$5,000,000); Pump Station Rehabilitation (Wet Well, Pumps, Controls, Switchgear) (\$1,000,000); and Asset Management Program (\$2,000,000). DEQ expects that the upgrades and replacements will achieve durable compliance and meet or exceed regulatory requirements.</p>

DEQ reviewed and approved Henrico's pretreatment program. The Consent Order does not address pretreatment procedures because the program is currently reported in compliance, corrective actions are targeted at observed non-compliance, and further pretreatment requirements on industrial users of the collection system and the treatment facility are not currently necessary.

The proposed Consent Order does not use the term "better technology;" however, similar upgrades are necessary and implied to achieve durable compliance. Technological compliance tools are included in plant operations such as SCADA technology, hydrologic, and hydraulic computer modeling for planning and operations, pump and pump station technology improvements, odor and corrosion control systems, trenchless sewer lining technology, maintenance system management technology, GIS technology for asset management, and incorporation of redundant energy sources for continuous operations. Henrico added enhanced nutrient removal technology, and reports that it has out-performed assigned total nitrogen and total phosphorus wasteload allocations for the James River and Chesapeake Bay, despite wet weather-related exceedances of TSS and CBOD5 effluent limitations addressed by the proposed order.

Henrico's wastewater treatment facility has operated in compliance since April 2021. While a comprehensive schedule of projects is required pursuant to the proposed Consent Order to promote a long-term sustainable solution, the order also represents a continuing and achievable effort to maintain and sustain compliance. The schedule for the required corrective action is dependent on orderly design and construction, as well as maintaining effective treatment throughout rehabilitation and upgrades.

DEQ is aware that Henrico is separately undertaking an effort to extend wastewater (and water) infrastructure to un-served and under-served properties through, in part, utilization of a SEP, and is attempting to remove private septic systems discharging on-site. This wastewater will be conveyed to the treatment facility for advanced treatment, including nitrogen and phosphorus removal. This effort is consistent with the Commonwealth's Chesapeake Bay TMDL Phase III Watershed Implementation Plan. Although the proposed Consent Order is fully adequate, Henrico has advised DEQ staff that significant changes to the order that increase the estimated cost of projects will jeopardize Henrico's septic system initiative for which funding has been reserved. DEQ supports the septic system initiative and does not favor adding unnecessary costs to the order that could jeopardize the proposed septic project.

Commenters raise concerns about impacts on EJ communities and urges DEQ to consider those

Under the Virginia Environmental Justice Act (2020) states that: "It is the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and



<p>Protection of EJ Community Interests</p>	<p>impacts. Commenters submitted a table of the top 10 SSO events by receiving stream, volume and location, which indicates that half (9.9 million gallons) of the top 10 events occurred in census tracts with a majority of people of color. Commenters presented county-wide maps by census tract illustrating locations of SSOs by total volume, 2010 and 2021 Consent Order projects, people of color population percentiles, and percent low-income.</p>	<p>fenceline communities.” DEQ is actively incorporating this consideration into its oversight responsibilities for the environment and, more specifically, into the Henrico enforcement action. Through this enforcement action, DEQ has actively sought to leverage our enforcement authority by applying the principles contained in the Virginia Environmental Justice Act.</p> <p>The Consent Order is intended to improve the sanitary sewer system performance and reduce overflows throughout Henrico and in areas of particular interest to commenters. DEQ also promotes Henrico’s use of a SEP to extend wastewater (and water) infrastructure to un-served and under-served properties, including the removal of private septic systems discharging on-site.</p>
<p>Public Health Notifications</p>	<p>Commenters request that the Consent Order require Henrico to issue public notices and health advisories of SSO events.</p>	<p>Current reporting requirements were recently updated by the General Assembly, and are set forth in Va. Code §62.1-44.5 (required notification by discharger to DEQ) and §62.1-44.19:6 B (required notification by DEQ to various traditional media, social media, and email lists “when the Virginia Department of Health determines that the discharge may be detrimental to the public health or [DEQ] determines that the discharge may impair beneficial uses of state waters.”</p>
<p>Sewer O&amp;M Plan</p>	<p>Commenters state the current version of the O&amp;M manual for the treatment facility does not address proper O&amp;M procedures for the collection system.</p>	<p>The O&amp;M manual for the treatment facility does not address the collection system; however, Henrico has developed a separate Wastewater Collection System O&amp;M Manual (April 14, 2016).</p>
<p>Pretreatment Requirements</p>	<p>Commenters request an industrial user analysis to determine SSO contribution and consideration of pretreatment program modifications.</p>	<p>DEQ has reviewed and approved Henrico’s pretreatment program, and observes that the program is currently operating in compliance. SSOs associated with peak, wet weather flows are primarily attributable to the aging collection system’s condition and capacity, instead of the limited number (20) of significant industrial users served. The projects and programs included in the proposed Consent Order have been determined to be the most appropriate path to durable compliance. Should information become available indicating pretreatment is a significant factor in SSO events, an amendment or similar modification to the order may be initiated.</p>
<p>Sewer System Plans &amp; Measures</p>	<p>Commenters state that the 2010 Consent Order failed to make a meaningful impact on SSOs and request a sanitary sewer overflow</p>	<p>Henrico has already undertaken the same or similar studies, and implemented the same or similar measures to address SSOs. Requiring completion of these studies again represents a redundant effort resulting in added costs and delay in implementation of</p>

<p>Force Majeure Clause.</p>	<p>characterization report; comprehensive inspection of the collection system; rainfall and flow monitoring; sewershed and pump station repair, replacement, and rehabilitation plans; and fats, oils, and grease control program.</p>	<p>corrective actions. The following studies have informed the enforcement action and course of corrective action:</p> <ul style="list-style-type: none"> <li>Sanitary sewer overflow characterization report: Henrico documents the details of SSOs including causes and remediation efforts, and uses the data in the planning efforts for infrastructure improvements included in the proposed Consent Order.</li> <li>Comprehensive inspection of the collection system: Henrico cleans and inspects the collection system for routine and preventative maintenance purposes, and uses information obtained in inspections to guide maintenance and repair efforts as well as the capital projects included in the proposed Consent Order.</li> <li>Rainfall and flow monitoring: Henrico monitors rainfall and flow at pumping stations and at the treatment facility, and uses this data in its SCADA system for real-time monitoring and guidance for current operations, maintenance, and capital planning.</li> <li>Sewershed and pump station repair, replacement, and rehabilitation plans: Henrico currently uses all of the SSO, condition assessment/inspection, and wet weather monitoring information, as well as comprehensive land use to develop facility plans and associated capital improvement plans.</li> <li>Fats, Oils, and Grease (FOG) control program: Henrico has a program through its Department of Public Utilities Monitoring and Compliance Division and the Department of Building Construction and Inspections to identify, track, and enforce the control/reduction of FOG within the collection system. In addition to regular inspections, follow up investigations/tracking are performed in SSO events to determine and mitigate FOG where applicable.</li> </ul> <p>Rather than repeating the above tasks and possibly delaying the projects included in the proposed Consent Order, DEQ designed the Consent Order to build on these activities and incorporate specific projects at the treatment facility and in the collection system. Sufficient planning is completed to begin the projects identified in the order.</p> <p>Section E, Para. 8 of the Consent Order provides a Force Majeure clause that states in relevant part:</p> <p>Henrico shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on its part. Henrico shall demonstrate that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. Henrico shall notify the DEQ Regional Director</p>
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verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth: a. the reasons for the delay or noncompliance; b. the projected duration of any such delay or noncompliance; c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and d. the timetable by which such measures will be implemented and the date full compliance will be achieved . . .

The force majeure clause is a standard administrative provision in DEQ orders that provides relief to responsible parties when circumstances beyond their control, including floods, arise, and performance is inadvisable, impracticable, illegal or impossible. Force majeure clauses are commonly used in other state and federal jurisdictions, including in EPA's enforcement actions. In practice, force majeure clauses have rare and unique application, and DEQ typically provides relief in the form of an extended schedule of compliance to perform the requirements of an order. In the event the clause is removed from the Consent Order, Henrico would still have legal remedies (e.g. impracticability, frustration of purpose) to seek relief from a catastrophic event. The force majeure clause in Henrico's order benefits both parties insofar as it provides defined terms for a force majeure event.



## MEMORANDUM

To: State Water Control Board Members

From: Melanie D. Davenport; Director, Water Permitting Division  
David L. Davis; Director, Office of Wetlands & Stream Protection  
Steven L. Hardwick, VWP Permit & Compliance Coordinator

RE: Briefing Memorandum for Issuance of a Virginia Water Protection (VWP) Individual Permit  
Mountain Valley Pipeline, revised draft VWP Permit No. 21-0416  
Giles, Craig, Montgomery, Roanoke, Franklin, and Pittsylvania Counties, Virginia

Date: 19 November 2021

Attachments: Responses to Citizen Comments Received During the Public Comment Period  
Revised Draft VWP Individual Permit (changes tracked)  
Revised Permit Fact Sheet

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### I. PROJECT BACKGROUND

#### Project Description

The Mountain Valley Pipeline (MVP) Project is a 42-inch diameter natural gas pipeline approximately 304 miles in length, running from Wetzel County, West Virginia, to Transco Village in Pittsylvania County, Virginia. The portion of the project located within Virginia consists of approximately 107 miles of pipeline and 51 miles of access roads in Giles, Craig, Montgomery, Roanoke, Franklin, and Pittsylvania Counties. Stationing numbers and mileposts (MP) identified on application map entitled Mountain Valley Pipeline Project Spreads 8, 9, 10 & 11, dated July 2018, and Figure 4. Detail Maps 4-525 through 4-786 of the application provide reference points for locations along the pipeline. Figure 5. USACE Norfolk District Wetlands and Waterbodies Overview Map depicts the Project's location in Virginia, including surface waters located within the project's right-of-way.

The portions of this project occurring in uplands are in various states of construction. Generally, the applicant, Mountain Valley Pipeline, LLC (MVP), has cleared right-of-way and installed pipeline in the upland areas that do not require permits to impact surface waters. Many of these areas remain cleared and in a state of temporary stabilization as MVP seeks authorization to install the pipeline across streams and wetlands. MVP previously undertook some surface water impacts in Virginia under its original Nationwide Permit 12 authorization. MVP has installed one wetland and three stream crossings in Montgomery County and two wetland and twenty-one stream crossings in Franklin County. The current Virginia Water Protection (VWP) Permit application is for the remaining impacts to state waters associated with pipeline construction, access roads and support activities. The application proposes 428 total surface water impact locations comprised of 315 temporary stream impact locations, 2 permanent stream impact locations, 72 temporary wetland impact locations, 1 permanent fill wetland impact and 38 permanent conversion wetland impacts.

## Project Purpose

The applicant describes the Project's purpose and need in the narrative attachment to the Joint Permit Application (JPA) titled "Mountain Valley Pipeline Project Individual Permit Application," dated February 2021 and detailed in the Final Environmental Impact Statement (FEIS)<sup>1</sup>. The overall project purpose is to provide natural gas for use by local distribution companies, industrial users, and power-generation facilities in the Mid-Atlantic, southeastern, and Appalachian markets. The Project will also provide markets along the route access natural gas supplies. Specifically, the MVP's purpose is to deliver natural gas to five contracted shippers via a pooling point at Transco Station 165 in Pittsylvania County, Virginia. This entails construction of a 42" natural gas pipeline and associated infrastructure from the new Mobley Interconnect in Wetzel County, West Virginia, to the WB Interconnect in Braxton County, West Virginia; Greene Interconnect in Monroe County, West Virginia; Roanoke Gas Lafayette Tap in Montgomery County, Virginia; the Roanoke Gas Franklin Tap in Franklin County, Virginia; and finally to the existing Transcontinental Gas Pipe Line Company LLC Station 165 in Pittsylvania County, Virginia.

## Summary of Project History

On October 23, 2015, Mountain Valley Pipeline, LLC (MVP) filed an application with the Federal Energy Regulatory Commission (FERC) for authorization, pursuant to section 7(c) of the Natural Gas Act, to construct and operate its proposed Mountain Valley Pipeline Project in West Virginia and Virginia. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA), FERC staff evaluated the potential environmental impacts associated with the construction and operation of the MVP Project in an Environmental Impact Statement (EIS). Numerous federal and state agencies including the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (EPA) and the U.S. Department of the Interior (DOI), Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (USFWS) participated as cooperating agencies. FERC issued the draft EIS for the project on September 16, 2016, addressing the issues raised during the scoping period and up to the point of publication.

In October 2016, after the issuance of the draft EIS, Mountain Valley filed a number of minor route modifications to address recommendations in the draft EIS, avoid sensitive environmental areas, accommodate landowner requests, or for engineering design reasons. FERC issued a Final Environmental Impact Statement (FEIS) for the Mountain Valley Project in June 2017. Mountain Valley submitted a Joint Permit Application to the USACE, Virginia Department of Environmental Quality (DEQ), and Virginia Marine Resources Commission (VMRC) on September 11, 2017.

On January 23, 2018, the USACE Norfolk District issued a letter to Mountain Valley verifying that the Project complied with all conditions of Nationwide Permit 12 (NWP 12), including the Commonwealth's April 7, 2017, conditional 401 water quality certification for the nationwide permit.

Due to significant public concern regarding construction of the pipeline raised during 2016- 2017, DEQ made the decision to require an upland Section 401 Water Quality Certification (upland 401 certification) for the project. This upland 401 certification included additional conditions to address several unique aspects of the project that are not directly regulated by other regulations or permits, including the Virginia

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<sup>1</sup> June 23, 2017, MVP FEIS on FERC's website: <https://www.ferc.gov/final-environmental-impact-statement-mountain-valley-project-and-equitrans-expansion-project>.

Water Protection Program. The upland 401 certification conditions focused on providing 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.

Several parties filed a petition in the U.S. Court of Appeals for the Fourth Circuit challenging the Board's decision to issue the upland 401 certification. Following briefing and oral argument, the court denied the petition. An opinion was issued on August 1, 2018, upholding the State Water Control Board's (SWCB) decision to issue the upland 401 certification (*Sierra Club v. SWCB*, 898 F.3d 383 (4th Cir. 2018)). A number of legal and regulatory events occurred during 2018 that bear on the project history and the status of Project permitting. In the face of continuing opposition and citizen demands, in April 2018, the SWCB directed DEQ to solicit public comment on three issues surrounding the Corps' verification of NWP 12. After the public comment process concluded, the SWCB decided to take no action to amend or modify the 401 certification with respect to MVP's NWP 12 verification.

Also, during 2018, the Virginia General Assembly amended the Code of Virginia to incorporate DEQ's decision to require two 401 water quality certifications for natural gas pipeline projects that have an internal diameter greater than thirty six inches. This law became effective on July 1, 2018. The law also requires these projects to obtain an individual Virginia Water Protection Permit rather than be authorized under a general permit. The Board approved the associated amendments to the Virginia Water Protection Permit Program regulations in September 2018. Additionally, by letter dated October 5, 2018, the USACE suspended MVP's authorization under NWP 12. The suspension was the result of a ruling by the United States Court of Appeals for the Fourth Circuit that vacated the USACE's verification of MVP's compliance with the NWP 12 in West Virginia.

In September 2020, the USACE proposed to re-issue and modify its NWPs, including NWP 12. By letter dated December 21, 2020, DEQ denied 401 water quality certification under the NWP 12 specifically "for any applicant to the Federal Energy Regulatory Commission for a certificate of public convenience and necessity pursuant to § 7c of the federal Natural Gas Act (15 U.S.C. § 717f(c)) to construct any natural gas transmission pipeline greater than 36 inches inside diameter, in which case issuance of a Virginia Water Protection Permit pursuant to this article and a certification issued pursuant to Article 2.6 (§ 62.1-44.15:80 et seq.)."

A detailed project history was also provided by the applicant in Section 1.2 of the Individual Permit Application narrative, Attachment B of the application, and the water quality certification request.

#### Proposed Impacts to Surface Waters

The permit authorizes surface water impacts as listed in the table below:

Impact Type	Surface Water Type	Impact Authorized	
		Square Feet	Linear Feet
Permanent	Palustrine Emergent Wetland (PEM)	1,707	N/A
	Stream Channel	441	63
	<i>Subtotal</i>	<i>2,148</i>	<i>63</i>
Conversion	PFO to PEM	51,826	N/A
	PSS to PEM	32,948	N/A
	<i>Subtotal</i>	<i>84,774</i>	<i>N/A</i>
Temporary	Palustrine Emergent Wetland (PEM)	170,409	N/A
	Stream Channel	152,684	17,065
	<i>Subtotal</i>	<i>323,093</i>	<i>17,065</i>
<b>TOTAL</b>		<b>410,015</b> <b>(9.41 Acres)</b>	<b>17,128</b>

Proposed Compensation

All compensatory mitigation for permanent wetland and stream impacts and wetland conversion impacts have already been completed.

The draft VWP Permit requires the documentation of the purchase of wetland and stream compensation credits. As stated in the Joint Permit Application (JPA), the applicant has already provided compensation for the proposed permanent and conversion wetland impacts through the purchase of 7.1 wetland credits from Banister Bend Farm, LLC Wetland Mitigation Bank in Pittsylvania County, Virginia, purchase agreement dated November 30, 2017. The applicant has already provided compensation for the proposed permanent stream impacts through the purchase of 298 stream credits from Graham and David Mitigation Bank, LLC in Montgomery County, Virginia, purchase agreement dated November 30, 2017.

The applicant has provided documentation of a reserved purchase of 0.014 wetland credits from Thompson Place Stream and Wetland Mitigation Bank in Blacksburg, VA, credit availability letter dated August 17, 2021.

Mitigation banks have several practicable advantages over permittee-responsible mitigation projects, including on-site mitigation:

1. An Interagency Review Team (IRT), with representation from federal, state and local agencies, oversees the planning, monitoring and implementation of mitigation banks in Virginia. IRT members include representatives from U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Agriculture, Virginia Department of Historic Resources, Virginia Institute of Marine Science, DEQ, Virginia Department of Wildlife Resources, Virginia Marine Resources Commission, Virginia Department of Conservation and Recreation, Virginia Department of Forestry, and local governments.
2. The IRT only releases credits from mitigation banks for third party purchase when the IRT agrees that the mitigation activities are meeting certain success criteria or when plans for a successful



bank or fund project have been approved. Financial assurances and Long Term Management Plans are required to ensure that the mitigation bank remains successful in perpetuity.

3. Mitigation is oftentimes in place before impacts are initiated.
4. Current science shows that consolidated mitigation and a watershed approach are ecologically preferable, and typically more successful, as compared to permittee-responsible mitigation.

Wetland or stream compensation is not required for temporary impacts as the temporary impacts are required to be restored to the pre-construction elevation and reseeded or planted to restore a native wetland or riparian vegetation.

The restoration of temporarily impacted surface waters shall be in accordance with the approved stream and wetland restoration plan (*Mitigation Framework*).

### Public Hearings

Due to the significant public interest over the life span of the project and during the previous public comment periods, DEQ held two (2) in-person public hearings regarding the proposed issuance of the draft VWP IP No. 21-0416.

### Draft Permit and Hearing Public Notice

The public notice of the draft VWP permit and two (2) in-person public hearings was published in fourteen (14) newspapers, between August 25, 2021 and August 28, 2021:

- Franklin News Post
- Smyth County News Messenger
- Floyd Press
- Roanoke Times
- Danville Register & Bee
- Chatham Star Tribune
- Southwest Times
- Virginian Leader
- Salem Times Register
- New Castle Record
- Vinton Messenger
- Fincastle Herald
- News Messenger
- Radford News Journal

### Public Hearings

The public hearings were held on September 27, 2021 (Pigg River Community Center, Rocky Mount, VA) and September 28, 2021 (Kyle Hall, Radford University, Radford, VA). Both hearings commenced at 6:00 p.m. EDT, and concluded when all registered speakers had an opportunity to voice their opinions. Both public hearings were held before a quorum of the State Water Control Board. Fifty-four (54) citizens spoke at the September 27, 2021 public hearing, and 49 citizens spoke at the September 28, 2021

public hearing. Transcripts of both public hearings were prepared by a court reporter. Both public hearings were video recorded.

### Draft Permit Public Comments

Written public comments were accepted between 12:00 a.m. EDT on August 28, 2021, and 11:59 p.m. EDT on October 27, 2021 (60-day comment period). Written public comments were received in several formats, including email (to a dedicated DEQ email address or emailed directly to DEQ staff), provided directly to DEQ staff at the public hearings, and direct delivery to DEQ.

As of 11:59 p.m. EDT on October 27, 2021, DEQ received over 7,900 public comments. Of the public comments received during the comment period, approximately 7,500 were form letters.

One hundred and twenty (120) comments were received after the public comment period closed at 11:59 p.m. EDT on October 27, 2021.

During the last two public comment events in 2017 and 2018, surrounding DEQ's actions with regard to the Project, DEQ has repeatedly heard from Project opponents that DEQ and the Board should consider all water body crossings individually; should require certain stream crossings to be bored rather than crossed via open-cut trenching; should deny use of the Nationwide Permit 12 in Virginia; and should require a VWP individual permit for the Project.

- All water body crossings were reviewed by DEQ using a GIS-based evaluation and comments were provided to FERC as part of FERC's draft EIS analysis. Further, all water body crossings were reviewed for this permit application (crossing-specific plan and profile drawings), just as DEQ reviews water body crossings for all linear road and transportation projects and all linear utility projects. While State Water Control Law and VWP permit regulations only require DEQ to review those water body crossings having a five square mile or more drainage area (approximately two dozen crossings meet this criterion for this project), every water body crossing was reviewed regardless of drainage area size. The permit action now before the Board addresses these citizen concerns.
- MVP provided a comprehensive water body crossing construction analysis for every water body crossing. Based on this analysis, 91 crossings will now be performed by subsurface boring methods, which avoids or minimizes impacts to surface waters at these 91 identified crossings. DEQ reviewed this construction analysis, and accepted MVP's results and conclusions. The permit action now before the Board addresses these citizen concerns.
- DEQ denied Section 401 water quality certification for the Corps' Nationwide 12 reauthorization in December 2020 for projects such as this one. Due to a number of legal and regulatory reasons at the federal level and due to DEQ's December 2020 Nationwide 12 Section 401 certification denial for projects such as this one, MVP submitted a JPA for an individual Section 404 permit from the Corps and an individual VWP permit from DEQ in 2021. The permit action now before the Board addresses these citizen concerns.
- State Water Control Law was amended by the Virginia General Assembly in 2018 to require an individual VWP permit for FERC-regulated natural gas transmission line projects having an inside

pipe diameter greater than 36 inches. The permit action now before the Board addresses these citizen concerns.

Even as the Board is receiving a thorough account of the efforts made by DEQ to address many, if not all, of these comments, a large number of comments were received that disagree with the methods used for evaluations, the revisions made to crossing methods, and issuance of the draft VWP individual permit now before the Board.

#### Status of U.S. Army Corps of Engineers Individual Permit

The applicant must also obtain an individual permit from the Corps for proposed impacts to Waters of the United States associated with this proposed project. The Corps held a 30-day public comment period between March 29 and April 28, 2021. We understand that many of the comments received by the Corps during their public comment period were identical or similar to those comments received by DEQ for this draft VWP permit. As of November 19, 2021, the Corps has not issued a final permit for this project.

## **II. SUMMARY OF COMMENTS DURING PUBLIC COMMENT PERIOD**

Attached to this memorandum is staff responses to comments received during the 60-day public comment period.

## **III. SUMMARY OF CHANGES TO DRAFT PERMIT IN REPOSE TO CITIZEN COMMENTS**

Staff included the permit conditions below in the *public noticed draft VWP individual permit*. These conditions were developed to protect instream beneficial uses, to ensure compliance with applicable water quality standards, to prevent significant impairment of state waters or fish and wildlife resources, to provide for no net loss of wetland acreage, and to provide no net loss of functions in all surface waters through compensatory mitigation and monitoring and reporting. Section numbers and letters below refer to those sections in the draft VWP permit that was public noticed between August 25, 2021, and August 28, 2021.

### **Part I – Special Conditions**

#### **A. Authorized Activities**

1. DEQ authorizes the acreage and linear feet of surface water impacts identified in **Table 1 Stream Impacts**, and **Table 2 Wetland Impacts**, attached to this permit in Appendix 1.
2. The permittee shall conduct authorized activities as described in the Joint Permit Application dated February 19, 2021, and received March 1, 2021, and supplemental materials, revisions and clarifications received through August 18, 2021. Any changes to the authorized activities or impacts map that affect permitted areas shall be submitted to DEQ immediately upon determination that changes are necessary, and DEQ approval shall be required prior to implementing the changes.
3. The permit authorizes the temporary use of mechanical equipment in surface waters in accordance with all applicable permit conditions.

4. The permittee shall notify DEQ of any changes in authorized impacts to surface waters or any changes to the design or type of construction activities in surface waters authorized by this permit. DEQ approval shall be required prior to implementing the changes. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit.

## **B. Permit Term**

1. This permit is valid for **ten (10) years** from the date of issuance. An extension of this permit term or a new permit may be necessary for the continuance of the authorized activities or any permit requirement that has not been completed, including compensation provisions. The permit term, including any granted extensions, shall not exceed 15 years.
2. The permittee shall notify DEQ in writing at least 180 calendar days prior to the expiration of this permit if reissuance will be requested.

## **C. Standard Project Conditions**

1. The activities authorized by this permit shall be executed in such a manner that any impacts to beneficial uses are minimized. As defined in § 62.1-44.3 of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, cultural and aesthetic values is an instream beneficial use of Virginia's waters. Offstream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural uses, electric power generation, commercial, and industrial uses.
2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water.
3. Flows downstream of the project area shall be maintained to protect all uses.
4. No activity shall cause more than minimal adverse effect on navigation,.
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. Except for temporary impacts authorized by this permit, continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures as approved in the stream and wetland restoration plan.
7. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity.
8. All in-stream activities shall be conducted during low-flow conditions whenever practicable.

9. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls shall be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls shall remain in place until the area is stabilized and removal of such controls is authorized by permittee's Annual Standards and Specifications.
10. 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, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters.
11. All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
12. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
13. Stream channel restoration activities shall be conducted in the dry or during low flow conditions. When site conditions prohibit access from the streambank or upon prior authorization from the Department of Environmental Quality, heavy equipment may be authorized for use within the stream channel. The equipment shall be stationed on cobble bars.
14. 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. Mats, fabrics, or other measures shall be removed as soon as the work is complete in the temporarily impacted wetland.
15. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
16. All non-impacted surface waters and any required buffers associated 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*.
17. All required notifications and submittals shall include project name and permit number and be submitted electronically to [steven.hardwick@deq.virginia.gov](mailto:steven.hardwick@deq.virginia.gov) or mailed to the DEQ office stated below, to the attention of the VWP project manager, unless directed in writing by DEQ subsequent to the issuance of this permit: Department of Environmental Quality, Central Office, P.O. Box 1105, Richmond, Virginia 23218
18. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.

- a. The authorization is made in writing by the permittee.
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

19. All submittals shall contain the following signed certification statement:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

20. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at 540-562-6700. If DEQ cannot be reached, the spill or fish kill shall be reported to the Virginia Department of Emergency Management (VDEM) at [1-800-468-8892](tel:1-800-468-8892) or the National Response Center (NRC) at [1-800-424-8802](tel:1-800-424-8802). Any spill of oil as defined in § 62.1-44.34:14 of the Code of Virginia that is less than 25 gallons and that reaches, or that is expected to reach, land only is not reportable, if recorded per § 62.1-44.34:19.2 of the Code of Virginia and if properly cleaned up.
21. DEQ shall be notified in writing within 24 hours or as soon as possible on the next business day when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

**D. Installation of Utilities and Temporary Impacts**

1. This pipelines project is subject to § 62.1-44.15:21 J 2 and shall be constructed in a manner that minimizes temporary and permanent impacts to state waters and protects water quality to the maximum extent practicable, including by the use of applicable best management practices that the Board determines to be necessary to protect water quality.
2. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with this Permit and the approved stream and wetland restoration plan, unless otherwise authorized by this permit.
3. 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.
4. 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).

5. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.
6. 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, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 90 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state in accordance with the a stream and wetland restoration plan to be approved by the Department.
7. Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials.
8. All temporarily disturbed wetland areas shall be restored to their original elevations and contours. The restoration work shall be completed as approved by DEQ in the stream and wetland restoration plan.
9. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours. The restoration work shall be completed as approved by DEQ in the stream and wetland restoration plan.
10. Submit a stream and wetland restoration plan (Plan) to DEQ for review and approval prior to initiation of construction activities in wetlands or stream channels. The Plan shall be approved by DEQ in writing prior to initiating impacts authorized by this Permit. The Plan shall establish site-specific methodologies and requirements sufficient to demonstrate successful restoration of temporarily impacted streams and wetlands to pre-construction conditions. The Plan shall include:
  - a. A pre-construction wetland and stream assessment, including contours, elevations, stream geomorphology, vegetation survey and other information sufficient to establish baseline conditions at each temporary impact area;
  - b. Temporary impact area restoration methods;
  - c. Re-vegetation plan;
  - d. Criteria for successful restoration;
  - e. A monitoring schedule and report format to document attainment of success criteria;
  - f. A corrective action strategy for areas not meeting the success criteria; and,
  - g. A supplemental compensatory mitigation strategy addressing temporal loss of stream and wetland functions.

#### **E. Wildlife Resources**

1. The permittee shall implement the time of year restrictions (TOYR) on in-stream construction that have been approved by the Virginia Department of Wildlife Resources (VDWR), and conditions approved by the Virginia Department of Conservation and Recreation (VDCR) as specified in Table 3, and attached to this permit in Appendix 2. The permittee shall notify the Department within three business days of any subsequent revisions or addenda to Table 3 that are approved or required by VDWR and/or VDCR and shall post the most current information on their website at <https://www.mountainvalleypipeline.info/news-info/>. TOYR and coordination not necessary if constructed via bore.

#### **F. Stream Modifications, Including Intake/Outfall Structures**

1. Redistribution of existing stream substrate for erosion control purposes is prohibited.
2. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized in this permit.
3. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.
4. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to surface waters to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
5. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.

#### **G. Road Crossings**

1. Access roads authorized by this permit shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations.
2. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheetpiling, stream diversions or other similar structures.
3. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the removal of that particular temporary crossing. Temporary access roads shall be removed entirely following activity completion.
4. At crossings of streams S-H42 (VWP No. S-314) and S-IJ16a (VWP No. S-60), pipes and culverts must be installed to maintain low flow conditions and shall be countersunk at both inlet and outlet ends of the pipe or culvert, unless otherwise specifically approved by the Department of Environmental Quality on a case-by-case basis, and as follows: The requirement to countersink does not apply to extensions or maintenance of existing pipes and culverts that are not countersunk, floodplain pipes and culverts being placed above ordinary high water, pipes and culverts being placed on bedrock, or pipes and culverts required to be placed on slopes 5.0% or greater. Bedrock



encountered during construction must be identified and approved in advance of a design change where the countersunk condition cannot be met. Pipes and culverts 24 inches or less in diameter shall be countersunk three inches below the natural stream bed elevations, and pipes and culverts greater than 24 inches shall be countersunk at least six inches below the natural stream bed elevations. Hydraulic capacity shall be determined based on the reduced capacity due to the countersunk position. In all stream crossings appropriate measures shall be implemented to minimize any disruption of aquatic life movement.

5. When countersinking culverts in streams, the permittee shall install the structure and any riprap or ancillary features in a manner to ensure reestablishment of the stream channel within 15 days post construction. When installing culverts in any surface water, the permittee shall install the culvert and ancillary features in a manner that will maintain the pre-construction hydrologic regime. Surface water depth within the impact area shall be consistent with depths upstream and downstream of the impact area.
6. Stream bottom elevations at road crossings shall be measured at the inlet and outlet of the proposed structure and recorded prior to construction and within one week after the completion of construction to ensure that the design elevations were met. This information shall be recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* completed after the crossing is installed.

#### **H. Stormwater Management Structures**

1. The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriate outlet protection approved by the Virginia Stormwater Management Program Authority.
2. Maintenance excavation of best management practices shall follow the stormwater management facilities maintenance agreement approved by the Virginia Stormwater Management Program Authority, and, for best management practices constructed in surface waters, shall not exceed the original contours or designated maintenance areas of the facility.
3. Draining of a stormwater management facility shall be performed by a method that prevents downstream sediment deposition, erosion, or scour.

#### **I. Project Construction Monitoring and Submittals (Impact Sites)**

1. The permittee shall submit written notification at least **thirty (30) calendar days** prior to the initiation of land disturbance or construction activities in permitted areas. The notification shall include preconstruction photographs, projected schedule for initiating and completing work at each permitted impact area.
  - a. Preconstruction photographs shall be taken at each impact area prior to initiation of activities within impact areas.
  - b. Photographs shall depict the impact area and the nonimpacted surface waters immediately adjacent to and downgradient of each impact area.

- c. Each photograph shall be labeled to include the following information: permit number, impact area number, date and time of the photograph, name of the person taking the photograph, photograph orientation, and photograph subject description.
2. Site inspections shall be conducted **once every calendar month** and recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* by the permittee or the permittee's qualified designee during active construction within authorized surface water impact areas. Monthly inspections shall be conducted by the permittee's environmental inspectors in the following areas within the approved limits-of-disturbance: all authorized permanent and temporary impact areas; all avoided surface waters, including wetlands, stream channels, and open water; surface water areas within 50 feet of any land disturbing activity; and all on-site areas designated for permanent preservation. The *Monthly VWP Permit Inspection Checklist (Attachment 2)* shall be completed in its entirety for each monthly inspection and shall be kept on-site and made available for review by DEQ staff upon request during normal business hours.
3. The *VWP Permit Construction Status Update Form (Attachment 1)* enclosed with this permit shall be completed in June and December of every year for the duration of this permit. The *VWP Permit Construction Status Update Form (Attachment 1)* shall include reference to the VWP permit authorization number and one of the following statements for each authorized surface water impact location:
  - a. Construction activities not yet started;
  - b. Construction activities started;
  - c. Construction activities started but are currently inactive, or;
  - d. Construction activities complete.
4. The *VWP Permit Construction Status Update Form (Attachment 1)* shall be submitted and must be received by DEQ no later than January 10 and July 10 of every year.
5. The permittee shall notify DEQ within 24 hours of discovering impacts to surface waters including wetlands, stream channels, and open water that are not authorized by this permit. The notification shall include photographs, estimated acreage and/or linear footage of impacts, and a description of the impacts.
6. The permittee shall submit written notification of completion within 30 calendar days after the completion of all activities in all permitted impact areas authorized under this permit.

## J. Compensatory Mitigation

1. The Joint Permit Application provides documentation of compensatory mitigation for wetland and stream crossings. The applicant has provided compensation for the proposed permanent and conversion wetland impacts through the purchase of 7.1 wetland credits from Bannister Bend Farm, LLC Wetland Mitigation Bank in Pittsylvania County, Virginia, purchase agreement dated November 30, 2017. The permittee has provided compensation for the proposed permanent stream

impacts through the purchase of 298 stream credits from Graham and David Mitigation Bank, LLC in Montgomery County, Virginia, purchase agreement dated November 30, 2017. The applicant has provided documentation of a reserved purchase of 0.014 wetland credits from Thompson Place Stream and Wetland Mitigation Bank in Blacksburg, VA, credit availability letter dated August 17, 2021.

2. To fulfill any additional mitigation requirements of this permit in accordance with 9VAC25-210 et seq. and § 62.1-44.15:23 of the Code of Virginia, the permittee shall first purchase available mitigation bank released credits. The permittee shall then fulfill its remaining credit obligation through the purchase of released mitigation credits from an ILF program. The permittee shall then fulfill its remaining credit obligation through the purchase of advance mitigation credits from an ILF program.

If the permittee proposes to purchase credits from an ILF program, no more than 45 days prior to initiating work within impact areas authorized by the permit, the permittee shall determine the availability of any mitigation bank released credits with a service area that covers the project and submit its proposed mitigation credit sources to DEQ for approval. Within 15 calendar days of receipt, DEQ shall review and provide any objections to the proposal, or the proposal shall be deemed approved.

#### **K. Other Regulatory Actions**

1. This permit incorporates by reference the conditions set forth in Section IV(b)(2) and Section IV(c) of the Consent Decree between Mountain Valley Pipeline, LLC and DEQ, dated December 11, 2019, requiring:
  - a. An Environmental Auditor approved by DEQ to monitor stream and wetland crossing activities;
  - b. An independent report submitted to DEQ by the Auditor within fourteen days after the completion of each wetland or waterbody crossing describing instream biological conditions;
  - c. Posting of the report to the permittee's webpage;
  - d. Forty-eight hour advance notice to DEQ before any stream or wetland crossing activity.
2. This permit incorporates by reference all conditions of the latest DEQ approved revision of the Annual Standards and Specifications pertaining to work within and around wetlands and streams.
3. This permit incorporates by reference all requirements of the latest revisions of the DEQ approved Erosion and Sediment Control General Details, Erosion and Sediment Control Narrative, and Erosion and Sediment Control Plan drawings that pertain to work within and around wetlands and stream crossings.

Staff revised the following draft VWP individual permit conditions for clarification and/or to address citizen comments. Section numbers and letters below refer to those sections in the revised draft VWP permit.

#### **C. Standard Project Conditions**

6. Except for temporary impacts authorized by this permit, continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures as approved in the stream and wetland restoration plan (*Mitigation Framework*).
7. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity. Any dredge material dewatering area shall be of adequate size to contain the dredge material and to allow for adequate dewatering and settling out of sediment prior to discharge back into state waters. Runoff from precipitation shall be diverted around the dewatering area.

**D. Installation of Utilities and Temporary Impacts**

2. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with this Permit, Virginia Water Protection Permit regulations, and the approved stream and wetland restoration plan (*Mitigation Framework*), unless otherwise authorized by this permit.
6. All materials (including fill, construction debris and materials, 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, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 90 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state in accordance with the a stream and wetland restoration plan (*Mitigation Framework*) to be approved by the Department.
8. All temporarily disturbed wetland areas shall be restored to their original elevations and contours. The restoration work shall be completed as approved by DEQ in the stream and wetland restoration plan (*Mitigation Framework*).
9. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours. All temporarily impacted wetlands shall be restored to their pre-construction conditions. The restoration work, as defined in 9VAC25-210-10, shall be completed as approved by DEQ in the stream and wetland restoration plan (*Mitigation Framework*). The *Mitigation Framework* shall be approved by DEQ in writing prior to initiating impacts authorized by this Permit. Any revisions to the *Mitigation Framework* shall be submitted for DEQ review and approval prior to implementing the revision(s). The *Mitigation Framework* shall include:
10. ~~Submit a stream and wetland restoration plan (Plan) to DEQ for review and approval prior to initiation of construction activities in wetlands or stream channels. The Plan shall be approved by DEQ in writing prior to initiating impacts authorized by this Permit. The Plan shall establish site-specific methodologies and requirements sufficient to demonstrate successful restoration of temporarily impacted streams and wetlands to pre-construction conditions. The Plan shall include:~~
  - a. A pre-construction wetland and stream assessment, including contours, elevations, stream geomorphology, vegetation survey and other information sufficient to establish baseline conditions at each temporary impact area;
  - b. Temporary impact area restoration methods;
  - c. Re-vegetation plan;
  - d. Criteria for successful restoration;
  - e. A monitoring schedule and report format to document attainment of success criteria;

- f. A corrective action strategy for areas not meeting the success criteria; and,
- g. A supplemental compensatory mitigation strategy addressing temporal loss of stream and wetland functions.

**E. Wildlife Resources**

1. The permittee shall implement the time of year restrictions (TOYR) on in-stream construction that have been recommended and approved by the Virginia Department of Wildlife Resources (VDWR), and conditions recommended and approved by the Virginia Department of Conservation and Recreation (VDCR) as specified in Table 3, and attached to this permit in Appendix 2. The permittee shall notify the Department within three business days of any subsequent revisions or addenda to Table 3 that are approved or required by VDWR and/or VDCR and shall post the most current information on their website at <https://www.mountainvalleypipeline.info/news-info/>. TOYR and coordination are not necessary if ~~constructed~~ construction is conducted via ~~bore~~boring, unless an instream impact is associated with the boring.

**J. Compensatory Mitigation**

2. To fulfill any additional mitigation requirements of this permit in accordance with 9VAC25-210 et seq. and § 62.1-44.15:23 of the Code of Virginia, the permittee shall first purchase available mitigation bank released credits. The permittee shall then fulfill its remaining credit obligation through the purchase of released mitigation credits from an ILF program. The permittee shall then fulfill its remaining credit obligation through the purchase of advance mitigation credits from an ILF program.

If the permittee proposes to purchase credits from an ILF program, no more than 45 days prior to initiating work within impact areas authorized by the permit, the permittee shall determine the availability of any mitigation bank released credits with a service area that covers the project and submit its proposed mitigation credit sources to DEQ for approval. Within 15 calendar days of receipt, DEQ shall review and provide any objections to the proposal, or the proposal shall be deemed approved.

Documentation of the purchase of any required mitigation credits shall be submitted to and received by DEQ prior to initiating work in the impact areas authorized by this permit.

For the period ending December 31 of each calendar year, the permittee shall submit to DEQ by January 15th a summary of the amount of surface water impacts initiated; the amount of compensation completed and compensation requirement remaining; the status of initiating any remaining surface water impacts; and the status of completing any remaining compensation requirement.

**K. Other Regulatory Actions**

- 2. This permit incorporates by reference all conditions of the ~~latest~~any DEQ approved revision of the Annual Standards and Specifications pertaining to work within and around wetlands and streams.
- 3. This permit incorporates by reference all ~~requirements~~conditions of the ~~latest~~any DEQ approved revisions of the ~~DEQ approved~~to the Erosion and Sediment Control General Details, Erosion and

Sediment Control Narrative, and Erosion and Sediment Control Plan drawings that pertain to work within and around wetlands and stream crossings.

#### **IV. STAFF CONTACT INFORMATION**

Please let any of us know if you have questions or if you would like additional information.

Melanie D. Davenport  
Director, Division of Water Permitting  
(804) 698-4038  
[melanie.davenport@deq.virginia.gov](mailto:melanie.davenport@deq.virginia.gov)

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Steven L. Hardwick  
VWP Permit & Compliance Coordinator  
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**VWP Individual Permit Number 21-0416**

**Effective Date: Month DD, YYYY**

**Expiration Date: Month DD, YYYY**

**VIRGINIA WATER PROTECTION PERMIT ISSUED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT**

In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the board has not taken into consideration the structural stability of any proposed activities.

**Permittee:** Mountain Valley Pipeline, LLC

**Address:** 2200 Energy Drive, Canonsburg, PA 15317

**Project Name:** Mountain Valley Pipeline Project

**Project Location:** In Virginia, the project consists of approximately 107 miles of pipeline and 51 miles of access roads in Giles, Craig, Montgomery, Roanoke, Franklin, and Pittsylvania Counties.

**Project Description:** The permittee is constructing a 42-inch diameter natural gas pipeline approximately 304 miles in length, running from Wetzel County, West Virginia to Transco Village in Pittsylvania County, Virginia. The portion of the project located within Virginia consists of approximately 107 miles of pipeline and 51 miles of access roads in Giles, Craig, Montgomery, Roanoke, Franklin, and Pittsylvania Counties. Permitted activities shall be conducted as described in the Joint Permit Application dated February 19, 2021, received on March 1, 2021, and supplemental materials, revisions and clarifications received through August 17, 2021.

**Authorized Surface Water Impacts:**

This permit authorizes the surface water impacts identified in **Table 1 Stream Impacts**, and **Table 2 Wetland Impacts**, attached to this permit in Appendix 1. In summary, this permit authorizes a total of 9.41 acres of impacts to surface waters consisting of 5.90 acres of wetlands and 3.51 acres (17,128 linear feet) of streams.

Impact Type	Surface Water Type	Impact Authorized	
		Square Feet	Linear Feet
Permanent	Palustrine Emergent Wetland (PEM)	1,707	N/A
	Stream Channel	441	63
	<i>Subtotal</i>	<i>2,148</i>	<i>63</i>
Conversion	PFO to PEM	51,826	N/A
	PSS to PEM	32,948	N/A
	<i>Subtotal</i>	<i>84,774</i>	<i>N/A</i>
Temporary	Palustrine Emergent Wetland (PEM)	170,409	N/A
	Stream Channel	152,684	17,065
	<i>Subtotal</i>	<i>323,093</i>	<i>17,065</i>
<b>TOTAL</b>		<b>410,015</b> <b>(9.41 Acres)</b>	<b>17,128</b>

Authorized surface water impacts shall be as depicted on the materials provided in the application as Attachment H-3, entitled Virginia Plan and Profile Crossing Drawings, and Attachment B, entitled Table B-1 Virginia Stream Impacts, and Table B-2 Virginia Wetland Impacts, dated February 22, 2021 with latest revision date of May 14, 2021, received May 14, 2021.

**Approved Compensation:**

The Joint Permit Application provides documentation of compensatory mitigation for wetland and stream crossings. The applicant has provided compensation for the proposed permanent and conversion wetland impacts through the purchase of 7.1 wetland credits from ~~Banister~~ Banister Bend Farm, LLC Wetland Mitigation Bank in Pittsylvania County, Virginia, purchase agreement dated November 30, 2017. The permittee has provided compensation for the proposed permanent stream impacts through the purchase of 298 stream credits from Graham and David Mitigation Bank, LLC in Montgomery County, Virginia, purchase agreement dated November 30, 2017. The applicant has provided documentation of a reserved purchase of 0.014 wetland credits from Thompson Place Stream and Wetland Mitigation Bank in Blacksburg, VA, credit availability letter dated August 17, 2021. The Applicant has provided the Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework that addresses restoration of temporarily impacted areas.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, Part II - General Conditions, Appendix 1, and Appendix 2.



[Name], Regional Director

Date

**Part I – Special Conditions [Tracked Changes – November 18, 2021]**

**A. Authorized Activities**

1. DEQ authorizes the acreage and linear feet of surface water impacts identified in **Table 1 Stream Impacts**, and **Table 2 Wetland Impacts**, attached to this permit in Appendix 1.
2. The permittee shall conduct authorized activities as described in the Joint Permit Application dated February 19, 2021, and received March 1, 2021, and supplemental materials, revisions and clarifications received through August 18, 2021. Any changes to the authorized activities or impacts map that affect permitted areas shall be submitted to DEQ immediately upon determination that changes are necessary, and DEQ approval shall be required prior to implementing the changes.
3. The permit authorizes the temporary use of mechanical equipment in surface waters in accordance with all applicable permit conditions.
4. The permittee shall notify DEQ of any changes in authorized impacts to surface waters or any changes to the design or type of construction activities in surface waters authorized by this permit. DEQ approval shall be required prior to implementing the changes. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit.

**B. Permit Term**

1. This permit is valid for **ten (10) years** from the date of issuance. An extension of this permit term or a new permit may be necessary for the continuance of the authorized activities or any permit requirement that has not been completed, including compensation provisions. The permit term, including any granted extensions, shall not exceed 15 years.
2. The permittee shall notify DEQ in writing at least 180 calendar days prior to the expiration of this permit if reissuance will be requested.

**C. Standard Project Conditions**

1. The activities authorized by this permit shall be executed in such a manner that any impacts to beneficial uses are minimized. As defined in § 62.1-44.3 of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, cultural and aesthetic values is an instream beneficial use of Virginia's waters. Offstream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural uses, electric power generation, commercial, and industrial uses.

2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water.
3. Flows downstream of the project area shall be maintained to protect all uses.
4. No activity shall cause more than minimal adverse effect on navigation,...
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. Except for temporary impacts authorized by this permit, continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures as approved in the stream and wetland restoration plan (*Mitigation Framework*).
7. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity. Any dredge material dewatering area shall be of adequate size to contain the dredge material and to allow for adequate dewatering and settling out of sediment prior to discharge back into state waters. Runoff from precipitation shall be diverted around the dewatering area.
8. All in-stream activities shall be conducted during low-flow conditions whenever practicable.
9. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls shall be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls shall remain in place until the area is stabilized and removal of such controls is authorized by permittee's Annual Standards and Specifications.
10. 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, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters.
11. All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
12. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
13. Stream channel restoration activities shall be conducted in the dry or during low flow conditions. When site conditions prohibit access from the streambank or upon prior authorization from the Department of Environmental Quality, heavy equipment may be authorized for use within the stream channel. The equipment shall be stationed on cobble bars.
14. 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

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maximum extent practical. Mats, fabrics, or other measures shall be removed as soon as the work is complete in the temporarily impacted wetland.

15. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
16. All non-impacted surface waters and any required buffers associated 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*.
17. All required notifications and submittals shall include project name and permit number and be submitted electronically to [steven.hardwick@deq.virginia.gov](mailto:steven.hardwick@deq.virginia.gov) or mailed to the DEQ office stated below, to the attention of the VWP project manager, unless directed in writing by DEQ subsequent to the issuance of this permit: Department of Environmental Quality, Central Office, P.O. Box 1105, Richmond, Virginia 23218
18. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.
  - a. The authorization is made in writing by the permittee.
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
19. All submittals shall contain the following signed certification statement:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*
20. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at 540-562-6700. If DEQ cannot be reached, the spill or fish kill shall be reported to the Virginia Department of Emergency Management (VDEM) at [1-800-468-8892](tel:1-800-468-8892) or the National Response Center (NRC) at [1-800-424-8802](tel:1-800-424-8802). Any spill of oil as defined in § 62.1-44.34:14 of the Code of

Virginia that is less than 25 gallons and that reaches, or that is expected to reach, land only is not reportable, if recorded per § 62.1-44.34:19.2 of the Code of Virginia and if properly cleaned up.

21. DEQ shall be notified in writing within 24 hours or as soon as possible on the next business day when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

**D. Installation of Utilities and Temporary Impacts**

1. This pipelines project is subject to § 62.1-44.15:21 J 2 and shall be constructed in a manner that minimizes temporary and permanent impacts to state waters and protects water quality to the maximum extent practicable, including by the use of applicable best management practices that the Board determines to be necessary to protect water quality.
2. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with this Permit, Virginia Water Protection Permit regulations, and the approved stream and wetland restoration plan (Mitigation Framework), unless otherwise authorized by this permit.
3. 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.
4. 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).
5. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.
6. All materials (including fill, construction debris and materials, 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, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 90 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state in accordance with the a stream and wetland restoration plan (Mitigation Framework) to be approved by the Department.
7. Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials.
8. All temporarily disturbed wetland areas shall be restored to their original elevations and contours. The restoration work shall be completed as approved by DEQ in the stream and wetland restoration plan (Mitigation Framework).

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9. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours. All temporarily impacted wetlands shall be restored to their pre-construction conditions. The restoration work, as defined in 9VAC25-210-10, shall be completed as approved by DEQ in the stream and wetland restoration plan (Mitigation Framework). The Mitigation Framework shall be approved by DEQ in writing prior to initiating impacts authorized by this Permit. Any revisions to the Mitigation Framework shall be submitted for DEQ review and approval prior to implementing the revision(s). The Mitigation Framework shall include:

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10. Submit a stream and wetland restoration plan (Plan) to DEQ for review and approval prior to initiation of construction activities in wetlands or stream channels. The Plan shall be approved by DEQ in writing prior to initiating impacts authorized by this Permit. The Plan shall establish site specific methodologies and requirements sufficient to demonstrate successful restoration of temporarily impacted streams and wetlands to pre-construction conditions. The Plan shall include:

- a. A pre-construction wetland and stream assessment, including contours, elevations, stream geomorphology, vegetation survey and other information sufficient to establish baseline conditions at each temporary impact area;
- b. Temporary impact area restoration methods;
- c. Re-vegetation plan;
- d. Criteria for successful restoration;
- e. A monitoring schedule and report format to document attainment of success criteria;
- f. A corrective action strategy for areas not meeting the success criteria; and,
- g. A supplemental compensatory mitigation strategy addressing temporal loss of stream and wetland functions.

**E. Wildlife Resources**

4. The permittee shall implement the time of year restrictions (TOYR) on in-stream construction that have been recommended and approved by the Virginia Department of Wildlife Resources (VDWR), and conditions recommended and approved by the Virginia Department of Conservation and Recreation (VDCR) as specified in Table 3, and attached to this permit in Appendix 2. The permittee shall notify the Department within three business days of any subsequent revisions or addenda to Table 3 that are approved or required by VDWR and/or VDCR and shall post the most current information on their website at <https://www.mountainvalleypipeline.info/news-info/>. TOYR and coordination are not necessary if constructed construction is conducted via core boring, unless the stream impact is associated with the boring.

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**F. Stream Modifications, Including Intake/Outfall Structures**

1. Redistribution of existing stream substrate for erosion control purposes is prohibited.
2. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized in this permit.
3. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.
4. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to surface waters to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
5. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.

**G. Road Crossings**

1. Access roads authorized by this permit shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations.
2. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheetpiling, stream diversions or other similar structures.
3. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the removal of that particular temporary crossing. Temporary access roads shall be removed entirely following activity completion.
4. At crossings of streams S-H42 (VWP No. S-314) and S-IJ16a (VWP No. S-60), pipes and culverts must be installed to maintain low flow conditions and shall be countersunk at both inlet and outlet ends of the pipe or culvert, unless otherwise specifically approved by the Department of Environmental Quality on a case-by-case basis, and as follows: The requirement to countersink does not apply to extensions or maintenance of existing pipes and culverts that are not countersunk, floodplain pipes and culverts being placed above ordinary high water, pipes and culverts being placed on bedrock, or pipes and culverts required to be placed on slopes 5.0% or greater. Bedrock encountered during construction must be identified and approved in advance of a design change where the countersunk condition cannot be met. Pipes and culverts 24 inches or less in diameter shall be countersunk three inches below the natural stream bed elevations, and pipes and culverts greater than 24 inches shall be countersunk at least six inches below the natural stream bed elevations. Hydraulic capacity shall be determined based on the reduced capacity due to the

countersunk position. In all stream crossings appropriate measures shall be implemented to minimize any disruption of aquatic life movement.

5. When countersinking culverts in streams, the permittee shall install the structure and any riprap or ancillary features in a manner to ensure reestablishment of the stream channel within 15 days post construction. When installing culverts in any surface water, the permittee shall install the culvert and ancillary features in a manner that will maintain the pre-construction hydrologic regime. Surface water depth within the impact area shall be consistent with depths upstream and downstream of the impact area.
6. Stream bottom elevations at road crossings shall be measured at the inlet and outlet of the proposed structure and recorded prior to construction and within one week after the completion of construction to ensure that the design elevations were met. This information shall be recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* completed after the crossing is installed.

#### H. Stormwater Management Structures

1. The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriate outlet protection approved by the Virginia Stormwater Management Program Authority.
2. Maintenance excavation of best management practices shall follow the stormwater management facilities maintenance agreement approved by the Virginia Stormwater Management Program Authority, and, for best management practices constructed in surface waters, shall not exceed the original contours or designated maintenance areas of the facility.
3. Draining of a stormwater management facility shall be performed by a method that prevents downstream sediment deposition, erosion, or scour.

#### I. Project Construction Monitoring and Submittals (Impact Sites)

1. The permittee shall submit written notification at least **thirty (30) calendar days** prior to the initiation of land disturbance or construction activities in permitted areas. The notification shall include preconstruction photographs, projected schedule for initiating and completing work at each permitted impact area.
  - a. Preconstruction photographs shall be taken at each impact area prior to initiation of activities within impact areas.
  - b. Photographs shall depict the impact area and the nonimpacted surface waters immediately adjacent to and downgradient of each impact area.
  - c. Each photograph shall be labeled to include the following information: permit number, impact area number, date and time of the photograph, name of the person taking the photograph, photograph orientation, and photograph subject description.



2. Site inspections shall be conducted **once every calendar month** and recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* by the permittee or the permittee's qualified designee during active construction within authorized surface water impact areas. Monthly inspections shall be conducted by the permittee's environmental inspectors in the following areas within the approved limits-of-disturbance: all authorized permanent and temporary impact areas; all avoided surface waters, including wetlands, stream channels, and open water; surface water areas within 50 feet of any land disturbing activity; and all on-site areas designated for permanent preservation. The *Monthly VWP Permit Inspection Checklist (Attachment 2)* shall be completed in its entirety for each monthly inspection and shall be kept on-site and made available for review by DEQ staff upon request during normal business hours.
3. The *VWP Permit Construction Status Update Form (Attachment 1)* enclosed with this permit shall be completed in June and December of every year for the duration of this permit. The *VWP Permit Construction Status Update Form (Attachment 1)* shall include reference to the VWP permit authorization number and one of the following statements for each authorized surface water impact location:
  - a. Construction activities not yet started;
  - b. Construction activities started;
  - c. Construction activities started but are currently inactive, or;
  - d. Construction activities complete.
4. The *VWP Permit Construction Status Update Form (Attachment 1)* shall be submitted and must be received by DEQ no later than January 10 and July 10 of every year.
5. The permittee shall notify DEQ within 24 hours of discovering impacts to surface waters including wetlands, stream channels, and open water that are not authorized by this permit. The notification shall include photographs, estimated acreage and/or linear footage of impacts, and a description of the impacts.
6. The permittee shall submit written notification of completion within 30 calendar days after the completion of all activities in all permitted impact areas authorized under this permit.

**J. Compensatory Mitigation**

1. The Joint Permit Application provides documentation of compensatory mitigation for wetland and stream crossings. The applicant has provided compensation for the proposed permanent and conversion wetland impacts through the purchase of 7.1 wetland credits from ~~Bannister~~Banister Bend Farm, LLC Wetland Mitigation Bank in Pittsylvania County, Virginia, purchase agreement dated November 30, 2017. The permittee has provided compensation for the proposed permanent stream impacts through the purchase of 298 stream credits from Graham and David Mitigation Bank,

LLC in Montgomery County, Virginia, purchase agreement dated November 30, 2017. The applicant has provided documentation of a reserved purchase of 0.014 wetland credits from Thompson Place Stream and Wetland Mitigation Bank in Blacksburg, VA, credit availability letter dated August 17, 2021.

2. To fulfill any additional mitigation requirements of this permit in accordance with 9VAC25-210 et seq. and § 62.1-44.15:23 of the Code of Virginia, the permittee shall first purchase available mitigation bank released credits. The permittee shall then fulfill its remaining credit obligation through the purchase of released mitigation credits from an ILF program. The permittee shall then fulfill its remaining credit obligation through the purchase of advance mitigation credits from an ILF program.

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If the permittee proposes to purchase credits from an ILF program, no more than 45 days prior to initiating work within impact areas authorized by the permit, the permittee shall determine the availability of any mitigation bank released credits with a service area that covers the project and submit its proposed mitigation credit sources to DEQ for approval. Within 15 calendar days of receipt, DEQ shall review and provide any objections to the proposal, or the proposal shall be deemed approved.

Documentation of the purchase of any required mitigation credits shall be submitted to and received by DEQ prior to initiating work in the impact areas authorized by this permit.

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For the period ending December 31 of each calendar year, the permittee shall submit to DEQ by January 15th a summary of the amount of surface water impacts initiated; the amount of compensation completed and compensation requirement remaining; the status of initiating any remaining surface water impacts; and the status of completing any remaining compensation requirement.

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#### K. Other Regulatory Actions

1. This permit incorporates by reference the conditions set forth in Section IV(b)(2) and Section IV(c) of the Consent Decree between Mountain Valley Pipeline, LLC and DEQ, dated December 11, 2019, requiring:
  - a. An Environmental Auditor approved by DEQ to monitor stream and wetland crossing activities;
  - b. An independent report submitted to DEQ by the Auditor within fourteen days after the completion of each wetland or waterbody crossing describing instream biological conditions;
  - c. Posting of the report to the permittee's webpage;
  - d. Forty-eight hour advance notice to DEQ before any stream or wetland crossing activity.
2. This permit incorporates by reference all conditions of the latest any DEQ approved revision of the Annual Standards and Specifications pertaining to work within and around wetlands and streams.

DRAFT VWP Individual Permit No. 21-0416

Part I

[DATE]

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3. This permit incorporates by reference all ~~requirements/conditions of the latest~~ any DEQ approved ~~revisions of the DEQ approved~~ to the Erosion and Sediment Control General Details, Erosion and Sediment Control Narrative, and Erosion and Sediment Control Plan drawings that pertain to work within and around wetlands and stream crossings.

TC-13

## Part II – General Conditions

### A. Duty to Comply

The permittee shall comply with all conditions and limitations of the VWP permit. Nothing in this chapter shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations, toxic standards, and prohibitions. Any VWP permit violation or noncompliance is a violation of the Clean Water Act and State Water Control Law and is grounds for enforcement action, VWP permit termination, VWP permit revocation, VWP permit modification, or denial of an application for a VWP permit extension or reissuance.

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

### B. Duty to Cease or Confine Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

### C. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the VWP permit that may have a reasonable likelihood of adversely affecting human health or the environment.

### D. VWP Permit Actions

A VWP permit may be modified in whole or in part, revoked and reissued, extended, transferred, or terminated in accordance with 9VAC25-210-180 of the Virginia Administrative Code.

1. During the drafting and authorization of a permit modification, only those conditions to be modified shall be addressed with preparing a draft modified permit. VWP permit terms and conditions of the existing permit shall remain in full force and effect during the modification of the permit.
2. This VWP permit may be modified upon the request of the permittee or upon board initiative when any of the following developments occur:
  - a. When new information becomes available about the project or activity covered by the VWP permit, including project additions or alterations, that was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;

- b. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
  - c. When changes occur that are subject to "reopener clauses" in the VWP permit; or
  - d. When developments applicable to surface water withdrawals occur as specified in 9VAC25-210-380 of the Virginia Administrative Code.
3. When this VWP permit authorizes surface water withdrawals, it may be modified when any of the following developments occur:
- a. When the board determines that minimum instream flow levels resulting directly from the permittee's withdrawal of surface water are detrimental to the instream beneficial use, existing at the time of permit issuance, and the withdrawal of surface water should be subject to further net limitations or when an area is declared a surface water management area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.
  - b. Significant changes to the location of the surface water withdrawal system are proposed such that the Department of Environmental Quality determines a new review is warranted due to the potential effect of the surface water withdrawal to existing beneficial uses of the new location.
  - c. Changes to the permitted project or the surface water withdrawal, including increasing the storage capacity for the surface water withdrawal, that propose an increase in the maximum permitted withdrawal volumes or rate of withdrawal or that cause more than a minimal change to the instream flow requirements with potential to result in a detrimental effect to existing beneficial uses.
  - d. A revision to the purpose of the surface water withdrawal that proposes to include a new use or uses that were not identified in the permit application or a modification of the existing authorized use or uses such that the use description in the permit application and permit is no longer applicable. Examples of uses include, but are not limited to agricultural irrigation, golf course irrigation, public water supply, manufacturing, and electricity generation.
4. When the permittee has submitted a timely and complete application for reissuance of an existing VWP individual permit, but through no fault of the permittee, the board does not reissue or reissue with conditions a VWP individual permit or the board does not provide notice of its tentative decision to deny the application before an existing VWP individual permit expires, the conditions of the expiring VWP individual permit shall be administratively continued in full force and effect until the effective date of a reissued permit or the date on which the board denies the application. Timely application shall be a minimum of 180 days for an individual permit or a minimum of 270 days for an individual permit for a surface water withdrawal, unless otherwise specified in the existing permit.

5. Any permittee desiring to continue a previously permitted activity after the expiration date of this VWP permit shall apply for and obtain a new permit or, if applicable, shall request an extension in accordance with 9VAC25-210-180 of the Virginia Administrative Code. Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit other than as may be allowed under 9VAC25-210-180, shall submit written notification requesting an extension. The permittee must file the request 90 days prior to the expiration date of the VWP permit. VWP permit modifications shall not be used to extend the term of a VWP permit beyond 15 years from the date of original issuance. When a permit term, other than that of an Emergency Virginia Water Protection Permit, is less than 15 years, an extension of the permit terms and conditions may be granted in accordance with 9VAC25-210-180. Emergency Virginia Water Protection Permits shall not exceed a duration of one year or shall expire upon the issuance of a regular Virginia Water Protection Permit, whichever comes first.
6. This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if the current permittee: a) Notifies the board of the proposed transfer of the permit and provides a written agreement between the current and proposed permittees containing the date of transfer of VWP permit responsibility, authorization, and liability to the new permittee; and b) the board does not within 15 days notify the existing permittee of its intent to modify the VWP permit.
7. After notice and opportunity for a formal hearing pursuant to § 62.1-44.15:02 of the Code of Virginia, a VWP permit can be terminated for cause. Reasons for termination for cause are as follows:
  - a. Noncompliance by the permittee with any condition of the VWP permit;
  - b. The permittee's failure in the application or during the VWP permit process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;
  - c. The permittee's violation of a special or judicial order;
  - d. A determination by the board that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;
  - e. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and
  - f. A determination that the permitted activity has ceased and that the compensation for unavoidable adverse impacts has been successfully completed.

8. The board may terminate this permit without cause when the permittee is no longer a legal entity due to death, dissolution, or when a company is no longer authorized to conduct business in the Commonwealth. The termination shall be effective 30 days after notice of the proposed termination is sent to the last known address of the permittee or registered agent, unless the permittee objects within that time. If the permittee does object during that period, the board shall follow the applicable procedures for termination under § 62.1-44.15:25 of the Code of Virginia and 9VAC25-230 of the Virginia Administrative Code.
9. This VWP permit may be terminated by consent, as initiated by the permittee. The permittee shall submit a request for termination by consent within 30 days of completing or canceling all permitted activities and all required compensatory mitigation requirements. When submitted for project completion, the request for termination by consent shall constitute a notice of project completion. The director may accept this termination on behalf of the board. The permittee shall submit the following information:
  - a. Name, mailing address, and telephone number;
  - b. Name and location of the activity;
  - c. The VWP permit number; and
  - d. One of the following certifications:
    - i. For project completion: "I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."
    - ii. For project cancellation: "I certify under penalty of law that the activities and any required compensatory mitigation authorized by this VWP permit will not occur. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit."
    - iii. For events beyond permittee control, the permittee shall provide a detailed explanation of the events, to be approved by DEQ, and the following certification statement: "I certify under penalty of law that the activities or the required compensatory mitigation authorized by this VWP permit have changed as the result of events beyond my control (see attached). I

understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit.

#### **E. Inspection and Entry**

Upon presentation of credentials, the permittee shall allow the board or any duly authorized agent of the board, at reasonable times and under reasonable circumstances, to conduct the actions listed in this section. For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

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

#### **F. Duty to Provide Information**

The board may request (i) such plans, specifications, and other pertinent information as may be necessary to determine the effect of an applicant's discharge on the quality of state waters or (ii) such other information as may be necessary to accomplish the purposes of this chapter. Any owner, permittee, or person applying for a VWP permit or general permit coverage shall provide the information requested by the board.

#### **G. Monitoring and Records Requirements**

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2017), Guidelines Establishing Test Procedures for the Analysis of Pollutants.
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring



instrumentation, copies of all reports required by the VWP permit, and records of all data used to complete the application for the VWP permit, for a period of at least three years from the date of permit expiration. This period may be extended by request of the board at any time.

4. Records of monitoring information shall include:

- a. The date, exact place and time of sampling or measurements;
- b. The name of the individuals who performed the sampling or measurements;
- c. The date and time the analyses were performed;
- d. The name of the individuals who performed the analyses;
- e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;
- f. The results of such analyses; and
- g. Chain of custody documentation.

**H. Property rights**

The issuance of a VWP permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local laws or regulations.

**I. Reopener**

This VWP permit may be reopened for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes, but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

**J. Compliance with State and Federal Law**

As to the permitted activity, compliance with a VWP permit constitutes compliance with the VWP permit requirements of the Law and regulations.

**K. Severability**

The provisions of this VWP permit are severable.

**L. Oil and Hazardous Substance Liability**

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

**M. Unauthorized Discharge of Pollutants**

Except in compliance with a VWP permit, unless the activity is otherwise exempted or excluded, no person shall dredge, fill, or discharge any pollutant into, or adjacent to surface waters; withdraw surface water; otherwise alter the physical, chemical, or biological properties of state waters regulated under this chapter and make them detrimental to the public health, to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses; excavate in wetlands; or on or after October 1, 2001, conduct the following activities in a wetland:

1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;
2. Filling or dumping;
3. Permanent flooding or impounding; or
4. New activities that cause significant alteration or degradation of existing wetland acreage or functions.



**Attachment 1: VWP PERMIT CONSTRUCTION STATUS UPDATE FORM**

Attached to VWP INDIVIDUAL PERMIT NUMBER 21-0416

[DATE]

[PERMIT ACTION]

Date (check one):

June \_\_\_\_, \_\_\_\_\_

December \_\_\_\_, \_\_\_\_\_

VWP Individual Permit Number: \_\_\_\_\_

Project Name and Location: \_\_\_\_\_

Status within each authorized surface water impact location, as identified on MAP NAME, dated MM-DD-YYYY, and received MM-DD-YYYY: (check one of the following status options for each impact number/location. Attach additional sheet(s) if needed.)

Authorized impact number	Construction activities not started	Construction activities started	Construction activities started but currently not active	Does this impact involve culvert(s) <sup>1</sup> ?	Construction activities complete <sup>2</sup>

<sup>1</sup> Provide spot elevations of the stream bottom within the thalweg at the beginning and end of the pipe or culvert, extending to a minimum of 10 feet beyond the limits of the impact, with completion of all culvert installations.

<sup>2</sup> If all construction activities and compensatory mitigation requirements are complete, the permittee completes and signs the Termination Agreement section below within 30 days of last authorized activity and/or compensation completion. A completed and signed Agreement serves as Notice of Project Completion (9VAC25-210-130 F).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Authorized Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Date: \_\_\_\_\_

Email: \_\_\_\_\_

TERMINATION AGREEMENT BY CONSENT – PROJECT COMPLETION

Permittee Name: \_\_\_\_\_

Permittee Mailing Address: \_\_\_\_\_

Permittee Phone: \_\_\_\_\_

I hereby consent to the termination of coverage for VWP Individual Permit Number 21-0416.

"I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."

Permittee Signature: \_\_\_\_\_



**Attachment 2: MONTHLY VWP PERMIT INSPECTION CHECKLIST**

**An inspection of all permitted impact areas, avoided waters and wetlands, and permanently preserved waters, wetlands and upland areas must be conducted at least once every month during active construction activities. Maintain this record on-site and available for inspection by DEQ staff.**

<b>Project Name</b> Mountain Valley Pipeline Project	<b>VWP Permit #</b> 21-0416	<b>Inspection Date</b>
<b>Inspector Name &amp; Affiliation</b>	<b>Phone # &amp; Email Address</b>	

I certify that the information contained in this report is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature of Inspector

\_\_\_\_\_  
Date

PERMIT REQUIREMENT	In Compliance?			Location, Description, Notes & Corrective Action Taken (use additional note space below if needed)	Date Completed
	Yes	No	Not Applicable		
Surface water impacts are limited to the size and locations specified by the permit. No sedimentation impacts and no impacts to upland preservation areas have occurred <sup>1</sup> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Within 50 feet of authorized activities, all remaining surface waters and mitigation (preservation) areas that are inside the project area are clearly flagged or marked to prevent unpermitted impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Authorized temporary impact areas have been restored to original contours, stabilized, and planted or seeded in accordance with the DEQ-approved restoration plan within 30 days of completing work in each area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
E&S controls consistent with the Virginia ESC Handbook are present and maintained in good working order.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Exposed slopes/stream banks have been stabilized immediately upon completion of work in each impact area, in accordance with the Virginia ESC Handbook.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Heavy equipment is placed on mats/ geotextile fabric when working in temporary wetland impact areas. Equipment and materials removed immediately upon completion of work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Construction activities are not substantially disrupting the movement of aquatic life. <sup>2</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
New instream pipes and culverts on <5% slope have been installed to maintain low flow conditions and are countersunk at both ends as follows: ≤ 24" diameter: countersunk 3" > 24" diameter: countersunk 6" or more. Any variations were approved in advance by DEQ.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Time-of-year restrictions are being adhered to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

<sup>1</sup> If unauthorized impacts have occurred, you **must** email or fax a copy of this report to DEQ within 24 hours of discovery. Email: [steven.hardwick@deq.virginia.gov](mailto:steven.hardwick@deq.virginia.gov) Fax: (804) 698-4032

<sup>2</sup> Substantial disruption means no more than a minimal and/or temporary disruption.

Date: \_\_\_\_\_

PERMIT REQUIREMENT	In Compliance?			Location, Description, Notes & Corrective Action Taken (use additional note space below if needed)	Date Completed
	Yes	No	Not Applicable		
For stream channelization or relocation, work in surface waters is being performed in the dry, with all flows diverted until the new channel is stabilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Water quality monitoring is being conducted during permanent stream relocations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Streams and wetlands are free from any sheen or discoloration that may indicate a spill of oil, lubricants, concrete or other pollutants. <sup>3</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**Inspection Notes**

<sup>3</sup> Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at 540-562-6700. If DEQ cannot be reached, the spill or fish kill shall be reported to the Virginia Department of Emergency Management (VDEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802. Any spill of oil as defined in § 62.1-44.34:14 of the Code of Virginia that is less than 25 gallons and that reaches, or that is expected to reach, land only is not reportable, if recorded per § 62.1-44.34:19.2 of the Code of Virginia and if properly cleaned up.

Att 2-2

Table 1 - Stream Impacts

Assigned WVP Number	Stream ID	NHD Stream Name	County	Latitude	Longitude	Flow Regime	HUC 8	Impact Type	Temporary Impacts (linear ft)	Permanent Fill Impacts (linear ft)	Temporary Impact Area (square feet)	Permanent Impact Area (square feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number (MVP)
1S-Q12		UNT to Kimballton Branch	Giles	37.375311	-80.680878	Ephemeral	05050002	Pipeline ROW	86		344		4-531	G-001
2S-Q13		Kimballton Branch	Giles	37.374377	-80.682038	Perennial	05050002	Pipeline ROW	90		1350		4-532	G-002
3S-P6		UNT to Stony Creek	Giles	37.362202	-80.688923	Ephemeral	05050002	Pipeline ROW	78		466		4-535	G-003
4S-S5-Braid-2		Stony Creek	Giles	37.369325	-80.684212	Ephemeral	05050002	Timber Mat Crossing	20		139		4-536	G-004
5S-S5-Braid-1		Stony Creek	Giles	37.360071	-80.683996	Perennial	05050002	Timber Mat Crossing	40		802		4-536	G-004
6S-S5		Stony Creek	Giles	37.350043	-80.683259	Ephemeral	05050002	Pipeline ROW	30		122		4-540	G-005
7S-G29		UNT to Dry Branch	Giles	37.350373	-80.65823	Ephemeral	05050002	Pipeline ROW	85		680		4-541	G-005
8S-G30		UNT to Dry Branch	Giles	37.349095	-80.65204	Intermittent	05050002	Pipeline ROW	110		662		4-542	G-006
9S-G32		Dry Branch	Giles	37.348641	-80.647225	Perennial	05050002	Pipeline ROW	99		793		4-542	G-007
10S-G33		UNT to Dry Branch	Giles	37.348641	-80.633428	Perennial	05050002	Timber Mat Crossing	25		501		4-544	G-009
12S-S54		UNT to Little Stony Creek	Giles	37.348659	-80.631295	Ephemeral	05050002	Timber Mat Crossing	20		61		4-544	G-010
13S-G35		UNT to Little Stony Creek	Giles	37.344779	-80.633779	Perennial	05050002	Timber Mat Crossing	25		501		4-544	G-009
14S-77		UNT to Little Stony Creek	Giles	37.344278	-80.626185	Intermittent	05050002	Timber Mat Crossing	20		61		4-545	G-012
15S-Z7-Braid-1		UNT to Little Stony Creek	Giles	37.344277	-80.626113	Ephemeral	05050002	Timber Mat Crossing	20		61		4-545	G-012
16S-Z9		UNT to Little Stony Creek	Giles	37.344163	-80.6284	Perennial	05050002	Timber Mat Crossing	20		78		4-544	G-011
17S-Z10		UNT to Little Stony Creek	Giles	37.341351	-80.620823	Intermittent	05050002	Timber Mat Crossing	20		240		4-545	G-013
18S-Z11		UNT to Little Stony Creek	Giles	37.342236	-80.620542	Perennial	05050002	Timber Mat Crossing	20		100		4-545	G-013
19S-Z12-EPH		UNT to Little Stony Creek	Giles	37.342214	-80.620312	Ephemeral	05050002	Timber Mat Crossing	20		122		4-545	G-013
20S-Z13		Little Stony Creek	Giles	37.342172	-80.620909	Perennial	05050002	Timber Mat Crossing	25		501		4-545	G-013
21S-Z14		UNT to Little Stony Creek	Giles	37.340977	-80.618031	Intermittent	05050002	Timber Mat Crossing	20		78		4-545	G-014
22S-Z17		Doe Creek	Giles	37.338952	-80.614618	Intermittent	05050002	Timber Mat Crossing	102		1019		4-548	G-015A
23S-A34		UNT to Doe Creek	Giles	37.337763	-80.606008	Ephemeral	05050002	Timber Mat Crossing	86		601		4-548	G-015B
24S-A33		UNT to Doe Creek	Giles	37.337639	-80.605571	Ephemeral	05050002	Pipeline ROW	111		775		4-548	G-016
25S-A32		UNT to Doe Creek	Giles	37.335984	-80.596868	Perennial	05050002	Pipeline ROW	78		1230		4-549	G-016
26S-Q02		Sinking Creek	Craig	37.335132	-80.429438	Perennial	05050002	Timber Mat Crossing	40		1398		4-581	S-Q02
27S-MN11-Upstream		UNT to Sinking Creek	Giles	37.32869	-80.595979	Ephemeral	05050002	Temporary Access Road	15		61		4-554	S-MN11-Upstream
28S-MN11-Upstream		UNT to Sinking Creek	Giles	37.32869	-80.595979	Ephemeral	05050002	Temporary Access Road	15		61		4-554	S-MN11-Upstream
29S-MN11-Downstream		UNT to Sinking Creek	Giles	37.332146	-80.560079	Ephemeral	05050002	Temporary Access Road	37		122		4-554	S-MN11-Downstream
30S-Y3		UNT to Doe Creek	Giles	37.331748	-80.563355	Ephemeral	05050002	Timber Mat Crossing	20		200		4-551	G-017
31S-Y2		Doe Creek	Giles	37.331332	-80.563047	Perennial	05050002	Timber Mat Crossing	25		501		4-551	G-017
32S-PP4		UNT to Sinking Creek	Craig	37.328329	-80.42281	Intermittent	05050002	Pipeline ROW	84		170		4-579	G-033
33S-PP3		UNT to Sinking Creek	Craig	37.32705	-80.425803	Perennial	05050002	Pipeline ROW	82		244		4-579	G-033
34S-RR4		UNT to Sinking Creek	Giles	37.326015	-80.556831	Perennial	05050002	Temporary Access Road	85		257		4-556	S-RR4
35S-E24		UNT to Sinking Creek	Giles	37.325638	-80.56468	Perennial	05050002	Pipeline ROW	81		1620		4-553	G-019A
36S-E25-Downstream		UNT to Sinking Creek	Giles	37.325607	-80.564373	Perennial	05050002	Timber Mat Crossing	20		161		4-553	G-019B
37S-E25-Upstream		UNT to Sinking Creek	Giles	37.325566	-80.564634	Perennial	05050002	Pipeline ROW	15		148		4-553	G-019A
38S-E25-Downstream		UNT to Sinking Creek	Giles	37.325566	-80.564634	Perennial	05050002	Timber Mat Crossing	20		161		4-553	G-019B
39S-PP1		UNT to Sinking Creek	Craig	37.324781	-80.431446	Intermittent	05050002	Pipeline ROW	86		257		4-578	G-031
40S-RR5		UNT to Sinking Creek	Giles	37.323702	-80.55562	Perennial	05050002	Pipeline ROW	83		832		4-555	G-020
41S-PA07		UNT to Sinking Creek	Giles	37.323593	-80.55257	Intermittent	05050002	Pipeline ROW	115		231		4-555	G-020
42S-J18-EPH		UNT to Sinking Creek	Giles	37.323737	-80.552396	Ephemeral	05050002	Temporary Access Road	74		444		4-555	G-020A
43S-J19		UNT to Sinking Creek	Giles	37.322194	-80.553058	Ephemeral	05050002	Temporary Access Road	43		170		4-555	S-J19
44S-J19		UNT to Sinking Creek	Giles	37.321756	-80.55311	Ephemeral	05050002	Temporary Access Road	9		35		4-555	S-J19
45S-J18-INT		UNT to Sinking Creek	Montgomery	37.321109	-80.412831	Intermittent	02080201	Temporary Access Road	44		174		4-555	S-J18-INT
46S-PP2		UNT to Craig Creek	Montgomery	37.318956	-80.406648	Ephemeral	02080201	Timber Mat Crossing	77		1542		4-577	G-030
47S-O012		UNT to Sinking Creek	Giles	37.318647	-80.441619	Perennial	05050002	Pipeline ROW	25		48		4-584	G-034
48S-O013		UNT to Sinking Creek	Giles	37.31895	-80.44093	Ephemeral	05050002	Pipeline ROW	86		77		4-577	G-030
49S-O014		UNT to Sinking Creek	Giles	37.318647	-80.441619	Perennial	05050002	Pipeline ROW	31		344		4-577	G-029
50S-J17		UNT to Sinking Creek	Giles	37.318324	-80.54772	Ephemeral	05050002	Pipeline ROW	78		248		4-558	G-022
51S-J16-b		UNT to Sinking Creek	Giles	37.318246	-80.547711	Ephemeral	05050002	Pipeline ROW	70		780		4-558	G-022
52S-PP21		UNT to Sinking Creek	Montgomery	37.316523	-80.408235	Perennial	02080201	Timber Mat Crossing	20		78		4-584	G-035
53S-RR13		UNT to Craig Creek	Montgomery	37.314504	-80.402616	Perennial	02080201	Timber Mat Crossing	20		122		4-584	G-036
54S-RR13		Craig Creek	Montgomery	37.31391	-80.398692	Perennial	02080201	Temporary Access Road	41		1433		4-585	S-RR13
55S-RR14		UNT to Craig Creek	Montgomery	37.313613	-80.402521	Ephemeral	02080201	Timber Mat Crossing	20		122		4-586	G-039
57S-O06		Craig Creek	Montgomery	37.313511	-80.404606	Perennial	02080201	Timber Mat Crossing	20		139		4-585	G-038
58S-Q03		UNT to Sinking Creek	Montgomery	37.311735	-80.532304	Ephemeral	02080201	Timber Mat Crossing	35		701		4-585	G-037
59S-J16-a		UNT to Sinking Creek	Giles	37.31173	-80.544091	Ephemeral	05050002	Permanent Access Road	15		30		4-560	S-Q03
60S-J16-a		UNT to Sinking Creek	Giles	37.31173	-80.544091	Ephemeral	05050002	Permanent Access Road	20		31		217	S-J16-a
61S-MN17		Sinking Creek	Giles	37.311616	-80.515786	Perennial	05050002	Permanent Access Road	55		1102		4-564	G-023
62S-RR13		UNT to Sinking Creek	Giles	37.307524	-80.466665	Perennial	05050002	Timber Mat Crossing	75		749		4-573	G-028
63S-MN11		UNT to Sinking Creek	Giles	37.305508	-80.465723	Intermittent	05050002	Pipeline ROW	84		174		4-571	G-027
64S-MN12		UNT to Sinking Creek	Montgomery	37.300554	-80.475911	Ephemeral	05050002	Pipeline ROW	88		418		4-571	G-026
65S-MN21		UNT to Mill Creek	Montgomery	37.299397	-80.391243	Perennial	03010101	Pipeline ROW	80		562		4-588	G-040

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Table 1 - Stream Impacts

Assigned VWP Number	Stream ID	NHD Stream Name	County	Latitude	Longitude	Flow Regime	HUC 8	Impact Type	Temporary Impacts (linear ft)	Permanent Fill Impacts (linear ft)	Temporary Impact Area (square feet)	Permanent Impact Area (square feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number (MVP)
66 S-MM17	UNT to Sinking Creek	Giles	37.299226	-80.406024	Perennial	05050002	Temporary Access Road	49			96		4-569	S-MM17
67 S-MM22	UNT to Mill Creek	Montgomery	37.297166	-80.386612	Ephemeral	09010101	Pipeline ROW	96			192		4-589	G-041
68 S-DR2	Greenbriar Branch	Giles	37.296666	-80.494174	Perennial	05050002	Timber Mat Crossing	20			161		4-567	G-024
69 S-276	UNT to Greenbriar Branch	Giles	37.296612	-80.494165	Intermittent	05050002	Timber Mat Crossing	20			122		4-567	G-024
70 S-FF62	UNT to Mill Creek	Montgomery	37.295356	-80.375118	Perennial	09010101	Pipeline ROW	76			836		4-590	G-043
71 S-MM18	UNT to Sinking Creek	Giles	37.295226	-80.481455	Ephemeral	05050002	Pipeline ROW	88			440		4-569	G-025
72 S-153	UNT to Mill Creek	Montgomery	37.295153	-80.367551	Perennial	09010101	Pipeline ROW	84			1346		4-591	G-044
73 S-E95	Mill Creek	Montgomery	37.295743	-80.375921	Intermittent	09010101	Pipeline ROW	152			910		4-590	G-042
74 S-G36	North Fork Roanoke River	Montgomery	37.269586	-80.313161	Perennial	09010101	Temporary Access Road	26			518		4-602	S-G36
75 S-G38	UNT to North Fork Roanoke River	Montgomery	37.267002	-80.312898	Ephemeral	09010101	Timber Mat Crossing	20			61		4-603	Crossing complete (NWP-12)
76 S-G40	UNT to North Fork Roanoke River	Montgomery	37.264882	-80.307302	Perennial	09010101	Timber Mat Crossing	20			61		4-604	Crossing complete (NWP-12)
77 S-PP23	UNT to North Fork Roanoke River	Montgomery	37.264858	-80.307151	Ephemeral	09010101	Timber Mat Crossing	20			48		4-604	Crossing complete (NWP-12)
78 S-G39	UNT to North Fork Roanoke River	Montgomery	37.259817	-80.308486	Intermittent	09010101	Pipeline ROW	82			492		4-604	H-001
79 S-MM14	UNT to Flatwoods Branch	Montgomery	37.259717	-80.319321	Ephemeral	09010101	Pipeline ROW	105			736		4-608	H-003
80 S-MM11	UNT to Flatwoods Branch	Montgomery	37.258673	-80.295445	Intermittent	09010101	Pipeline ROW	82			492		4-608	H-005
81 S-MM11	UNT to Flatwoods Branch	Montgomery	37.258409	-80.288166	Ephemeral	09010101	Pipeline ROW	80			430		4-609	H-002
82 S-FL5	UNT to Flatwoods Branch	Montgomery	37.258198	-80.286029	Intermittent	09010101	Pipeline ROW	82			775		4-609	H-006
83 S-MM13	UNT to Flatwoods Branch	Montgomery	37.258176	-80.289222	Ephemeral	09010101	Pipeline ROW	129			427		4-608	H-004
84 S-516a/F16b	UNT to Flatwoods Branch	Montgomery	37.257998	-80.284735	Ephemeral	09010101	Pipeline ROW	85			427		4-608	H-004
85 S-C36	UNT to Flatwoods Branch	Montgomery	37.25736	-80.281611	Intermittent	3010101	Pipeline ROW	96			244		4-609	H-007
86 S-C38	UNT to Flatwoods Branch	Montgomery	37.257193	-80.281025	Intermittent	3010101	Pipeline ROW	36			109		4-609	H-008
87 S-MM31	UNT to Flatwoods Branch	Montgomery	37.256995	-80.280329	Ephemeral	09010101	Timber Mat Crossing	20			78		4-609	H-009
88 S-C29	Flatwoods Branch	Montgomery	37.256387	-80.270214	Perennial	09010101	Pipeline ROW	46			57		4-610	H-010
89 S-C25	UNT to Bradshaw Creek	Montgomery	37.254342	-80.267895	Intermittent	09010101	Pipeline ROW	115			344		4-611	H-013
90 S-G24	UNT to Bradshaw Creek	Montgomery	37.254135	-80.266743	Intermittent	09010101	Pipeline ROW	118			322		4-611	H-014
91 S-C21	Bradshaw Creek	Montgomery	37.251791	-80.255899	Perennial	09010101	Timber Mat Crossing	75			501		4-613	H-015
92 S-MM19	UNT to Roanoke River	Montgomery	37.248419	-80.206995	Intermittent	09010101	Pipeline ROW	26			266		4-627	H-018
93 S-A016	UNT to Roanoke River	Montgomery	37.231693	-80.199728	Intermittent	09010101	Timber Mat Crossing	20			100		4-631	H-020
94 S-11	UNT to Roanoke River	Montgomery	37.231179	-80.19846	Intermittent	09010101	Timber Mat Crossing	20			279		4-631	H-020
95 S-CD12b	UNT to South Fork Roanoke River	Montgomery	37.229766	-80.201144	Perennial	09010101	Timber Mat Crossing	20			122		4-631	H-021
96 S-FF19	UNT to Indian Run	Montgomery	37.216102	-80.197399	Ephemeral	09010101	Pipeline ROW	79			396		4-634	H-023
97 S-FF20a	UNT to Roanoke River	Montgomery	37.210921	-80.193318	Perennial	09010101	Pipeline ROW	80			476		4-635	H-024
98 S-MM22	UNT to Roanoke River	Montgomery	37.209284	-80.187282	Perennial	09010101	Pipeline ROW	175			437		4-637	H-025
99 S-J02	UNT to Roanoke River	Roanoke	37.194064	-80.167933	Perennial	09010101	Pipeline ROW	77			1925		4-641	H-026
100 S-V13	UNT to Bottom Creek	Roanoke	37.187687	-80.151146	Intermittent	09010101	Pipeline ROW	85			680		4-644	H-027
101 S-Y14	UNT to Bottom Creek	Roanoke	37.187568	-80.151048	Perennial	09010101	Pipeline ROW	77			1078		4-644	H-027
102 S-FF57	UNT to Bottom Creek	Roanoke	37.181736	-80.148948	Intermittent	09010101	Temporary Access Road	42			393		4-645	S-FF57
103 S-FF55	UNT to Bottom Creek	Roanoke	37.181506	-80.149697	Intermittent	09010101	Pipeline ROW	33			266		4-645	H-028
104 S-FF34b	UNT to Bottom Creek	Roanoke	37.181385	-80.149104	Perennial	09010101	Pipeline ROW	81			266		4-645	H-028
105 S-FF33	UNT to Bottom Creek	Roanoke	37.179186	-80.1441	Intermittent	09010101	Pipeline ROW	148			1333		4-647	H-029
106 S-J82	UNT to Bottom Creek	Roanoke	37.170458	-80.138216	Intermittent	09010101	Timber Mat Crossing	20			301		4-648	H-030
107 S-J85	UNT to Bottom Creek	Roanoke	37.169474	-80.130356	Perennial	09010101	Temporary Access Road	50			401		4-650	S-J85
108 S-J83	UNT to Bottom Creek	Roanoke	37.168211	-80.138255	Intermittent	09010101	Timber Mat Crossing	148			741		4-649	H-031
109 S-J88	Bottom Creek	Roanoke	37.168095	-80.138295	Perennial	09010101	Timber Mat Crossing	30			1960		4-649	H-031
110 S-J84	UNT to Bottom Creek	Roanoke	37.168361	-80.138381	Perennial	09010101	Timber Mat Crossing	35			527		4-649	H-031
111 S-J89	UNT to Bottom Creek	Roanoke	37.165862	-80.139317	Perennial	09010101	Timber Mat Crossing	20			200		4-649	H-032
112 S-J90	UNT to Bottom Creek	Roanoke	37.165863	-80.139378	Intermittent	09010101	Timber Mat Crossing	20			100		4-649	H-032
113 S-KL25	UNT to Mill Creek	Roanoke	37.160173	-80.134799	Intermittent	09010101	Pipeline ROW	82			409		4-651	H-033
114 S-5T9b	UNT to Mill Creek	Roanoke	37.154024	-80.129179	Perennial	09010101	Timber Mat Crossing	20			301		4-652	H-040
115 S-KL55	UNT to Mill Creek	Roanoke	37.150009	-80.133248	Perennial	09010101	Timber Mat Crossing	20			301		4-653	H-042
116 S-J12	UNT to Mill Creek	Roanoke	37.148353	-80.133519	Perennial	09010101	Timber Mat Crossing	20			261		4-653	H-043
117 S-FF44	UNT to Bottom Creek	Roanoke	37.143003	-80.138999	Intermittent	09010101	Timber Mat Crossing	20			139		4-654	H-044
118 S-J43	Mill Creek	Roanoke	37.138636	-80.139715	Perennial	09010101	Timber Mat Crossing	20			362		4-655	H-045
119 S-Y9	UNT to Mill Creek	Roanoke	37.134481	-80.137629	Intermittent	09010101	Timber Mat Crossing	44			174		4-655	H-046
120 S-Y7	UNT to Mill Creek	Roanoke	37.134481	-80.137629	Intermittent	09010101	Timber Mat Crossing	32			126		4-656	H-046
121 S-Y8	UNT to Mill Creek	Roanoke	37.134276	-80.137484	Perennial	09010101	Timber Mat Crossing	20			78		4-655	H-046
122 S-922	UNT to Mill Creek	Roanoke	37.128922	-80.133765	Perennial	09010101	Timber Mat Crossing	20			78		4-655	H-047A
123 S-823	UNT to Mill Creek	Roanoke	37.128858	-80.133491	Intermittent	09010101	Timber Mat Crossing	14			28		4-655	H-047A
124 S-825	UNT to Mill Creek	Roanoke	37.128449	-80.132601	Intermittent	09010101	Timber Mat Crossing	76			379		4-655	H-048
125 S-821	UNT to Mill Creek	Roanoke	37.128449	-80.132601	Intermittent	09010101	Pipeline ROW	92			366		4-659	H-048B
126 S-H1	Green Creek	Franklin	37.127793	-80.116787	Perennial	09010101	Timber Mat Crossing	20			200		4-661	Crossing complete (NWP-12)
127 S-G36	UNT to Green Creek	Franklin	37.127077	-80.111387	Intermittent	09010101	Timber Mat Crossing	20			139		4-662	Crossing complete (NWP-12)
128 S-G27	UNT to Green Creek	Franklin	37.126962	-80.111052	Perennial	09010101	Timber Mat Crossing	20			139		4-662	Crossing complete (NWP-12)
129 S-G24	UNT to Green Creek	Franklin	37.126412	-80.121395	Intermittent	09010101	Pipeline ROW	75			449		4-661	Crossing complete (NWP-12)
130 S-G25	UNT to Green Creek	Franklin	37.125988	-80.121401	Intermittent	09010101	Pipeline ROW	42			291		4-661	H-051

T11-2

Table 1 - Stream Impacts

Assigned VWP Number	Stream ID	NHD Stream Name	County	Latitude	Longitude	Flow Regime	HUC 8	Impact Type	Temporary Impacts (linear ft)	Permanent Fill Impacts (linear ft)	Temporary Impact Area (square feet)	Permanent Impact Area (square feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number (MVP)
131 S-RR18		UNT to Green Creek	Franklin	37.420955	-80.113578	Intermittent	03010101	Permanent Access Road	8		17		4-662	S-RR18
132 S-D11		UNT to North Fork Blackwater River	Franklin	37.421137	-80.086182	Perennial	03010101	Timber Mat Crossing	20		200		4-666	H-054
133 S-D8		North Fork Blackwater River	Franklin	37.421098	-80.074673	Perennial	03010101	Pipeline ROW	78		941		4-667	H-055
134 S-D12		UNT to North Fork Blackwater River	Franklin	37.421538	-80.085642	Intermittent	03010101	Pipeline ROW	54		322		4-666	H-053
135 S-D13		UNT to North Fork Blackwater River	Franklin	37.421513	-80.085668	Intermittent	03010101	Pipeline ROW	117		466		4-666	H-053
136 S-D14		UNT to North Fork Blackwater River	Franklin	37.421473	-80.088457	Intermittent	03010101	Pipeline ROW	234		701		4-666	H-052
137 S-I14		UNT to North Fork Blackwater River	Franklin	37.411679	-80.0603	Perennial	03010101	Timber Mat Crossing	20		301		4-670	Crossing complete (NWP-12)
138 S-G17		UNT to North Fork Blackwater River	Franklin	37.410664	-80.054219	Perennial	03010101	Timber Mat Crossing	20		319		4-672	Crossing complete (NWP-12)
140 S-GH14		UNT to North Fork Blackwater River	Franklin	37.406177	-80.051015	Intermittent	03010101	Pipeline ROW	75		301		4-674	H-057
141 S-GH11		UNT to North Fork Blackwater River	Franklin	37.405883	-80.048662	Perennial	03010101	Pipeline ROW	76		305		4-674	H-055
142 S-GH12		UNT to North Fork Blackwater River	Franklin	37.404707	-80.046422	Intermittent	03010101	Pipeline ROW	77		311		4-674	H-058
143 S-R08		UNT to North Fork Blackwater River	Franklin	37.404329	-80.045343	Perennial	03010101	Pipeline ROW	78		231		4-674	H-059
144 S-R09		UNT to North Fork Blackwater River	Franklin	37.403929	-80.041868	Perennial	03010101	Timber Mat Crossing	20		139		4-674	H-060
145 S-R11		UNT to North Fork Blackwater River	Franklin	37.402491	-80.041046	Ephemeral	03010101	Pipeline ROW	77		693		4-675	H-061
146 S-R11		UNT to North Fork Blackwater River	Franklin	37.401127	-80.039653	Ephemeral	03010101	Pipeline ROW	77		540		4-675	H-062
147 S-I1		UNT to North Fork Blackwater River	Franklin	37.093062	-80.027724	Perennial	03010101	Pipeline ROW	107		1285		4-677	H-063
147 S-I2		UNT to North Fork Blackwater River	Franklin	37.092891	-80.027593	Intermittent	03010101	Pipeline ROW	40		100		4-677	H-063
148 S-I16		UNT to Little Creek	Franklin	37.092555	-80.027314	Intermittent	03010101	Timber Mat Crossing	21		105		4-677	Crossing complete (NWP-12)
150 S-GH6		UNT to Little Creek	Franklin	37.089497	-79.978402	Intermittent	03010101	Timber Mat Crossing	20		61		4-685	Crossing complete (NWP-12)
151 S-I12		UNT to Little Creek	Franklin	37.092997	-79.983227	Perennial	03010101	Timber Mat Crossing	20		61		4-684	Crossing complete (NWP-12)
153 S-I11		UNT to Little Creek	Franklin	37.091608	-79.987859	Intermittent	03010101	Timber Mat Crossing	20		39		4-684	Crossing complete (NWP-12)
153 S-I18		UNT to Little Creek	Franklin	37.091564	-79.988051	Perennial	03010101	Timber Mat Crossing	20		78		4-684	Crossing complete (NWP-12)
154 S-I19		UNT to Little Creek	Franklin	37.091413	-79.993444	Intermittent	03010101	Timber Mat Crossing	20		39		4-684	Crossing complete (NWP-12)
155 S-I17		UNT to Little Creek	Franklin	37.091382	-79.990622	Perennial	03010101	Timber Mat Crossing	20		39		4-683	Crossing complete (NWP-12)
156 S-I14		UNT to North Fork Blackwater River	Franklin	37.091354	-79.992013	Intermittent	03010101	Timber Mat Crossing	20		401		4-688	Crossing complete (NWP-12)
157 S-K12		UNT to Little Creek	Franklin	37.091189	-80.024366	Perennial	03010101	Timber Mat Crossing	20		78		4-683	Crossing complete (NWP-12)
157 S-K12		UNT to Little Creek	Franklin	37.090915	-80.023355	Perennial	03010101	Timber Mat Crossing	20		78		4-683	Crossing complete (NWP-12)
159 S-GH4		UNT to Teels Creek	Franklin	37.090812	-79.953936	Intermittent	03010101	Timber Mat Crossing	20		78		4-682	Crossing complete (NWP-12)
159 S-GH4		UNT to Teels Creek	Franklin	37.090461	-79.996354	Perennial	03010101	Timber Mat Crossing	20		100		4-689	Crossing complete (NWP-12)
160 S-GH3		UNT to Teels Creek	Franklin	37.089745	-79.956077	Perennial	03010101	Timber Mat Crossing	20		122		4-688	I-001A
161 S-I10		UNT to Teels Creek	Franklin	37.089179	-80.005026	Perennial	03010101	Timber Mat Crossing	20		61		4-688	Crossing complete (NWP-12)
162 S-E28		UNT to Teels Creek	Franklin	37.089178	-79.95011	Perennial	03010101	Pipeline ROW	80		640		4-689	I-002
163 S-E28		Teels Creek	Franklin	37.089047	-79.9513	Perennial	03010101	Pipeline ROW	82		984		4-667	I-005B
164 S-E28		Teels Creek	Franklin	37.089247	-79.948057	Perennial	03010101	Pipeline ROW	76		910		4-690	I-005B
165 S-E28		Teels Creek	Franklin	37.088785	-79.945556	Perennial	03010101	Pipeline ROW	101		1211		4-690	I-005B
166 S-EF4		UNT to Teels Creek	Franklin	37.078963	-79.941911	Perennial	03010101	Pipeline ROW	80		880		4-691	I-006
167 S-EF7		UNT to Teels Creek	Franklin	37.074664	-79.941123	Ephemeral	03010101	Timber Mat Crossing	20		39		4-692	Crossing complete (NWP-12)
168 S-EF7		UNT to Teels Creek	Franklin	37.074636	-79.941336	Ephemeral	03010101	ATMS	44		44		4-692	Crossing complete (NWP-12)
169 S-EF12		Teels Creek	Franklin	37.073367	-79.939865	Perennial	03010101	Pipeline ROW	79		1581		4-692	I-007
170 S-MM42		UNT to Teels Creek	Franklin	37.070703	-79.937069	Ephemeral	03010101	Pipeline ROW	81		161		4-693	I-008
171 S-D23		Teels Creek	Franklin	37.070322	-79.931039	Perennial	03010101	Pipeline ROW	92		2087		4-694	I-010
172 S-D22		UNT to Teels Creek	Franklin	37.070101	-79.929732	Intermittent	03010101	Pipeline ROW	83		662		4-694	I-011
173 S-D18		UNT to Teels Creek	Franklin	37.069560	-79.926213	Ephemeral	03010101	Pipeline ROW	30		61		4-694	I-012
174 S-RR13		UNT to Teels Creek	Franklin	37.069342	-79.933892	Perennial	03010101	Timber Mat Crossing	20		26		4-694	I-009
175 S-D20		UNT to Teels Creek	Franklin	37.069485	-79.926233	Intermittent	03010101	Pipeline ROW	76		610		4-694	I-012
176 S-EF48		UNT to Blackwater River	Franklin	37.064748	-79.87442	Intermittent	03010101	Pipeline ROW	86		170		4-705	I-026
177 S-Y14		UNT to Blackwater River	Franklin	37.064723	-79.874819	Ephemeral	03010101	Pipeline ROW	84		253		4-704	I-024
178 S-C14		Teels Creek	Franklin	37.063956	-79.871983	Ephemeral	03010101	Pipeline ROW	80		3655		4-696	I-013
179 S-V25		UNT to Blackwater River	Franklin	37.063464	-79.872182	Ephemeral	03010101	Pipeline ROW	86		902		4-706	I-027
180 S-KL1		UNT to Blackwater River	Franklin	37.062672	-79.867639	Perennial	03010101	Pipeline ROW	88		431		4-708	I-028
181 S-KL39		UNT to Blackwater River	Franklin	37.061193	-79.880018	Perennial	03010101	Pipeline ROW	30		601		4-696	I-014
182 S-C16		UNT to Teels Creek	Franklin	37.060610	-79.921179	Perennial	03010101	Timber Mat Crossing	20		301		4-704	I-024
183 S-KL54		UNT to Maggoodee Creek	Franklin	37.059535	-79.940624	Perennial	03010101	Pipeline ROW	121		788		4-696	I-025
184 S-CR		UNT to Blackwater River	Franklin	37.059098	-79.853159	Intermittent	03010101	Pipeline ROW	76		758		4-704	I-024
185 S-F4		Teels Creek	Franklin	37.059060	-79.853379	Intermittent	03010101	Pipeline ROW	86		431		4-708	I-028
186 S-C17		Teels Creek	Franklin	37.058690	-79.853379	Ephemeral	03010101	Pipeline ROW	82		819		4-708	I-028
187 S-KL52		UNT to Maggoodee Creek	Franklin	37.058165	-79.844877	Ephemeral	03010101	Timber Mat Crossing	30		601		4-696	I-014
188 S-S31		UNT to Maggoodee Creek	Franklin	37.057726	-79.838583	Perennial	03010101	Pipeline ROW	105		105		4-709	I-030
189 S-F8		UNT to Maggoodee Creek	Franklin	37.057174	-79.836406	Perennial	03010101	Temporary Access Road	41		453		4-710	S-531
190 S-C06		Little Creek	Franklin	37.056584	-79.911921	Perennial	03010101	Pipeline ROW	83		2402		4-710	I-032
191 S-HH4		UNT to Maggoodee Creek	Franklin	37.056594	-79.835785	Intermittent	03010101	Pipeline ROW	77		4826		4-698	I-025
192 S-KL51		UNT to Blackwater River	Franklin	37.056084	-79.850382	Perennial	03010101	Pipeline ROW	97		871		4-711	I-033
193 S-KL38		UNT to Blackwater River	Franklin	37.055912	-79.850382	Perennial	03010101	Pipeline ROW	67		370		4-708	I-029
194 S-C20		UNT to Maggoodee Creek	Franklin	37.055212	-79.833887	Ephemeral	03010101	Pipeline ROW	20		545		4-702	I-022
195 S-C19		Maggoodee Creek	Franklin	37.055147	-79.833099	Perennial	03010101	Timber Mat Crossing	75		78		4-711	I-034
								Pipeline ROW			3006		4-711	I-035

Table 1 - Stream Impacts

Assigned VWP Number	Stream ID	NHD Stream Name	County	Latitude	Longitude	Flow Regime	NUCS	Impact Type	Temporary Impacts (Linear Ft)	Permanent Fill Impacts (Linear Ft)	Temporary Impact Area (Square Feet)	Permanent Impact Area (Square Feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number (MVP)
186 S-KL36	UNT to Blackwater River	Blackwater River	Franklin	37.053336	-79.884604	Perennial	03010101	Timber Mat Crossing	20	20	148	4-702	I-021	
197 S-T11	Blackwater River	Blackwater River	Franklin	37.052803	-79.825711	Perennial	03010101	Pipeline ROW	91	91	6765	4-712	I-036	
198 S-KL35	UNT to Blackwater River	Blackwater River	Franklin	37.052125	-79.886182	Perennial	03010101	Timber Mat Crossing	35	35	87	4-702	I-020	
199 S-F9b	UNT to Blackwater River	Blackwater River	Franklin	37.049238	-79.817223	Perennial	03010101	Pipeline ROW	76	76	1141	4-713	I-037	
200 S-I12	Little Creek	Little Creek	Franklin	37.040219	-79.908513	Perennial	03010101	Pipeline ROW	76	76	3745	4-689	I-018	
201 S-F10	UNT to Blackwater River	Blackwater River	Franklin	37.048037	-79.813934	Ephemeral	03010101	Timber Mat Crossing	20	20	179	4-713	I-038	
202 S-CD1	UNT to Blackwater River	Blackwater River	Franklin	37.047765	-79.897868	Perennial	03010101	Pipeline ROW	104	104	366	4-701	I-019	
203 S-F9a	UNT to Blackwater River	Blackwater River	Franklin	37.047172	-79.813172	Intermittent	03010101	Timber Mat Crossing	20	20	301	4-713	I-039	
204 S-MM29	UNT to Maple Branch	Maple Branch	Franklin	37.043871	-79.822898	Perennial	03010101	Temporary Access Road	42	42	632	4-714	S-MM29	
205 S-MM23	Maple Branch	Maple Branch	Franklin	37.043854	-79.822974	Perennial	03010101	Temporary Access Road	78	78	1559	4-714	S-MM23	
206 S-G46	UNT to Blackwater River	Blackwater River	Franklin	37.042742	-79.809015	Ephemeral	03010101	Timber Mat Crossing	20	20	200	4-716	I-040	
207 S-A36	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.039716	-79.804337	Ephemeral	03010101	Timber Mat Crossing	77	77	309	4-717	I-041	
208 S-A38	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.039271	-79.799442	Intermittent	03010101	Pipeline ROW	30	30	270	4-718	I-042	
209 S-A40	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.036178	-79.799224	Intermittent	03010101	Timber Mat Crossing	13	13	74	4-718	I-042	
210 S-A41	Foul Ground Creek	Foul Ground Creek	Franklin	37.033714	-79.788213	Perennial	03010101	Pipeline ROW	76	76	910	4-720	I-043A	
211 S-GH96	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.033714	-79.788213	Perennial	03010101	Timber Mat Crossing	20	20	61	4-721	I-044A	
212 S-KL17	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.031069	-79.778435	Intermittent	03010101	Timber Mat Crossing	20	20	100	4-721	I-044A	
213 S-GH87	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.031011	-79.778435	Intermittent	03010101	Pipeline ROW	46	46	139	4-721	I-044A	
214 S-GH38	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.030974	-79.778119	Intermittent	03010101	Pipeline ROW	7	7	22	4-721	I-044A	
215 S-GH39	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.030861	-79.778093	Intermittent	03010101	Pipeline ROW	103	103	416	4-721	I-044B	
216 S-GH40	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.028893	-79.774785	Ephemeral	03010101	Pipeline ROW	89	89	266	4-721	I-045	
217 S-GH44	UNT to Foul Ground Creek	Foul Ground Creek	Franklin	37.028892	-79.773559	Perennial	03010101	Timber Mat Crossing	109	109	619	4-721	I-046	
218 S-G22	UNT to Poplar Camp Creek	Poplar Camp Creek	Franklin	37.019526	-79.761958	Perennial	03010101	Pipeline ROW	80	80	958	4-723	I-047	
219 S-G23	UNT to Poplar Camp Creek	Poplar Camp Creek	Franklin	37.019526	-79.761958	Perennial	03010101	Pipeline ROW	42	42	126	4-723	I-047	
220 S-G21	UNT to Poplar Camp Creek	Poplar Camp Creek	Franklin	37.019359	-79.761643	Intermittent	03010101	Pipeline ROW	54	54	161	4-723	I-047	
221 S-G20	Poplar Camp Creek	Poplar Camp Creek	Franklin	37.017364	-79.76	Perennial	03010101	Timber Mat Crossing	20	20	200	4-724	I-048	
222 S-G18	UNT to Blackwater River	Blackwater River	Franklin	37.022336	-79.754238	Intermittent	03010101	Pipeline ROW	81	81	161	4-725	I-049	
223 S-G17	UNT to Blackwater River	Blackwater River	Franklin	37.020566	-79.752655	Ephemeral	03010101	Timber Mat Crossing	20	20	100	4-726	Crossing complete (MVP-12)	
224 S-E18	UNT to Blackwater River	Blackwater River	Franklin	37.020127	-79.747749	Perennial	03010101	Pipeline ROW	94	94	658	4-727	I-050	
225 S-E17	UNT to Blackwater River	Blackwater River	Franklin	37.020029	-79.747278	Perennial	03010101	Pipeline ROW	95	95	758	4-727	I-051	
226 S-E14	UNT to Blackwater River	Blackwater River	Franklin	36.995814	-79.735444	Perennial	03010101	Pipeline ROW	82	82	1638	4-728	I-052	
227 S-H38	UNT to Jacks Creek	Jacks Creek	Franklin	36.998430	-79.722466	Perennial	03010101	Timber Mat Crossing	20	20	240	4-730	I-053	
228 S-H32	UNT to Jacks Creek	Jacks Creek	Franklin	36.988273	-79.708195	Perennial	03010101	Timber Mat Crossing	20	20	200	4-731	I-057	
229 S-H37	UNT to Jacks Creek	Jacks Creek	Franklin	36.988031	-79.71745	Ephemeral	03010101	Pipeline ROW	82	82	492	4-731	I-054	
230 S-H34	UNT to Jacks Creek	Jacks Creek	Franklin	36.988008	-79.711881	Perennial	03010101	Timber Mat Crossing	20	20	61	4-732	I-056	
231 S-H36	UNT to Jacks Creek	Jacks Creek	Franklin	36.988008	-79.711881	Perennial	03010101	Timber Mat Crossing	20	20	61	4-732	I-056	
232 S-H30	UNT to Jacks Creek	Jacks Creek	Franklin	36.987961	-79.714922	Perennial	03010101	Pipeline ROW	4	4	4	4-734	I-055	
233 S-A18	UNT to Jacks Creek	Jacks Creek	Franklin	36.987818	-79.702711	Intermittent	03010101	Timber Mat Crossing	87	87	227	4-734	W-H11	
234 S-A19/H26	UNT to Jacks Creek	Jacks Creek	Franklin	36.987719	-79.700634	Intermittent	03010101	Pipeline ROW	212	212	1455	4-734	I-059	
235 S-A20	UNT to Jacks Creek	Jacks Creek	Franklin	36.987115	-79.698903	Intermittent	03010101	Pipeline ROW	81	81	227	4-734	I-059	
236 S-H28	UNT to Jacks Creek	Jacks Creek	Franklin	36.985174	-79.692272	Ephemeral	03010101	Pipeline ROW	16	16	139	4-734	I-060A	
237 S-H27	UNT to Jacks Creek	Jacks Creek	Franklin	36.985124	-79.692272	Ephemeral	03010101	Pipeline ROW	36	36	96	4-735	I-061B	
238 S-A22	UNT to Jacks Creek	Jacks Creek	Franklin	36.984846	-79.69187	Intermittent	03010101	Pipeline ROW	20	20	161	4-735	I-061A	
239 S-MM44	UNT to Little Jacks Creek	Little Jacks Creek	Franklin	36.982507	-79.687818	Perennial	03010101	Timber Mat Crossing	20	20	78	4-735	I-062	
240 S-MM46	UNT to Little Jacks Creek	Little Jacks Creek	Franklin	36.982240	-79.687818	Perennial	03010101	Timber Mat Crossing	9	9	26	4-735	S-MM46	
241 S-MM45	UNT to Little Jacks Creek	Little Jacks Creek	Franklin	36.981971	-79.686901	Ephemeral	03010101	Timber Mat Crossing	33	33	131	4-735	S-MM45	
242 S-MM48	UNT to Little Jacks Creek	Little Jacks Creek	Franklin	36.979223	-79.684192	Perennial	03010101	Timber Mat Crossing	25	25	174	4-736	I-063	
243 S-H25	Little Jacks Creek	Little Jacks Creek	Franklin	36.978025	-79.682186	Perennial	03010101	Timber Mat Crossing	20	20	139	4-736	I-064	
244 S-H24	UNT to Little Jacks Creek	Little Jacks Creek	Franklin	36.978025	-79.682186	Perennial	03010101	Timber Mat Crossing	20	20	200	4-736	I-065	
245 S-H23	UNT to Turkey Creek	Turkey Creek	Franklin	36.976421	-79.677523	Ephemeral	03010101	Pipeline ROW	92	92	462	4-738	I-086	
246 S-H11	UNT to Turkey Creek	Turkey Creek	Franklin	36.974647	-79.674453	Ephemeral	03010101	Pipeline ROW	18	18	91	4-738	S-H11	
247 S-A13	Turkey Creek	Turkey Creek	Franklin	36.973282	-79.673073	Perennial	03010101	Timber Mat Crossing	20	20	161	4-738	I-067	
248 S-A11	UNT to Turkey Creek	Turkey Creek	Franklin	36.973282	-79.673073	Perennial	03010101	Pipeline ROW	55	55	166	4-740	S-A11	
249 S-H17	Dinner Creek	Dinner Creek	Franklin	36.972125	-79.669988	Ephemeral	03010101	Pipeline ROW	101	101	806	4-741	I-069B	
250 S-A7	UNT to Dinner Creek	Dinner Creek	Franklin	36.972032	-79.662804	Perennial	03010101	Timber Mat Crossing	20	20	122	4-741	I-069A	
251 S-S58	Polecat Creek	Polecat Creek	Franklin	36.970524	-79.65737	Perennial	03010101	Timber Mat Crossing	78	78	161	4-741	I-070	
252 S-CD8	UNT to Owens Creek	Owens Creek	Franklin	36.970523	-79.653226	Intermittent	03010101	Pipeline ROW	84	84	358	4-742	I-071	
253 S-AB8	UNT to Owens Creek	Owens Creek	Franklin	36.969118	-79.651328	Intermittent	03010101	Pipeline ROW	30	30	301	4-742	I-078	
254 S-OD3	Owens Creek	Owens Creek	Franklin	36.968640	-79.645042	Intermittent	03010101	Timber Mat Crossing	20	20	601	4-743	I-073	
255 S-G16	Strawfield Creek	Strawfield Creek	Franklin	36.967711	-79.642174	Perennial	03010101	Timber Mat Crossing	88	88	301	4-743	I-074	
256 S-G15	UNT to Parrot Branch	Parrot Branch	Franklin	36.967025	-79.636599	Intermittent	03010101	Pipeline ROW	20	20	161	4-744	I-075	
257 S-G13	Parrot Branch	Parrot Branch	Franklin	36.967025	-79.636599	Intermittent	03010101	Timber Mat Crossing	20	20	200	4-744	I-076	
258 S-03	UNT to Jomiklin Creek	Jomiklin Creek	Pittsylvania	36.965631	-79.605542	Perennial	03010101	Timber Mat Crossing	105	105	632	4-747	I-078	
259 S-D4	UNT to Jomiklin Creek	Jomiklin Creek	Pittsylvania	36.965600	-79.604894	Intermittent	03010101	Pipeline ROW	20	20	321	4-747	I-079	
260 S-D2	Jomiklin Creek	Jomiklin Creek	Pittsylvania	36.965405	-79.599313	Perennial	03010101	Timber Mat Crossing	20	20	321	4-748	I-080	

T-14

Table 1 - Stream Impacts

Assigned VWP Number	Stream ID	HHD Stream Name	County	Latitude	Longitude	Flow Regime	NUC-8	Impact Type	Temporary Impacts (linear ft)	Permanent Fill Impacts (linear ft)	Temporary Impact Area (square feet)	Permanent Impact Area (square feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number (MVP)
261 S-07		UNT to Jonkin Creek	Fraclin	36.964763	-79.617043	Intermittent	03010101	Pipeline ROW	80		640		4-746	I-077
262 S-D1-EPH		UNT to Jonkin Creek	Pittsylvania	36.954490	-79.595691	Epheermal	03010101	Pipeline ROW	61		610		4-748	I-081
263 S-D1-UNT		UNT to Jonkin Creek	Pittsylvania	36.964407	-79.595841	Intermittent	03010101	Pipeline ROW	29		292		4-748	I-081
264 S-G11		UNT to Jonkin Creek	Pittsylvania	36.962420	-79.5905	Intermittent	03010101	Pipeline ROW	77		462		4-749	I-083
265 S-G9		UNT to Jonkin Creek	Pittsylvania	36.959361	-79.586437	Intermittent	03010101	Pipeline ROW	79		318		4-751	I-083
266 S-G8		UNT to Jonkin Creek	Pittsylvania	36.957805	-79.583545	Intermittent	03010101	Pipeline ROW	90		362		4-751	I-084A
267 S-Q15		UNT to Jonkin Creek	Pittsylvania	36.957580	-79.583492	Epheermal	03010101	Pipeline ROW	103		514		4-751	I-084B
268 S-A6		UNT to Rocky Creek	Pittsylvania	36.952275	-79.58064	Perennial	03010101	Timber Mat Crossing	100		100		4-750	I-085
269 S-H11-Braid		UNT to Rocky Creek	Pittsylvania	36.949513	-79.579553	Epheermal	03010101	Pipeline ROW	85		170		4-750	S-H11-Braid
270 S-F2		UNT to Rocky Creek	Pittsylvania	36.944049	-79.577442	Epheermal	03010101	Pipeline ROW	85		139		4-753	I-086
271 S-C7		UNT to Rocky Creek	Pittsylvania	36.940016	-79.571517	Perennial	03010101	Timber Mat Crossing	20		401		4-753	I-086
272 S-C3		Harpn Creek	Pittsylvania	36.929762	-79.526109	Perennial	03010101	Timber Mat Crossing	20		362		4-758	I-087
273 S-C4		UNT to Harpn Creek	Pittsylvania	36.929745	-79.526259	Perennial	03010101	Timber Mat Crossing	58		231		4-758	I-087
274 S-H13		Harpn Creek	Pittsylvania	36.925105	-79.51735	Perennial	03010101	Timber Mat Crossing	77		1542		4-759	I-088
275 S-G6		UNT to Harpn Creek	Pittsylvania	36.920737	-79.505898	Intermittent	03010101	Pipeline ROW	80		479		4-761	I-089
276 S-G5		UNT to Harpn Creek	Pittsylvania	36.917694	-79.496604	Epheermal	03010101	Pipeline ROW	77		462		4-762	I-090
277 S-G4		Harpn Creek	Pittsylvania	36.916463	-79.492669	Perennial	03010101	Timber Mat Crossing	30		601		4-762	I-091
278 S-G3		UNT to Harpn Creek	Pittsylvania	36.915658	-79.490029	Perennial	03010101	Timber Mat Crossing	20		179		4-762	I-092
279 S-CCL16		UNT to Harpn Creek	Pittsylvania	36.913003	-79.487828	Perennial	03010101	Timber Mat Crossing	20		222		4-763	I-093
280 S-CCL10		UNT to Cherrystone Creek	Pittsylvania	36.905329	-79.471492	Intermittent	03010105	Timber Mat Crossing	20		161		4-765	I-094
281 S-CCL13		UNT to Cherrystone Creek	Pittsylvania	36.905307	-79.471574	Intermittent	03010105	Timber Mat Crossing	20		139		4-765	I-094
282 S-MM8		UNT to Cherrystone Creek	Pittsylvania	36.902991	-79.46822	Perennial	03010105	Timber Mat Crossing	20		122		4-766	I-095
283 S-CCL5		UNT to Cherrystone Creek	Pittsylvania	36.901941	-79.465535	Perennial	03010105	Timber Mat Crossing	20		122		4-766	I-095
284 S-CC8		UNT to Cherrystone Creek	Pittsylvania	36.899437	-79.462483	Intermittent	03010105	Timber Mat Crossing	20		161		4-766	I-097
285 S-CC5		UNT to Cherrystone Creek	Pittsylvania	36.899411	-79.462483	Perennial	03010105	Timber Mat Crossing	20		240		4-766	I-097
286 S-CC3		UNT to Cherrystone Creek	Pittsylvania	36.899248	-79.462396	Perennial	03010105	Timber Mat Crossing	54		649		4-766	I-097
287 S-CC9		UNT to Cherrystone Creek	Pittsylvania	36.897740	-79.458046	Epheermal	03010105	Pipeline ROW	81		444		4-767	I-098
288 S-CCL10		UNT to Cherrystone Creek	Pittsylvania	36.897315	-79.456119	Intermittent	03010105	Pipeline ROW	78		701		4-767	I-099
289 S-CCL11		UNT to Cherrystone Creek	Pittsylvania	36.895910	-79.45296	Intermittent	03010105	Pipeline ROW	9		61		4-768	I-100
290 S-CC11		UNT to Cherrystone Creek	Pittsylvania	36.895808	-79.45192	Perennial	03010105	Pipeline ROW	87		697		4-768	I-100
291 S-CC1		Cherrystone Creek	Pittsylvania	36.894043	-79.447443	Perennial	03010105	Pipeline ROW	82		1228		4-769	I-101B
292 S-CC3		UNT to Cherrystone Creek	Pittsylvania	36.893727	-79.446763	Epheermal	03010105	Pipeline ROW	91		727		4-769	I-102
293 S-PS		UNT to Cherrystone Creek	Pittsylvania	36.892751	-79.440053	Epheermal	03010105	Timber Mat Crossing	20		100		4-769	I-103
294 S-L15-EPH		UNT to Pole Bridge Branch	Pittsylvania	36.891451	-79.433781	Epheermal	03010105	Pipeline ROW	171		684		4-770	I-104
295 S-Q4		UNT to Pole Bridge Branch	Pittsylvania	36.886114	-79.430914	Perennial	03010105	Timber Mat Crossing	20		100		4-771	I-106A
296 S-Q3		Pole Bridge Branch	Pittsylvania	36.884444	-79.42822	Perennial	03010105	Pipeline ROW	75		1873		4-771	I-106B
297 S-Q2		UNT to Pole Bridge Branch	Pittsylvania	36.884284	-79.427914	Perennial	03010105	Timber Mat Crossing	20		239		4-772	I-108
298 S-B6		UNT to Pole Bridge Branch	Pittsylvania	36.879093	-79.401189	Epheermal	03010105	Pipeline ROW	84		841		4-772	I-109
299 S-B8		UNT to Pole Bridge Branch	Pittsylvania	36.877937	-79.412932	Intermittent	03010105	Pipeline ROW	82		327		4-773	I-109
300 S-89		UNT to Pole Bridge Branch	Pittsylvania	36.877416	-79.412525	Perennial	03010105	Pipeline ROW	76		545		4-773	I-110
301 S-DD4-Brid 1		UNT to Mill Creek	Pittsylvania	36.871651	-79.404061	Intermittent	03010105	Pipeline ROW	67		401		4-775	I-111
302 S-DD4		UNT to Mill Creek	Pittsylvania	36.871478	-79.403907	Intermittent	03010105	Pipeline ROW	147		880		4-775	I-111
303 S-R127		UNT to Mill Creek	Pittsylvania	36.866534	-79.400511	Epheermal	03010105	Pipeline ROW	84		880		4-776	I-112
304 S-C1		Mill Creek	Pittsylvania	36.865133	-79.397914	Intermittent	03010105	Pipeline ROW	92		553		4-777	I-113
305 S-G2		Little Cherrystone Creek	Pittsylvania	36.851931	-79.397914	Perennial	03010105	Timber Mat Crossing	20		139		4-779	I-114
306 S-B2		UNT to Little Cherrystone Creek	Pittsylvania	36.849394	-79.37778	Epheermal	03010105	Timber Mat Crossing	20		100		4-780	I-115
307 S-H55		UNT to Little Cherrystone Creek	Pittsylvania	36.849486	-79.369222	Epheermal	03010105	Timber Mat Crossing	20		61		4-781	I-116
308 S-H54		UNT to Little Cherrystone Creek	Pittsylvania	36.841112	-79.366848	Perennial	03010105	Timber Mat Crossing	20		240		4-781	I-117
309 S-GG11		UNT to Little Cherrystone Creek	Pittsylvania	36.841093	-79.366942	Perennial	03010105	Timber Mat Crossing	46		366		4-781	I-117
310 S-H3		UNT to Little Cherrystone Creek	Pittsylvania	36.834501	-79.359244	Intermittent	03010105	Pipeline ROW	18		109		4-783	I-118
311 S-H5		UNT to Little Cherrystone Creek	Pittsylvania	36.833412	-79.359823	Perennial	03010105	Pipeline ROW	83		662		4-783	I-118
312 S-O01		UNT to Little Cherrystone Creek	Pittsylvania	36.830485	-79.356618	Intermittent	03010105	Pipeline ROW	48		266		4-783	I-119
313 S-H44		UNT to Little Cherrystone Creek	Pittsylvania	36.829873	-79.345038	Perennial	03010105	Timber Mat Crossing	33		416		4-785	I-122
314 S-H42		UNT to Little Cherrystone Creek	Pittsylvania	36.828953	-79.344442	Perennial	03010105	Permanent Access Road	32		224		4-785	S-H42
315 S-H42		UNT to Little Cherrystone Creek	Pittsylvania	36.828953	-79.344442	Perennial	03010105	Permanent Access Road	20		139		4-785	S-H42
316 S-O02		UNT to Little Cherrystone Creek	Pittsylvania	36.828831	-79.344413	Perennial	03010105	Pipeline ROW	78		397		4-784	I-123
317 S-EF26		Little Cherrystone Creek	Pittsylvania	36.828207	-79.349814	Perennial	03010105	Timber Mat Crossing	20		401		4-784	I-121

Note: Gray-scale rows indicate timber mat crossings, and one additional Temporary workspace [ATWS] completed under NWP-12

Table 2 - Wetland Impacts

Assigned WVP Number	Wetland ID	County	Latitude	Longitude	Cowardin Class	HUC 8	Impact Type	Temporary Impacts (square feet)	Permanent Conversion Impacts (square feet)	Permanent Fill Impacts (square feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number
318	W-Z11	Giles	37.346591	-80.64171	PEM	05050002	Pipeline ROW	1141	-	-	4-543	G-008
319	W-Z3	Giles	37.342244	-80.62061	PSS	05050002	Timber Mat Crossing	-	592	-	4-545	G-013
320	W-CD12	Giles	37.318644	-80.44172	PEM	05050002	Pipeline ROW	906	-	-	4-577	G-029
321	W-MM10	Giles	37.298219	-80.48062	PEM	05050002	Temporary Access Road	1106	-	-	4-569	S-MM17 - W-MM10
322	W-RR1b	Giles	37.29667	-80.49404	PEM	05050002	Timber Mat Crossing	244	-	-	4-567	G-024
323	W-IJ46	Montgomery	37.296153	-80.36751	PEM	03010101	Pipeline ROW	1281	-	-	4-591	G-044
324	W-AD4	Montgomery	37.286984	-80.33012	PEM	03010101	Temporary Access Road	301	-	-	4-596	W-AD4-A
325	W-NN6	Montgomery	37.268174	-80.31647	PEM	03010101	Timber Mat Crossing	362	-	-	4-603	Crossing completed (NWP-12)
326	W-F9-PFO	Montgomery	37.258109	-80.28589	PFO	03010101	Pipeline ROW	8999	736	-	4-609	H-006
327	W-C12	Montgomery	37.257265	-80.28167	PEM	03010101	Pipeline ROW	-	2278	-	4-609	H-008
328	W-C12	Montgomery	37.257192	-80.28165	PFO	03010101	Pipeline ROW	-	2008	-	4-609	H-008
329	W-C11	Montgomery	37.257107	-80.28135	PSS	03010101	Timber Mat Crossing	605	-	-	4-610	W-C6
330	W-C6	Montgomery	37.25586	-80.27572	PEM	03010101	Pipeline ROW	1978	-	-	4-610	H-012
331	W-C5	Montgomery	37.255606	-80.27424	PEM	03010101	Timber Mat Crossing	174	-	-	4-631	H-020
332	W-AB7	Montgomery	37.231426	-80.19862	PEM	03010101	Permanent Access Road	-	-	1707	4-631	H-022
333	W-KL58	Montgomery	37.229183	-80.20311	PEM	03010101	Pipeline ROW	-	3711	-	4-635	H-024
334	W-EF5	Montgomery	37.210948	-80.19336	PFO	03010101	Temporary Access Road	-	976	-	4-647	W-EF18 - W-EF17A
335	W-EF18	Roanoke	37.179449	-80.14067	PSS	03010101	Temporary Access Road	880	-	-	4-649	H-031
336	W-EF17	Roanoke	37.179402	-80.14066	PFO	03010101	Timber Mat Crossing	701	-	-	4-650	S-IJ85 - W-IJ96-PEM - W-IJ97-A
337	W-IJ94	Roanoke	37.170092	-80.13829	PEM	03010101	Temporary Access Road	-	-	-	4-649	H-031
338	W-IJ96	Roanoke	37.169461	-80.13038	PEM	03010101	Timber Mat Crossing	-	1106	-	4-651	H-033-W-KL17-S-KL25
339	W-IJ95	Roanoke	37.169068	-80.13828	PSS	03010101	Timber Mat Crossing	-	436	-	4-652	H-036
340	W-IJ102	Roanoke	37.168289	-80.13838	PFO	03010101	Pipeline ROW	-	1895	-	4-652	H-036
341	W-KL17	Roanoke	37.160152	-80.13477	PSS	03010101	Pipeline ROW	362	-	-	4-652	H-036
344	W-EF42	Roanoke	37.157611	-80.13372	PEM	03010101	Pipeline ROW	12602	-	-	4-652	H-036
345	W-H502	Roanoke	37.157427	-80.13341	PEM	03010101	Pipeline ROW	14248	-	-	4-652	H-036
346	W-AB6	Roanoke	37.156825	-80.132	PEM	03010101	Pipeline ROW	-	2692	-	4-652	H-036
347	W-AB6	Roanoke	37.156713	-80.13168	PFO	03010101	Pipeline ROW	-	266	-	4-652	H-036
348	W-AB6	Roanoke	37.15617	-80.13079	PEM	03010101	Pipeline ROW	2818	-	-	4-652	H-036
349	W-AB6	Roanoke	37.156034	-80.1306	PSS	03010101	Pipeline ROW	-	183	-	4-652	H-036
350	W-AB5	Roanoke	37.15584	-80.13023	PFO	03010101	Pipeline ROW	-	6739	-	4-652	H-036
351	W-AB3	Roanoke	37.155664	-80.12957	PEM	03010101	Pipeline ROW	-	2971	-	4-652	H-40
352	W-EF46	Roanoke	37.154575	-80.12912	PSS	03010101	Timber Mat Crossing	-	1978	-	4-653	H-41
353	W-KL48	Roanoke	37.152292	-80.13002	PSS	03010101	Pipeline ROW	-	-	-	4-653	W-KL48-PEM
354	W-KL48	Roanoke	37.151965	-80.13005	PEM	03010101	Pipeline ROW	274	-	-	4-653	W-KL48-PSS-2, W-KL50
355	W-KL48	Roanoke	37.150926	-80.13127	PSS	03010101	Pipeline ROW	-	1150	-	4-653	W-KL48-PSS-2, W-KL50
356	W-KL50	Roanoke	37.150728	-80.13154	PEM	03010101	Pipeline ROW	1777	-	-	4-653	H-042
357	W-KL49	Roanoke	37.150297	-80.13219	PEM	03010101	Timber Mat Crossing	662	-	-	4-653	H-042
358	W-KL51	Roanoke	37.150006	-80.1324	PEM	03010101	Timber Mat Crossing	274	-	-	4-653	H-042
359	W-KL51	Roanoke	37.149975	-80.13248	PSS	03010101	Timber Mat Crossing	-	348	-	4-653	H-042
360	W-MN7	Roanoke	37.148328	-80.1339	PEM	03010101	Timber Mat Crossing	505	-	-	4-654	H-043
361	W-EF44	Roanoke	37.142977	-80.13832	PEM	03010101	Timber Mat Crossing	370	-	-	4-654	H-044
362	W-IJ36	Roanoke	37.138922	-80.13985	PSS	03010101	Timber Mat Crossing	-	5388	-	4-655	H-045
363	W-27	Roanoke	37.136601	-80.12822	PSS	03010101	Temporary Access Road	-	13	-	4-657	W-27 - W-Z6-A
364	W-Z6	Roanoke	37.136466	-80.12824	PFO	03010101	Temporary Access Road	-	122	-	4-657	W-27 - W-Z6-A
365	W-IJ62	Roanoke	37.135529	-80.13404	PEM	03010101	Temporary Access Road	4	-	-	4-656	W-IJ62
366	W-Y2	Roanoke	37.134284	-80.13745	PEM	03010101	Timber Mat Crossing	823	-	-	4-656	H-046
367	W-IJ10	Roanoke	37.132561	-80.13174	PEM	03010101	Permanent Access Road	87	-	-	4-656	W-IJ10 - W-Q11 - W-KL1-A

T2-1

Table 2 - Wetland Impacts

Assigned WVP Number	Wetland ID	County	Latitude	Longitude	Cowardin Class	HUC 8	Impact Type	Temporary Impacts (square feet)	Permanent Conversion Impacts (square feet)	Permanent Fill Impacts (square feet)	Application Figure Number (MVP)	Plan & Profile Drawing Number
368	W-Q11	Roanoke	37.13247	-80.13164	PEM	03010101	Permanent Access Road	566	-	-	4-656	W-J10 - W-Q11 - W-KL1-A
369	W-K11	Roanoke	37.132456	-80.13146	PEM	03010101	Permanent Access Road	78	-	-	4-656	W-J10 - W-Q11 - W-KL1-A
370	W-B25-	Roanoke	37.128942	-80.13377	PEM	03010101	Timber Mat Crossing	405	-	-	4-659	H-047A
371	W-B25-	Roanoke	37.128645	-80.13328	PEM	03010101	Pipeline ROW	8425	-	-	4-659	H-047B-W-B25-PEM-1-W-B25-PEM-1A
372	W-B24-	Roanoke	37.12854	-80.13079	PSS	03010101	Pipeline ROW	-	7131	-	4-659	H-048B
373	W-B24-	Roanoke	37.12853	-80.13106	PEM	03010101	Pipeline ROW	4491	-	-	4-659	H-048B
374	W-B25-	Roanoke	37.128527	-80.13234	PSS	03010101	Timber Mat Crossing	-	3615	-	4-659	H-048
375	W-B25-	Roanoke	37.128449	-80.1328	PEM	03010101	Timber Mat Crossing	610	-	-	4-659	H-048
376	W-B25-	Roanoke	37.128436	-80.13265	PEM	03010101	Timber Mat Crossing	209	-	-	4-659	H-048
377	W-S72-	Franklin	37.125329	-80.12146	PEM	03010101	Pipeline ROW	4975	-	-	4-661	H-051
378	W-RR4	Franklin	37.125117	-80.11353	PEM	03010101	Permanent Access Road	941	-	-	4-662	W-RR4 - S-RR18 - W-RR3 - W-KL1-A1
379	W-RR3	Franklin	37.124714	-80.11475	PEM	03010101	Permanent Access Road	83	-	-	4-662	W-RR4 - S-RR18 - W-RR3 - W-KL1-A1
380	W-K141	Franklin	37.123851	-80.1158	PEM	03010101	Permanent Access Road	998	-	-	4-661	W-RR4 - S-RR18 - W-RR3 - W-KL1-A1
381	W-D7-	Franklin	37.121559	-80.08575	PEM	03010101	Pipeline ROW	693	-	-	4-666	H-053
382	W-EF3	Franklin	37.117734	-80.09599	PEM	03010101	Permanent Access Road	1154	-	-	4-665	W-EF3
383	W-I11	Franklin	37.092927	-80.02757	PEM	03010101	Pipeline ROW	1812	-	-	4-677	H-063
386	W-GH2	Franklin	37.092404	-79.98318	PSS	03010101	Timber Mat Crossing	-	566	-	4-684	Crossing completed (NWP-12)
387	W-I18	Franklin	37.091357	-79.99201	PEM	03010101	Timber Mat Crossing	383	-	-	4-683	Crossing completed (NWP-12)
388	W-I16	Franklin	37.089156	-80.00504	PEM	03010101	Timber Mat Crossing	200	-	-	4-681	Crossing completed (NWP-12)
389	W-E7	Franklin	37.084557	-79.9476	PEM	03010101	Pipeline ROW	9249	-	-	4-690	I-004
390	W-E8	Franklin	37.082843	-79.9461	PEM	03010101	Pipeline ROW	3010	-	-	4-690	I-005
391	W-EF51	Franklin	37.064781	-79.87446	PEM	03010101	Pipeline ROW	579	-	-	4-705	I-026
392	W-K143b	Franklin	37.059608	-79.84071	PEM	03010101	Pipeline ROW	17	-	-	4-710	I-031
393	W-CD6	Franklin	37.057586	-79.91523	PEM	03010101	Timber Mat Crossing	4069	-	-	4-698	I-016
394	W-CD5	Franklin	37.055438	-79.91062	PFO	03010101	Pipeline ROW	-	4948	-	4-698	I-017
395	W-EF48	Franklin	37.052142	-79.8862	PEM	03010101	Timber Mat Crossing	348	-	-	4-702	I-020
396	W-CD1	Franklin	37.047767	-79.89757	PFO	03010101	Pipeline ROW	-	4818	-	4-701	I-019
397	W-DD1	Franklin	37.031754	-79.7881	PEM	03010101	Pipeline ROW	3541	-	-	4-720	I-043B
398	W-A12-	Franklin	37.031643	-79.78811	PEM	03010101	Pipeline ROW	-	174	-	4-720	I-043A
399	W-A12-	Franklin	37.031643	-79.78811	PEM	03010101	Pipeline ROW	2836	-	-	4-722	I-046
400	W-GH16	Franklin	37.028394	-79.77324	PFO	03010101	Timber Mat Crossing	-	2862	-	4-730	I-053
401	W-H17	Franklin	36.98939	-79.72209	PFO	03010101	Timber Mat Crossing	-	1607	-	4-734	I-058
402	W-H11	Franklin	36.988077	-79.7028	PEM	03010101	Pipeline ROW	2039	-	-	4-731	I-055
403	W-H16	Franklin	36.988073	-79.71497	PEM	03010101	Timber Mat Crossing	1011	-	-	4-732	I-056
404	W-H14	Franklin	36.988069	-79.71184	PEM	03010101	Timber Mat Crossing	266	-	-	4-734	I-059
405	W-A8	Franklin	36.987947	-79.70084	PEM	03010101	Pipeline ROW	671	-	-	4-731	I-055
406	W-H15	Franklin	36.987938	-79.71483	PSS	03010101	Timber Mat Crossing	-	309	-	4-736	I-064
407	W-H9	Franklin	36.978536	-79.68206	PEM	03010101	Timber Mat Crossing	370	-	-	4-741	I-069B
408	W-H6	Franklin	36.972189	-79.66304	PEM	03010101	Pipeline ROW	248	-	-	4-748	I-080
409	W-D3	Pittsylvania	36.965318	-79.59876	PFO	03010101	Timber Mat Crossing	-	1241	-	4-746	I-077
410	W-MM17	Franklin	36.964731	-79.61707	PEM	03010101	Pipeline ROW	296	-	-	4-751	I-083
411	W-B5	Pittsylvania	36.959293	-79.5862	PEM	03010101	Pipeline ROW	209	-	-	4-751	I-084A
412	W-B4-PSS	Pittsylvania	36.957884	-79.58367	PSS	03010101	Pipeline ROW	-	205	-	4-758	W-C1
413	W-C1	Pittsylvania	36.929954	-79.52683	PEM	03010101	Timber Mat Crossing	793	-	-	4-759	I-088
414	W-H5	Pittsylvania	36.924983	-79.51716	PEM	03010101	Pipeline ROW	9004	-	-	4-762	S-G4
415	W-B3	Pittsylvania	36.916508	-79.49236	PEM	03010101	Timber Mat Crossing	57	-	-	4-765	I-094
416	W-CC2-	Pittsylvania	36.905418	-79.47157	PEM	03010105	Timber Mat Crossing	1185	-	-	4-766	I-095
417	W-MM5	Pittsylvania	36.903012	-79.46819	PSS	03010105	Timber Mat Crossing	-	1699	-	-	-

Table 2 - Wetland Impacts

Assigned WWP Number	Wetland ID	County	Latitude	Longitude	Cowardin Class	HUC 8	Impact Type	Temporary Impacts (square feet)	Permanent Conversion Impacts (square feet)	Permanent Fill Impacts (square feet)	Application Figure Number (NWP)	Plan & Profile Drawing Number
418	W-MM9	Pittsylvania	36.894087	-79.44611	PEM	03010105	Timber Mat Crossing	470	-	-	4-769	I-101A
419	W-MM8	Pittsylvania	36.894034	-79.44549	PEM	03010105	Pipeline ROW	2409	-	-	4-769	I-101B
420	W-MM8	Pittsylvania	36.89393	-79.44546	PFO	03010105	Pipeline ROW	-	1834	-	4-769	I-101B
421	W-Q2	Pittsylvania	36.884674	-79.42861	PFO	03010105	Pipeline ROW	-	16422	-	4-771	I-106B
422	W-Q1	Pittsylvania	36.883985	-79.42731	PEM	03010105	Pipeline ROW	636	-	-	4-771	I-107
423	W-G2	Pittsylvania	36.851816	-79.38593	PEM	03010105	Timber Mat Crossing	1507	-	-	4-779	I-114
424	W-H1	Pittsylvania	36.856097	-79.3609	PEM	03010105	Pipeline ROW	479	-	-	4-782	I-118-S-H5-W-H3
425	W-EF6	Pittsylvania	36.835004	-79.33913	PFO	03010105	Pipeline ROW	-	2905	-	4-786	I-124
426	W-H2	Pittsylvania	36.834817	-79.36048	PEM	03010105	Pipeline ROW	34791	-	-	4-782	W-H2
427	W-IJ1	Pittsylvania	36.834623	-79.33853	PFO	03010105	Timber Mat Crossing	-	462	-	4-786	W-IJ1
428	W-H3	Pittsylvania	36.833741	-79.36008	PEM	03010105	Pipeline ROW	2217	-	-	4-783	I-118
429	W-MM3	Pittsylvania	36.830361	-79.35663	PSS	03010105	Pipeline ROW	-	1481	-	4-783	I-119
430	W-IJ2-PE	Pittsylvania	36.82778	-79.35026	PEM	03010105	Timber Mat Crossing	1699	-	-	4-784	I-121
431	W-IJ2-PF	Pittsylvania	36.827748	-79.3503	PFO	03010105	Timber Mat Crossing	-	3419	-	4-784	I-121

Note: Grayscale rows indicate timber mat crossings completed under NWP-12

Table 3 - DWR Time of Year Restrictions/DOE Recommendations

Assigned WWP Number	Stream ID	National Hydrogeological Database Stream Name (NHSD)	Flow Regime (MWP)	Proposed Crossing Method (MWP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEE)	Latitude (DEE)	Longitude (DEE)	Profile & Plan Drawing Number (MWP)	Application Figure Number (MWP)
1	S-Q12	UNT to Kimballton Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.375311	-80.680878	G-001	4-531
2	S-Q13	Kimballton Branch	Perennial	Dry-Ditch Open-Cut	none, but upstream of wild trout water (Brook Trout, Brown Trout) and TE Water - Stony Creek (Candy Darter)	Brook and Brown Trout, October 1 through March 31; Candy Darter, March 15 through June 30	MWP requested a modification at this site. Without additional information or a change in crossing type, we continue to recommend adherence to the instream work TOYR.		Giles	37.374277	-80.682039	G-002	4-532
3	S-P6	UNT to Stony Creek	Ephemeral	Dry-Ditch Open-Cut	none, but upstream of TE Water - Stony Creek (Candy Darter)	Candy Darter (Stony Creek) March 15 through June 30			Giles	37.362202	-80.680892	G-003	4-535
4	S-S5 Braid-2	Stony Creek	Ephemeral, Ephemeral, Perennial	Conventional Bore	TE Water (Candy Darter)	Candy Darter, March 15 through June 30			Giles	37.360325	-80.684214	G-004	4-536
5	S-S5 Braid-1	Stony Creek	Ephemeral, Ephemeral, Perennial	Conventional Bore	TE Water (Candy Darter)	Candy Darter, March 15 through June 30			Giles	37.360276	-80.684193	G-004	4-536
6	S-S5	Stony Creek	Ephemeral, Ephemeral, Perennial	Conventional Bore	TE Water for Candy Darter	Candy Darter (Stony Creek) March 15 through June 30			Giles	37.360071	-80.683936	G-004	4-536
7	S-G29	UNT to Dry Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.35043	-80.658239	G-005	4-541
8	S-G30	UNT to Dry Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.350373	-80.65823	G-005	4-541
9	S-G32	Dry Branch	Intermittent	Dry-Ditch Open-Cut	none	none			Giles	37.349095	-80.65204	G-006	4-542
10	S-G33	UNT to Dry Branch	Perennial	Dry-Ditch Open-Cut	none	none			Giles	37.348641	-80.647235	G-007	4-542
11	S-G35	UNT to Little Stony Creek	Perennial	Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15	MWP requested a TOYR modification - no TOYR necessary if constructed via bore, so their request is approved.		Giles	37.344876	-80.631426	G-009	4-544
12	S-S5A	UNT to Little Stony Creek	Ephemeral	Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15	MWP requested a TOYR modification - no TOYR necessary if constructed via bore, so their request is approved.		Giles	37.344859	-80.631295	G-010	4-544
13	S-G35	UNT to Little Stony Creek	Perennial	Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15			Giles	37.344779	-80.633379	G-009	4-544
14	S-Z7	UNT to Little Stony Creek	Intermittent, Ephemeral	Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15	MWP requested a TOYR modification - no TOYR necessary if constructed via bore, so their request is approved.		Giles	37.344278	-80.631805	G-012	4-545
15	S-Z7 Braid-1	UNT to Little Stony Creek	Intermittent, Ephemeral	Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15	MWP requested a TOYR modification - no TOYR necessary if constructed via bore, so their request is approved.		Giles	37.344277	-80.631613	G-012	4-545
16	S-Z9	UNT to Little Stony Creek	Perennial	Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15			Giles	37.344163	-80.6264	G-011	4-544
17	S-Z10	UNT to Little Stony Creek	Intermittent, Perennial, Ephemeral, Wetland	Guided Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15	MWP requested a TOYR modification - no TOYR necessary if constructed via bore, so their request is approved.		Giles	37.342351	-80.620823	G-013	4-545
18	S-Z11	UNT to Little Stony Creek	Intermittent, Perennial, Ephemeral, Wetland	Guided Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15			Giles	37.342236	-80.620542	G-013	4-545
19	S-Z12-EPH	UNT to Little Stony Creek	Intermittent, Perennial, Ephemeral, Wetland	Guided Conventional Bore	none, but trib to wild trout water Little Stony Creek (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15			Giles	37.342214	-80.620312	G-013	4-545
20	S-Z13	Little Stony Creek	Intermittent, Perennial, Ephemeral, Wetland	Guided Conventional Bore	wild trout water (Brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - Brook and Rainbow Trout October 1 through May 15			Giles	37.342172	-80.62009	G-013	4-545

T3-1



Table 3 - DWR Time of Year Restrictions/DOER Recommendations

Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work, TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEQ)	Latitude (DEQ)	Longitude (DEQ)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
21	S-Z14	UNT to Little Stony Creek (DEQ)	Intermittent	Conventional Bore	none, but trib to wild trout water, Little Stony Creek (brook and Rainbow Trout)	IF ANY INSTREAM WORK, TOYR not necessary if constructed via bore - brook and rainbow trout: October 1 through May 15	MVP requested a TOYR modification - no TOYR necessary if constructed via bore, so their request is approved		Giles	37.540977	-80.618031	G-014	4-545
22	S-YZ1	Doe Creek	Intermittent	Temporary Access Road	none	none			Giles	37.338952	-80.614618	S-YZ1	4-546
23	S-A34	UNT to Doe Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.337763	-80.606008	G-015A	4-548
24	S-A33	UNT to Doe Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.337639	-80.605571	G-015B	4-548
25	S-A32	UNT to Doe Creek	Perennial	Dry-Ditch Open-Cut	none	none			Giles	37.335094	-80.596568	G-016	4-549
26	S-Q02	Sinking Creek	Perennial	Temporary Access Road	stockable trout water	To ensure avoidance of stocking and/or angling activities, we recommend coordination with our Regional Aquatic Resources Manager, Jeff Williams			Craig	37.333152	-80.429498	S-Q02	4-551
27	S-MN11-Upstream	UNT to Sinking Creek	Ephemeral	Temporary Access Road	none	none			Giles	37.332869	-80.559168	S-MN11-Upstream	4-554
28	S-MN11-Downstream	UNT to Sinking Creek	Ephemeral	Temporary Access Road	none	none			Giles	37.332151	-80.559779	S-MN11-Downstream	4-554
29	S-Y3	UNT to Doe Creek	Ephemeral, Perennial	Conventional Bore	none	none			Giles	37.331748	-80.583355	G-017	4-551
31	S-Y2	Doe Creek	Ephemeral, Perennial	Conventional Bore	none	none			Giles	37.331332	-80.583027	G-017	4-551
32	S-PP4	UNT to Sinking Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Craig	37.328329	-80.422281	G-033	4-579
33	S-PP3	UNT to Sinking Creek	Perennial	Dry-Ditch Open-Cut	none	none			Craig	37.326705	-80.425803	G-032	4-579
34	S-RR4	UNT to Sinking Creek	Perennial	Temporary Access Road	none	none			Giles	37.326015	-80.556831	S-RR4	4-556
35	S-EZ4	UNT to Sinking Creek	Perennial	Dry-Ditch Open-Cut	none	none			Giles	37.325778	-80.555082	G-019A	4-553
36	S-EZ5-Downstream	UNT to Sinking Creek	Perennial	Conventional Bore	none	none			Giles	37.325638	-80.554688	G-019B	4-553
37	S-EZ5-Upstream	UNT to Sinking Creek	Perennial	Pipeline ROW	none	none			Giles	37.325607	-80.554373	G-019A	4-553
38	S-EZ5-Downstream	UNT to Sinking Creek	Perennial	Conventional Bore	none	none			Giles	37.325566	-80.554034	G-019B	4-553
39	S-PP1	UNT to Sinking Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Craig	37.324781	-80.431446	G-031	4-578
40	S-RR5	UNT to Sinking Creek	Perennial	Dry-Ditch Open-Cut	none	none			Giles	37.323702	-80.555627	G-020	4-555
41	S-PA07	UNT to Sinking Creek	Intermittent	Pipeline ROW	none	none			Giles	37.323533	-80.555257	G-020	4-555
42	S-U18-EPH	UNT to Sinking Creek	Ephemeral, Intermittent	Dry-Ditch Open-Cut	none	none			Giles	37.322737	-80.553396	G-000A	4-555
43	S-U19	UNT to Sinking Creek	Ephemeral	Temporary Access Road	none	none			Giles	37.322194	-80.553056	S-U19	4-555
44	S-U19	UNT to Sinking Creek	Ephemeral	Temporary Access Road	none	none			Giles	37.321823	-80.553111	S-U19	4-555
45	S-U18-INT	UNT to Sinking Creek	Ephemeral	Temporary Access Road	none	none			Giles	37.321756	-80.553011	S-U18-INT	4-555
46	S-PP22	UNT to Craig Creek	Intermittent	Conventional Bore	none, but upstream of TE Water Creek (James Spinnymusale). Upstream of stockable trout water.	If instream work, TOYR not necessary if constructed via bore through July 31		According to the information currently in our files, Craig Creek, which has been designated by the VDW as a "Threatened and Endangered Species Water" for the James Spinnymusale is within the submitted project boundary including a 100-foot buffer. Therefore, DC-DOH recommends coordination with USFWS and VDW's Wildlife Management Authority for the management and protection of this species to ensure compliance with protected species legislation.	Montgomery	37.321109	-80.412831	G-034	4-584
47	S-Q01Z	UNT to Sinking Creek	Ephemeral, Perennial	Dry-Ditch Open-Cut	none	none			Giles	37.318956	-80.440648	G-030	4-577

T3-2

Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned VWP Number	Stream ID	National Hydrogeological Database System Name	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR modification request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEC)	Latitude (DEC)	Longitude (DEC)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
48	S-0013	UNT to Sinking Creek	Epithermal, Perennial	Dry-Ditch Open-Cut	none	none	MVP asked for TOYR modification, but no TOYR are necessary here anyway, so their request is approved.		Giles	37.31893	-80.44093	G-030	4-577
49	S-0014	UNT to Sinking Creek	Wetland, Perennial	Dry-Ditch Open-Cut	none	none	MVP asked for TOYR modification, but no TOYR are necessary here anyway, so their request is approved.		Giles	37.318647	-80.441619	G-029	4-577
50	S-H17	UNT to Sinking Creek	Epithermal	Pipeline ROW	none	none			Giles	37.318374	-80.5472	G-022	4-558
51	S-H1E-b	UNT to Sinking Creek	Epithermal	Dry-Ditch Open-Cut	none	none			Giles	37.318246	-80.547711	G-022	4-558
52	S-PPZ1	UNT to Craig Creek	Perennial	Conventional Bore	Water, but upstream of TE Water, Craig Creek (James Spiny-mussel). Upstream of stockable trout water.	IF instream work, TOYR and mussel survey not necessary if constructed via bore. Mussel survey and potential relocation necessary prior to any instream work. TOYR for James Spiny-mussel: May 15 through July 31.		According to the information currently in our files, Craig Creek, which has been designated by the VDW as a "Threatened and Endangered Species Water" for the James spiny-mussel is within the submitted project boundary including a 100-foot buffer. Therefore, DCR-DNH recommends coordination with USFWS and DWR, Virginia's regulatory authority for the management and protection of the waters to ensure compliance with protected species legislation.	Montgomery	37.317187	-80.409235	G-035	4-584
53	S-PP20	UNT to Craig Creek	Perennial	Conventional Bore	none, but upstream of TE Water, Craig Creek (James Spiny-mussel). Upstream of stockable trout water.	IF instream work, TOYR and mussel survey not necessary if constructed via bore. Mussel survey and potential relocation necessary prior to any instream work. TOYR for James Spiny-mussel: May 15 through July 31.		According to the information currently in our files, Craig Creek, which has been designated by the VDW as a "Threatened and Endangered Species Water" for the James spiny-mussel is within the submitted project boundary including a 100-foot buffer. Therefore, DCR-DNH recommends coordination with USFWS and DWR, Virginia's regulatory authority for the management and protection of the waters to ensure compliance with protected species legislation.	Montgomery	37.316533	-80.408846	G-036	4-584
54	S-RR13	Craig Creek	Perennial	Temporary Access Road	TE Water (James spiny-mussel)	IF instream work, TOYR and mussel survey not necessary if constructed via bore. Mussel survey and potential relocation necessary prior to any instream work. TOYR for James Spiny-mussel: May 15 through July 31.		According to the information currently in our files, Craig Creek, which has been designated by the VDW as a "Threatened and Endangered Species Water" for the James spiny-mussel is within the submitted project boundary including a 100-foot buffer. Therefore, DCR-DNH recommends coordination with USFWS and DWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with protected species legislation.	Montgomery	37.314504	-80.403613	S-W13	4-585

T3-3

Table 3 - DWR Time of Year Restrictions/DOE Recommendations

Assigned WVP Number	Stream ID	Neotoma Hydrogeological Database Stream Name (LDD)	Flow Regime (MWP)	Proposed Crossing Method (MWP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR model request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DCD)	Latitude (D1Q)	Longitude (D6C)	Profile & Plan Drawing Number (WVP)	Application Figure Number (WVP)
55	S-HH18	UNT to Craig Creek (LDD)	Perennial	Conventional Bore	none, but upstream of TE Water-Craig Creek (James Spiny-mussel). Upstream of stable trout water.	If instream work, TOYR and mussel survey not necessary if constructed via bore. Mussel survey and potential relocation work. TOYR for James Spiny-mussel: May 15 through July 31.	MWP requested TOYR in March. MWP requested TOYR in May 14. This is not within the recommended TOYR, so that request is approved.	According to the information currently in our files, Craig Creek, which has been designated by the DWR as a "Threatened and Endangered Species Water" for the James spiny-mussel, is within the submitted project boundary including a 100-foot buffer. Therefore, DCR-DNR recommends coordination with USFWS and VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with protected species legislation.	Montgomery	37.31391	-80.38633	G-039	4-585
56	S-RR14	UNT to Craig Creek	Ephemeral	Conventional Bore	none, but upstream of TE Water-Craig Creek (James Spiny-mussel). Upstream of stable trout water.	If instream work, TOYR and mussel survey not necessary if constructed via bore. Mussel survey and potential relocation work. TOYR for James Spiny-mussel: May 15 through July 31.		According to the information currently in our files, Craig Creek, which has been designated by the DWR as a "Threatened and Endangered Species Water" for the James spiny-mussel, is within the submitted project boundary including a 100-foot buffer. Therefore, DCR-DNR recommends coordination with USFWS and VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with protected species legislation.	Montgomery	37.313615	-80.402321	G-088	4-585
57	S-O06	Craig Creek	Perennial	Conventional Bore	TE Water (James Spiny-mussel)	If instream work, TOYR and mussel survey not necessary if constructed via bore. Mussel survey and potential relocation work. TOYR for James Spiny-mussel: May 15 through July 31.		According to the information currently in our files, Craig Creek, which has been designated by the DWR as a "Threatened and Endangered Species Water" for the James spiny-mussel, is within the submitted project boundary including a 100-foot buffer. Therefore, DCR-DNR recommends coordination with USFWS and VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with protected species legislation.	Montgomery	37.313511	-80.404606	G-037	4-585
58	S-QQ3	UNT to Sinking Creek	Ephemeral	Temporary Access Road	none	none			Giles	37.311735	-80.532004	S-Q03	4-580
59	S-JJ16-a	UNT to Sinking Creek	Ephemeral	Permanent Access Road	none	none			Giles	37.31173	-80.540091	S-JJ16-a	4-559
60	S-JJ16-b	UNT to Sinking Creek	Ephemeral	Permanent Access Road	none	none			Giles	37.31173	-80.540091	S-JJ16-b	4-559
61	S-NN17	Sinking Creek	Perennial	Conventional Bore	none	none			Giles	37.311616	-80.515786	G-023	4-564
62	S-LL03	UNT to Sinking Creek	Perennial	Dry-Ditch Open-Cut	none	none	MWP asked for TOYR model, but no TOYR are necessary here anyway, so their request is approved.		Giles	37.307524	-80.468665	G-028	4-573
63	S-NN11	UNT to Sinking Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Giles	37.305508	-80.467231	G-027	4-573
64	S-NN12	UNT to Sinking Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.300454	-80.473911	G-026	4-571
65	S-MN21	UNT to Mill Creek	Perennial	Dry-Ditch Open-Cut	wild trout (Brown Trout)	Brown Trout: October 1 through March 31			Montgomery	37.293297	-80.393248	G-040	4-588
66	S-MM17	UNT to Sinking Creek	Perennial	Temporary Access Road	none	none			Giles	37.298236	-80.480824	S-MM17	4-569
67	S-MN22	UNT to Mill Creek	Ephemeral	Dry-Ditch Open-Cut	none, but upstream of wild trout water (Brown Trout)	Brown Trout: October 1 through March 31			Montgomery	37.297166	-80.386612	G-041	4-589
68	S-RR2	Greenbrier Branch	Perennial, intermittent	Conventional Bore	none	none			Montgomery	37.296686	-80.494174	G-Q24	4-567
69	S-Z26	UNT to Greenbrier Branch	Perennial, intermittent	Conventional Bore	none	none			Giles	37.296512	-80.494165	G-Q24	4-567
70	S-EF02	UNT to Mill Creek	Perennial	Dry-Ditch Open-Cut	none, but upstream of wild trout water	Brown Trout: October 1 through March 31			Montgomery	37.296356	-80.375118	G-043	4-590
71	S-MM18	UNT to Sinking Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Giles	37.296281	-80.481455	G-045	4-569

TB-4

Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name (OED)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOR recommended by DWR	Sept 2020 TOR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEC)	Latitude (DEC)	Longitude (DEC)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
72	S-J52	UNT to Mill Creek	Perennial, Wetland	Dry-Ditch Open-Cut	none, but upstream of wild trout water.	Brown Trout: October 1 through March 31			Montgomery	37.296153	-80.36751	G-044	4-591
73	S-EP65	Mill Creek	Intermittent	Dry-Ditch Open-Cut	wild trout water (Brown Trout)	March 31	MVP requested TOR modification, but without additional information or a change in crossing method, we continue to recommend adherence to the TOR.		Montgomery	37.295743	-80.373921	G-042	4-590
74	S-G36	North Fork Roanoke River	Perennial	Temporary Access Road	TE Water (Roanoke Logperch)	Roanoke Logperch: March 15 through June 30	MVP requested TOR modification, but without additional information or a change in crossing method, we continue to recommend adherence to the TOR.		Montgomery	37.266586	-80.343161	S-636	4-602
78	S-G39	UNT to North Fork Roanoke River	Intermittent	Dry-Ditch Open-Cut	none, but upstream of TE Water (Roanoke Logperch)	Roanoke Logperch: March 15 through June 30			Montgomery	37.264817	-80.310846	H-001	4-604
79	S-MM14	UNT to Flatwoods Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Montgomery	37.259717	-80.29321	H-003	4-608
80	S-MM15	UNT to Flatwoods Branch	Intermittent	Dry-Ditch Open-Cut	none	none			Montgomery	37.259673	-80.296446	H-002	4-608
81	S-MM11	UNT to Flatwoods Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Montgomery	37.258493	-80.288186	H-005	4-609
82	S-F15	UNT to Flatwoods Branch (Intermittent?)	Wetland, Perennial (Intermittent?)	Dry-Ditch Open-Cut	none	none			Montgomery	37.258198	-80.286029	H-006	4-609
83	S-MM13	UNT to Flatwoods Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Montgomery	37.258176	-80.289222	H-004	4-608
84	S-F16a/F16b	UNT to Flatwoods Branch	Ephemeral	Dry-Ditch Open-Cut	none	none			Montgomery	37.257998	-80.284735	H-007	4-609
85	S-C36	UNT to Flatwoods Branch	Intermittent, Wetland	Dry-Ditch Open-Cut	none	none			Montgomery	37.25726	-80.281611	H-008	4-609
86	S-C36	UNT to Flatwoods Branch	Intermittent, Wetland	Dry-Ditch Open-Cut	none	none			Montgomery	37.257131	-80.281475	H-008	4-609
87	S-MM31	UNT to Flatwoods Branch	Ephemeral	Conventional Bore	none	none			Montgomery	37.256959	-80.280329	H-009	4-609
88	S-C29	Flatwoods Branch	Ephemeral	Conventional Bore	none	none			Montgomery	37.256387	-80.278021	H-010	4-610
89	S-C25	UNT to Bradshaw Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Montgomery	37.254342	-80.267895	H-013	4-611
90	S-C24	UNT to Bradshaw Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Montgomery	37.254135	-80.266743	H-014	4-611
91	S-C21	Bradshaw Creek	Perennial	Conventional Bore	none	none	MVP requested modification, no TOR is necessary, go their request is authorized.		Montgomery	37.251791	-80.25899	H-015	4-613
92	S-MM19	UNT to Roanoke River	Intermittent	Dry-Ditch Open-Cut	none, but upstream of TE Water (Roanoke Logperch and Drumhead Midoml)	Roanoke Logperch, Orangefin Midoml: March 15 through June 30			Montgomery	37.244319	-80.206995	H-018	4-627
93	S-AB16	UNT to Roanoke River	Intermittent, Intermittent, Wetland	Conventional Bore	none, but upstream of TE Water (Roanoke Logperch and Orangefin Midoml)	if instream work, TOR not necessary if constructed via bore Roanoke Logperch, Orangefin Midoml: March 15 through June 30			Montgomery	37.231693	-80.198778	H-020	4-631

Assigned VWP Number	Stream ID	Stream Name	Hydrological Database Stream Name	Wetland	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation recommendation(s)	County (DEQ)	Latitude (DEQ)	Longitude (DEQ)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
94	S-11	UNT to Roanoke River	UNT to Roanoke River (DEQ)	Intermittent, Wetland	Conventional Bore	none, but upstream of TE Water (Roanoke Logperch and Orangefin Madtom)	If Instream work TOYR not necessary if constructed via bore - Roanoke Logperch, Orangefin Madtom: March 15 through June 30 If Instream work TOYR not necessary if constructed via bore - Roanoke Logperch, Orangefin Madtom: March 15 through June 30			Montgomery	37.231179	-80.19646	H-020	4-631
95	S-CD12b	UNT to South Fork Roanoke River	UNT to South Fork Roanoke River	Perennial	Conventional Bore	none, but upstream of TE Water (Roanoke Logperch and Orangefin Madtom)				Montgomery	37.229784	-80.201148	H-021	4-631
96	S-EF19	UNT to Indian Run	UNT to Indian Run	Ephemeral Wetland, Perennial	Dry-Ditch Open-Cut	Water (Roanoke Logperch and Orangefin Madtom)	Roanoke Logperch, Orangefin Madtom: March 15 through June 30			Montgomery	37.216102	-80.19789	H-023	4-634
97	S-EF20a	UNT to Roanoke River	UNT to Roanoke River	Perennial	Dry-Ditch Open-Cut	Water (Roanoke Logperch and Orangefin Madtom)	Roanoke Logperch, Orangefin Madtom: March 15 through June 30			Montgomery	37.210922	-80.19318	H-024	4-635
98	S-MM22	UNT to Roanoke River	UNT to Roanoke River	Perennial	Dry-Ditch Open-Cut	Water (Roanoke Logperch and Orangefin Madtom)	Roanoke Logperch, Orangefin Madtom: March 15 through June 30			Montgomery	37.205284	-80.18782	H-025	4-637
99	S-J10	UNT to Roanoke River	UNT to Roanoke River	Perennial	Dry-Ditch Open-Cut	Water (Roanoke Logperch and Orangefin Madtom)	Roanoke Logperch, Orangefin Madtom: March 15 through June 30			Roanoke	37.194064	-80.187933	H-026	4-641
100	S-Y13	UNT to Bottom Creek	UNT to Bottom Creek	Intermittent, Perennial	Dry-Ditch Open-Cut	Water (Brook Trout)	Brook trout: October 1 through March 31	MVP requested TOYR modification but without additional information or a change in crossing method, we continue to recommend adherence to the TOYR	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water for the Orangefin madtom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommend coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.187887	-80.151146	H-027	4-644
101	S-Y14	UNT to Bottom Creek	UNT to Bottom Creek	Intermittent, Perennial	Dry-Ditch Open-Cut	Water (Brook Trout)	Brook trout: October 1 through March 31	MVP requested TOYR modification but without additional information or a change in crossing method, we continue to recommend adherence to the TOYR	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water for the Orangefin madtom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommend coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.187568	-80.151049	H-027	4-644
102	S-EF57	UNT to Bottom Creek	UNT to Bottom Creek	Intermittent	Temporary Access Road	Water (Brook Trout)	Brook trout: October 1 through March 31		In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water for the Orangefin madtom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.181736	-80.148948	S-EF57	4-645

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Table 3 - DWR Time of Year Restrictions/DWR Recommendations

Assigned WWP Number	Stream ID	National Hydrogeological Database Stream Name (DEQ)	Flow Regime (RWP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEQ)	Latitude (DEQ)	Longitude (DEQ)	Profile & Plan Cross-section Member (RWP)	Application Figure Number (RWP)
103	S-EF55	UNT to Bottom Creek	Intermittent	Pipeline ROW	none but upstream of trout water (Brook Trout)	Brook trout: October 1 through March 31	MVP requested TOYR modification but without additional information or a change in crossing method, we continue to recommend adherence to the TOYR	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water* for the Orange/in madom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.181506	-80.149497	H-028	4-645
104	S-EF54b	UNT to Bottom Creek	Perennial, Intermittent	Dry-Ditch Open-Cut	none but upstream of trout water (Brook Trout)	Brook trout: October 1 through March 31	MVP requested TOYR modification but without additional information or a change in crossing method, we continue to recommend adherence to the TOYR	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water* for the Orange/in madom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.181385	-80.14914	H-028	4-645
105	S-EF53	UNT to Bottom Creek	Intermittent	Dry-Ditch Open-Cut	upstream of trout water Bottom Creek	Brook trout: October 1 through March 31	MVP requested TOYR modification but without additional information or a change in crossing method, we continue to recommend adherence to the TOYR	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water* for the Orange/in madom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.179186	-80.141	H-029	4-647
106	S-1182	UNT to Bottom Creek	Intermittent	Conventional Bare	none but upstream of trout water (Brook Trout)	IF Instream work, TOYR not necessary if constructed via bore - Brook trout: October 1 through March 31	MVP requested TOYR modification. TOYR not necessary if constructed via bore to their request is approved	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water* for the Orange/in madom is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.170458	-80.138216	H-030	4-648

Assigned WVP Number	Stream ID	Time of Year Restrictions/DOE Recommendations	National Hydrogeological Database Stream Name	Flow Regime (WVP)	Proposed Crossing Method (WVP)	DWR Stream Designation	Instream work, TOIR recommended by DWR	Sept 2020 TOIR modification request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DCR)	Latitude (DEC)	Longitude (DEC)	Profile & Plan Drawing Number (WVP)	Application Figure Number (WVP)
107	S-116a		UNT to Bottom Creek	Ephemeral	Permanent Access Road	none but upstream of trout water (Brook Trout)	Brook trout: October 1 through March 31.		In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water" for the Orange/in madison is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.169474	-80.138356	S-116a	4-650
108	S-1183		UNT to Bottom Creek	Wetlands; Intermittent; Perennial; Wetland	Conventional bore	none but upstream of trout water (Brook Trout)	IF instream work, TOIR not necessary if constructed via bore - Brook trout: October 1 through March 31	MVP requested TOIR modification. TOIR not necessary if constructed via bore, so their request is approved	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water" for the Orange/in madison is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.169211	-80.138258	H-031	4-649
109	S-1188		Bottom Creek	Wetlands; Intermittent; Perennial; Wetland	Conventional Bore	wild trout water (Brook Trout)	IF instream work, TOIR not necessary if constructed via bore - Brook trout: October 1 through March 31		In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water" for the Orange/in madison is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.168395	-80.138295	H-031	4-649
110	S-1184		UNT to Bottom Creek	Wetlands; Intermittent; Perennial; Wetland	Conventional Bore	none but upstream of trout water (Brook Trout)	IF instream work, TOIR not necessary if constructed via bore - Brook trout: October 1 through March 31.	MVP requested TOIR modification. TOIR not necessary if constructed via bore, so their request is approved	In addition, Bottom Creek, which has been designated by the VDWR as a Threatened and Endangered Species Water" for the Orange/in madison is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570).	Roanoke	37.168361	-80.138381	H-031	4-649

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Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name (DEQ)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEQ)	Latitude (DEQ)	Longitude (DEQ)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
111	S-1J89	UNT to Bottom Creek	Perennial, Intermittent	Conventional Bore	none but upstream of trout water (Brook Trout)	If instream work, TOYR not necessary if constructed via bore - Brook trout: October 1 through March 31	MVP requested TOYR modification. TOYR not necessary if constructed via bore, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.165862	-80.139317	H-032	4-649
112	S-1J90	UNT to Bottom Creek	Perennial, Intermittent	Conventional Bore	none but upstream of trout water (Brook Trout)	If instream work, TOYR not necessary if constructed via bore - Brook trout: October 1 through March 31	MVP requested TOYR modification. TOYR not necessary if constructed via bore, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.165685	-80.139378	H-032	4-649
113	S-K125	UNT to Mill Creek	Wetland; Intermittent	Dry-Ditch Open-Cut	none	none	MVP requested TOYR modification. TOYR not necessary here, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.160173	-80.134799	H-033	4-651
114	S-579b	UNT to Mill Creek	Wetland; Perennial	Conventional Bore	none	none	MVP requested TOYR modification. TOYR not necessary here, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.154424	-80.139179	H-040	4-652
115	S-K155	UNT to Mill Creek	Intermittent	Timber Mat Crossing	none	none	MVP requested TOYR modification. TOYR not necessary here, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.150009	-80.132426	H-042	4-653
116	S-1J12	UNT to Mill Creek	Wetland; Perennial	Conventional Bore	none	none	MVP requested TOYR modification. TOYR not necessary here, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.148333	-80.139219	H-043	4-653
117	S-EF44	UNT to Bottom Creek	Intermittent; Wetland	Conventional Bore	none but upstream of trout water (Brook Trout)	If instream work, TOYR not necessary if constructed via bore - Brook trout: October 1 through March 31	MVP requested TOYR modification. TOYR not necessary if constructed via bore, so their request is approved	In addition, Bottom Creek, which has been designated by the VDMR as a Threatened and Endangered Species Water for the Orange/in madum is within the submitted project boundary including a 100-foot buffer and DCR-DNH recommends coordination with VDMR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 - 570)	Roanoke	37.143003	-80.138399	H-044	4-654

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Assigned VMP Number	Stream ID	Time of Year Restrictions/DOE Recommendations	National Hydrogeological Database Stream Name (NHSD)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation (Recommendation)	County (DOE)	Latitude (DOE)	Longitude (DOE)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
118	S-143		Mill Creek	Wetland; Perennial	Conventional Bore	Storable trout water; Trout Water for Orangein Midatom	If any instream work, TOYR and coordination not necessary if constructed via bore - Orangein Midatom: March 15 through June 30; To ensure avoidance of spawning and egg incubation, we recommend coordination with the Regional Aquatic Resources Manager, Scott Smith	MVP requested modification of TOYR. TOYR not necessary if constructed via bore, so their request is approved.		Roanoke	37.138636	-80.139715	H-045	4-655
119	S-19		UNT to Mill Creek	Intermittent	Timber Mat Crossing	none, but upstream of TE Water (Orangein Midatom)	Orangein Midatom: March 15 through June 30	MVP requested modification of TOYR. TOYR not necessary here, so their request is approved.		Roanoke	37.134576	-80.137649	H-046	4-656
120	S-17		UNT to Mill Creek	Intermittent; Wetland; Perennial	Conventional Bore	none, but upstream of TE Water (Orangein Midatom)	If any instream work, TOYR not necessary if constructed via bore - Orangein Midatom: March 15 through June 30	MVP requested modification of TOYR. TOYR not necessary if constructed via bore, so their request is approved.		Roanoke	37.134481	-80.137622	H-046	4-656
121	S-18		UNT to Mill Creek	Intermittent; Wetland; Perennial	Conventional Bore	none, but upstream of TE Water (Orangein Midatom)	If any instream work, TOYR not necessary if constructed via bore - Orangein Midatom: March 15 through June 30	MVP requested modification of TOYR. TOYR not necessary if constructed via bore, so their request is approved.		Roanoke	37.134176	-80.137484	H-046	4-656
122	S-B22		UNT to Mill Creek	Perennial	Conventional Bore	none, but upstream of TE Water (Orangein Midatom)	If any instream work, TOYR not necessary if constructed via bore - Orangein Midatom: March 15 through June 30	MVP requested modification of TOYR. TOYR not necessary if constructed via bore, so their request is approved.		Roanoke	37.128922	-80.133769	H-047A	4-659
123	S-B23		UNT to Mill Creek	Intermittent	Timber Mat Crossing	none, but upstream of TE Water (Orangein Midatom)	Orangein Midatom: March 15 through June 30	MVP requested TOYR modification. Without additional information or a changed in crossing method, we continue to recommend adherence to the TOYR		Roanoke	37.128553	-80.13391	H-046	4-659
124	S-B25		UNT to Mill Creek	Wetland; Intermittent	Conventional Bore	none, but upstream of TE Water (Orangein Midatom)	If any instream work, TOYR not necessary if constructed via bore - Orangein Midatom: March 15 through June 30	MVP requested modification of TOYR. TOYR not necessary if constructed via bore, so their request is approved.		Roanoke	37.12849	-80.132601	H-068A	4-659
125	S-B21		UNT to Mill Creek	Wetland; Perennial	Dry-Ditch Open-Cut	none, but upstream of TE Water (Orangein Midatom)	Orangein Midatom: March 15 through June 30	MVP requested TOYR modification. Without additional information or a changed in crossing method, we continue to recommend adherence to the TOYR		Roanoke	37.128484	-80.130943	H-068B	4-659
129	S-G24		UNT to Green Creek	Wetland; Intermittents	Dry-Ditch Open-Cut	none, but upstream of trout water (Brown Trout)	Brown Trout: October 1 through March 31			Franklin	37.126412	-80.121398	H-051	4-661
130	S-G25		UNT to Green Creek	Wetland; Intermittents	Dry-Ditch Open-Cut	none, but upstream of trout water (Brown Trout)	Brown Trout: October 1 through March 31			Franklin	37.125398	-80.121401	H-051	4-661
131	S-RR18		UNT to Green Creek	Intermittent	Permanent Access Road	none, but upstream of trout water (Brown Trout)	Brown Trout: October 1 through March 31			Franklin	37.125055	-80.118578	S-RR18	4-662
132	S-D11		UNT to North Fork Blackwater River	Perennial	Conventional Bore	none	none			Franklin	37.124317	-80.086182	H-064	4-666
133	S-D8		UNT to North Fork Blackwater River	Perennial	Dry-Ditch Open-Cut	storable trout water	To ensure avoidance of shedding and/or egg incubation, we recommend coordination with Scott Smith			Franklin	37.123098	-80.074673	H-065	4-667
134	S-D12		UNT to North Fork Blackwater River	Wetland; Intermittents	Dry-Ditch Open-Cut	none	none			Franklin	37.121568	-80.085642	H-063	4-666
135	S-D13		UNT to North Fork Blackwater River	Wetland; Intermittents	Dry-Ditch Open-Cut	none	none			Franklin	37.121513	-80.085668	H-033	4-666
136	S-D14		UNT to North Fork Blackwater River	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.121473	-80.084657	H-052	4-666
139	S-GH15		UNT to North Fork Blackwater River	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.106177	-80.050005	H-056	4-674
140	S-GH14		UNT to North Fork Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.105883	-80.048861	H-057	4-674
141	S-GH11		UNT to North Fork Blackwater River	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.104707	-80.046822	H-058	4-674

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Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name (DBE)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR road request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEC)	Latitude (DEC)	Longitude (DEC)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
142	S-GH9	UNT to North Fork Blackwater	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.104329	-80.045343	H-059	4-674
143	S-RR08	UNT to North Fork Blackwater	Ephemeral	Conventional Bore	none	none			Franklin	37.103329	-80.041868	H-060	4-674
144	S-RR09	UNT to North Fork Blackwater	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.102491	-80.041046	H-061	4-675
145	S-RR11	UNT to North Fork Blackwater	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.101127	-80.039653	H-062	4-675
146	S-IJ1	UNT to North Fork Blackwater	Perennial; Wetland; Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.093062	-80.027224	H-063	4-677
147	S-IJ2	UNT to North Fork Blackwater	Perennial; Wetland; Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.091891	-80.027593	H-063	4-677
155	S-GH4	UNT to Teels Creek	Perennial	Timber Max Crossing	none	none			Franklin	37.089812	-79.956077	H-001A	4-688
160	S-GH3	UNT to Teels Creek	Perennial	Conventional Bore	none	none			Franklin	37.088745	-79.956042	H-001A	4-688
162	S-E29	UNT to Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.088378	-79.950111	H-002	4-689
163	S-E28	Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.089047	-79.961313	H-001	4-687
165	S-E28	Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.085247	-79.948057	H-003	4-687
166	S-EF4	UNT to Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.082875	-79.945556	H-005B	4-687
169	S-EF12	Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.078953	-79.941911	H-006	4-691
170	S-MM42	UNT to Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.073367	-79.931865	H-007	4-692
171	S-D23	Teels Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.070703	-79.937059	H-008	4-693
172	S-D22	UNT to Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.070322	-79.931019	H-010	4-694
173	S-D18	UNT to Teels Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.070101	-79.929733	H-011	4-694
174	S-RR15	UNT to Teels Creek	Ephemeral	Pipeline ROW	none	none			Franklin	37.068566	-79.926133	H-012	4-694
175	S-D20	UNT to Teels Creek	Perennial	Conventional Bore	none	none			Franklin	37.068562	-79.926133	H-012	4-694
176	S-EF08	UNT to Blackwater River	Intermittent; Wetland	Dry-Ditch Open-Cut	none	none			Franklin	37.069485	-79.926223	H-012	4-694
177	S-Y24	UNT to Blackwater River	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.064748	-79.878421	H-026	4-705
178	S-C18	Teels Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.064723	-79.878139	H-025	4-704
179	S-Y25	UNT to Blackwater River	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.063956	-79.871985	H-013	4-696
180	S-KL1	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.063464	-79.878281	H-024	4-704
181	S-KL39	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.062262	-79.862639	H-027	4-706
183	S-KL54	UNT to Maggodes Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.061183	-79.860018	H-023	4-704
184	S-C8	UNT to Blackwater River	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.059535	-79.840624	H-031	4-710
185	S-F4	UNT to Blackwater River	Ephemeral	Pipeline ROW	none	none			Franklin	37.059098	-79.853595	H-028	4-708
186	S-C17	Teels Creek	Perennial	Conventional Bore	none	none			Franklin	37.059066	-79.853379	H-031	4-708
187	S-KL52	UNT to Maggodes Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.058339	-79.918015	H-014	4-696
188	S-S11	UNT to Maggodes Creek	Perennial	Temporary Access Road	none	none			Franklin	37.058185	-79.844877	H-030	4-708
189	S-F8	UNT to Maggodes Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.057776	-79.838563	H-011	4-710
190	S-CD6	Little Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.057724	-79.836406	H-032	4-710
191	S-HH4	UNT to Maggodes Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.057584	-79.918921	H-015	4-698
192	S-KL51	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.056594	-79.835785	H-033	4-711
193	S-KL38	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.056084	-79.850380	H-029	4-708
194	S-C20	UNT to Maggodes Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.055912	-79.863177	H-022	4-702
195	S-C19	Maggodes Creek	Ephemeral	Conventional Bore	none	none			Franklin	37.055193	-79.833881	H-034	4-711
196	S-KL36	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.055147	-79.830098	H-035	4-711
197	S-F11	Blackwater River	Perennial	Conventional Bore	none	none			Franklin	37.053336	-79.884604	H-021	4-702
198	S-KL35	UNT to Blackwater River	Perennial; Wetland	Conventional Bore	none	none			Franklin	37.052843	-79.825711	H-036	4-712
					none	none			Franklin	37.051125	-79.866182	H-030	4-702

Table 3 - DWR Time of Year Restrictions/DOE Recommendations

Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DOE)	Latitude (DOE)	Longitude (DOE)	Profile & Pin Drawing Number (MVP)	Application Figure Number (MVP)
199	S-F9b	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.049238	-79.817231	I-037	4-713
200	S-I12	Little Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.049219	-79.908513	I-018	4-699
201	S-F10	UNT to Blackwater River	Ephemeral	Conventional Bore	none	none			Franklin	37.048037	-79.813934	I-038	4-713
202	S-CD1	UNT to Blackwater River	Perennial/ Wetland	Dry-Ditch Open-Cut	none	none			Franklin	37.047765	-79.897636	I-019	4-701
203	S-F9a	UNT to Blackwater River	Intermittent	Conventional Bore	none	none			Franklin	37.047172	-79.813	I-039	4-713
204	S-MM29	UNT to Maple Branch	Perennial	Temporary Access Road	none	none			Franklin	37.043871	-79.822898	S-MM29	4-714
205	S-MM23	Maple Branch	Perennial	Temporary Access Road	none	none			Franklin	37.043854	-79.822974	S-MM23	4-714
206	S-G64	UNT to Blackwater River	Ephemeral	Conventional Bore	none	none			Franklin	37.042742	-79.809015	I-040	4-716
207	S-A36	UNT to Foul Ground Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.037916	-79.804237	I-041	4-717
208	S-A38	UNT to Foul Ground Creek	Intermittent	Conventional Bore	none	none			Franklin	37.036271	-79.799442	I-042	4-718
209	S-A40	UNT to Foul Ground Creek	Intermittent	Timber Mat Crossing	none	none			Franklin	37.035173	-79.79824	I-043	4-718
210	S-A41	UNT to Foul Ground Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.031714	-79.788213	I-043A	4-720
211	S-GH36	UNT to Foul Ground Creek	Intermittent	Conventional Bore	none	none			Franklin	37.031063	-79.785888	I-044A	4-721
212	S-KL17	UNT to Foul Ground Creek	Intermittent	Conventional Bore	none	none			Franklin	37.031011	-79.778435	I-044A	4-721
213	S-GH37	UNT to Foul Ground Creek	Intermittent	Pipeline ROW	none	none			Franklin	37.030974	-79.77819	I-044A	4-721
214	S-GH38	UNT to Foul Ground Creek	Streams, Wetland	Conventional Bore	none	none			Franklin	37.030972	-79.778083	I-046	4-721
215	S-GH39	UNT to Foul Ground Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.028861	-79.778069	I-044B	4-721
216	S-GH40	UNT to Foul Ground Creek	Ephemeral	Dry-Ditch Open-Cut	none	none			Franklin	37.028893	-79.747765	I-045	4-721
217	S-GH44	UNT to Foul Ground Creek	Streams, Wetland	Conventional Bore	none	none			Franklin	37.028392	-79.773359	I-046	4-721
218	S-G22	UNT to Poplar Camp Creek	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.019612	-79.761958	I-047	4-723
219	S-G23	UNT to Poplar Camp Creek	Perennial	Conventional Bore	none	none			Franklin	37.019526	-79.762002	I-052	4-723
220	S-G21	UNT to Poplar Camp Creek	Intermittent	Pipeline ROW	none	none			Franklin	37.019359	-79.761643	I-047	4-723
221	S-G20	Poplar Camp Creek	Perennial	Conventional Bore	none	none			Franklin	37.017364	-79.761048	I-048	4-724
222	S-G18	UNT to Blackwater River	Intermittent	Dry-Ditch Open-Cut	none	none			Franklin	37.009236	-79.754238	I-049	4-725
224	S-E18	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.001271	-79.747749	I-050	4-727
225	S-E17	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	37.000529	-79.74278	I-051	4-727
226	S-E14	UNT to Blackwater River	Perennial	Dry-Ditch Open-Cut	none	none			Franklin	36.995814	-79.735344	I-052	4-728
227	S-H38	UNT to Jacks Creek	Perennial, Wetland	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of rare plant heritage resources (Poplar Creek). The natural resources of concern at this site are Piedmont Hamlet, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.98843	-79.722866	I-053	4-730

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Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name (NHD)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWA response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DCR)	Latitude (DEQ)	Longitude (DCR)	Permits & Plan Documents Number (MVP)	Application Figure Number (MVP)
228	S-H32	UNT to Jacks Creek	Perennial	Conventional Bore	none	none	MVP requested TOYR mod, but none is necessary here anyway, so their request is granted	DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Prairie dropseed, Weak bluegrass, Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.388273	-79.708199	14057	4-732
229	S-H37	UNT to Jacks Creek	Epheemeral	Dry Ditch/Open-Cut	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Prairie dropseed, Weak bluegrass, Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.388031	-79.711745	14054	4-731
230	S-H34	UNT to Jacks Creek	Perennial	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.388009	-79.711881	14056	4-732
231	S-H36	UNT to Jacks Creek	Perennial, Wetland	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Prairie dropseed, Weak bluegrass, Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.388008	-79.714932	14055	4-731
232	S-H30	UNT to Jacks Creek	Intermittent	Pipeline ROW	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Prairie dropseed, Weak bluegrass, Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.587961	-79.702711	W-411	4-734

Assigned VWP Number	Stream ID	National Hydrological Datasheet Stream Name	Flow Regime (NHP)	Proposed Crossing Method (NHP)	DWR Stream Designation	Instream work TOFR recommended by DWR	Sept 2020 TOFR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DCR)	Latitude (DEG)	Longitude (DEG)	Profile & Plan Drawing Number (NHP)	Application Figure Number (NHP)
233	S-A18	UNT to Jacks Creek	Intermittent	Dry Ditch Open-Cut	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Flameflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.987218	-79.696534	1-059	4-734
234	S-A19/H26	UNT to Jacks Creek	Intermittent	Dry-Ditch Open-Cut	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Flameflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.987719	-79.696803	1-060A	4-734
235	S-A20	UNT to Jacks Creek	Perennial	Conventional Bore	none	none	MVP requested TOFR mod, but points is necessary here anyway, so their request is granted	DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Flameflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.987715	-79.698555	1-060B	4-734
236	S-H28	UNT to Jacks Creek	Ephemeral	Pipeline ROW	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Flameflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.985174	-79.692272	1-061B	4-735
237	S-H27	UNT to Jacks Creek	Ephemeral	Dry-Ditch Open-Cut	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Flameflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.985124	-79.692272	1-061B	4-735

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Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WWP Number	Stream ID	Regional Hydrological Database Stream Name (DBD)	Flow Regime (MWP)	Proposed Crossing Method (MWP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DBD)	Latitude (DBD)	Longitude (DBD)	Profile & Plan Member (MWP)	Application Figure Number (MWP)
238	S-A22	UNT to Jacks Creek	Intermittent	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont fawnflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.984846	-79.69189	1-051A	4-735
239	S-MMM44	UNT to Little Jacks Creek	Perennial	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont fawnflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.982507	-79.687818	1-062	4-735
240	S-MMM46	UNT to Little Jacks Creek	Intermittent	Timber Mat Crossing	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont fawnflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.98224	-79.6875	5-MMM46	4-735
241	S-MMM45	UNT to Little Jacks Creek	Ephemeral	Timber Mat Crossing	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont fawnflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.981971	-79.686501	5-MMM45	4-735
242	S-MMM48	UNT to Little Jacks Creek	Perennial	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont fawnflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.979223	-79.684192	1-063	4-736

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Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WVP Number	Stream ID	Regional Hydrological Database Stream Name (DEQ)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work, TOYR recommended by DWR	Sept 2020 TOYR modification request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DEQ)	Latitude (DEQ)	Longitude (DEQ)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
243	S-H25	Little Jacks Creek	Perennial; Wetland	Conventional Bore	none, but upstream of TE Water (Roanoke Logperch)	IF instream work, TOYR not necessary if constructed via bore - Roanoke Logperch - March 15 through June 31		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Pineflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.978229	-79.682186	1-084	4-736
244	S-H24	UNT to Little Jacks Creek	Perennial	Conventional Bore	none	none		DCR recommends avoidance of the Jacks Creek Conservation Site and associated documented occurrences of natural heritage resources (Not Listed). The natural heritage resources of concern at this site are: Piedmont Pineflower, Weak bluegrass, Prairie dropseed, and the Southern Piedmont Ultramafic Barren Significant Community.	Franklin	36.978025	-79.680882	1-085	4-736
245	S-H23	UNT to Turkey Creek	Ephemeral	Dry-Ditch Open-Cut	none				Franklin	36.978421	-79.677525	1-086	4-738
246	S-H11	UNT to Turkey Creek	Ephemeral	Pipeline ROW	none				Franklin	36.974647	-79.674053	5-HH1	4-738
247	S-A13	Turkey Creek	Perennial	Conventional Bore	none, but upstream of TE Water (Roanoke Logperch)	IF instream work, TOYR not necessary if constructed via bore - Roanoke Logperch - March 15 through June 31	MVP requested a TOYR - no TOYR necessary if the crossing is constructed via bore. So, their request is approved.		Franklin	36.972382	-79.673075	1-087	4-738
248	S-A11	UNT to Turkey Creek	Ephemeral	Pipeline ROW	none				Franklin	36.972327	-79.669808	5-A11	4-740
249	S-H17	Dinner Creek	Intermittent	Dry-Ditch Open-Cut	none				Franklin	36.972125	-79.662981	1-088B	4-741
250	S-A7	UNT to Dinner Creek	Perennial	Conventional Bore	none				Franklin	36.972032	-79.662508	1-088A	4-741
251	S-S58	Polecat Creek	Perennial	Conventional Bore	none				Franklin	36.970904	-79.657371	1-070	4-741
252	S-CDB	UNT to Owens Creek	Intermittent	Dry-Ditch Open-Cut	none				Franklin	36.970522	-79.653726	1-071	4-742
253	S-AB8	UNT to Owens Creek	Intermittent	Dry-Ditch Open-Cut	none, but upstream of TE Water (Roanoke Logperch)	IF instream work, TOYR not necessary if constructed via bore - Roanoke Logperch - March 15 through June 31	MVP requested a TOYR - no TOYR necessary if the crossing is constructed via bore. So, their request is approved.		Franklin	36.970133	-79.651328	1-072	4-742
254	S-DD3	Owens Creek	Intermittent	Conventional Bore	none				Franklin	36.939118	-79.645042	1-073	4-743
255	S-G16	Strawfield Creek	Perennial	Conventional Bore	none				Franklin	36.98864	-79.642174	1-074	4-743
256	S-G15	UNT to Parrot Branch	Intermittent	Dry-Ditch Open-Cut	none				Franklin	36.987711	-79.638591	1-075	4-744
257	S-G13	Parrot Branch	Perennial	Conventional Bore	none, but upstream of TE Water (Roanoke Logperch and Orangefin darters)	IF instream work, TOYR not necessary if constructed via bore - Roanoke Logperch - March 15 through June 31	MVP requested TOYR modification. TOYR if crossing is constructed via bore. So, their request is approved.		Franklin	36.977025	-79.630747	1-076	4-744
258	S-D3	UNT to Jonkin Creek	Perennial	Conventional Bore	none				Pittsylvania	36.985831	-79.603542	1-078	4-747
259	S-D4	UNT to Jonkin Creek	Intermittent	Dry-Ditch Open-Cut	none				Pittsylvania	36.96565	-79.604894	1-079	4-747
260	S-D2	Jonkin Creek	Perennial; Wetland	Conventional Bore	none				Pittsylvania	36.965605	-79.598131	1-080	4-748
261	S-D7	UNT to Jonkin Creek	Intermittent; Wetland	Dry-Ditch Open-Cut	none				Franklin	36.964783	-79.617043	1-077	4-746
262	S-D1-EPH	UNT to Jonkin Creek	Ephemeral	Dry-Ditch Open-Cut	none				Pittsylvania	36.964643	-79.595691	1-081	4-748
263	S-D1-INT	UNT to Jonkin Creek	Intermittent	Pipeline ROW	none				Pittsylvania	36.964407	-79.595941	1-081	4-748
264	S-G11	UNT to Jonkin Creek	Intermittent	Dry-Ditch Open-Cut	none				Pittsylvania	36.962442	-79.590511	1-082	4-749
265	S-G9	UNT to Jonkin Creek	Intermittent; Wetland	Dry-Ditch Open-Cut	none				Pittsylvania	36.959381	-79.586437	1-083	4-751
266	S-G8	UNT to Jonkin Creek	Intermittent	Dry-Ditch Open-Cut	none				Pittsylvania	36.957258	-79.583492	1-084A	4-751
267	S-Q15	UNT to Rucky Creek	Ephemeral	Dry-Ditch Open-Cut	none				Pittsylvania	36.952275	-79.580461	1-085	4-750
268	S-A6	UNT to Rucky Creek	Perennial	Conventional Bore	none				Pittsylvania	36.949615	-79.579553	1-084B	4-750
269	S-H11-Braid	UNT to Rucky Creek	Ephemeral	Pipeline ROW	none				Pittsylvania	36.946619	-79.574442	1-086	4-750
270	S-F2	UNT to Rucky Creek	Ephemeral	Timber Mat Crossing	none				Pittsylvania	36.946619	-79.574442	1-086	4-750

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Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WVP Number	Stream ID	National Hydrogeological Database Stream Name (BDC)	Flow Regime (MVP)	Proposed Crossing Method (MVP)	DWR Stream Designation	Instream work TOR recommended by DWR	Sept 2020 TOR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DCR)	Latitude (DEC)	Longitude (DEC)	Profile & Plan Drawing Number (MVP)	Application Figure Number (MVP)
271	S-C7	UNT to Rocky Creek	Perennial	Conventional Bore	none	none	MVP requested TOR modification here, but no TOR recommended as their request is abandoned.		Pittsylvania	36.944016	-79.571517	1-086	4-753
272	S-C3	Harpn Creek	Perennial; Perennial	Conventional Bore	none	none			Pittsylvania	36.929762	-79.526109	1-087	4-758
273	S-C4	UNT to Harpen Creek	Perennial; Perennial	Conventional Bore	none	none			Pittsylvania	36.929745	-79.526259	1-087	4-758
274	S-H13	Harpn Creek	Perennial; Wetland	Dry-Ditch Open-Cut	none	none	MVP requested TOR modification, but no TOR recommended, so their request is abandoned.		Pittsylvania	36.925105	-79.51735	1-088	4-759
275	S-G6	UNT to Harpen Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.920237	-79.505898	1-089	4-761
276	S-G5	UNT to Harpen Creek	EpheMERal	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.917694	-79.486604	1-090	4-762
277	S-G4	Harpn Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.916463	-79.482469	1-091	4-762
278	S-G3	UNT to Harpen Creek	Perennial	Timber Mat Crossing	none	none			Pittsylvania	36.915654	-79.490230	1-092	4-762
279	S-CC16	UNT to Harpen Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.913003	-79.487283	1-093	4-763
280	S-CC14	UNT to Cherrystone Creek	Intermittent; Intermittent	Conventional Bore	none	none			Pittsylvania	36.905335	-79.471921	1-094	4-765
281	S-CC13	UNT to Cherrystone Creek	Intermittent; Intermittent	Conventional Bore	none	none			Pittsylvania	36.905307	-79.471574	1-094	4-765
282	S-MM8	UNT to Cherrystone Creek	Perennial; Wetland	Conventional Bore	none	none			Pittsylvania	36.902591	-79.46822	1-095	4-766
283	S-CC15	Creek to Cherrystone Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.901941	-79.466535	1-096	4-766
284	S-CC8	UNT to Cherrystone Creek	Intermittent; Perennial	Conventional Bore	none	none			Pittsylvania	36.899437	-79.462685	1-097	4-766
285	S-CC5	UNT to Cherrystone Creek	Intermittent; Perennial	Conventional Bore	none	none			Pittsylvania	36.899411	-79.462463	1-097	4-766
286	S-CC3	UNT to Cherrystone Creek	Intermittent; Perennial	Conventional Bore	none	none			Pittsylvania	36.899411	-79.462463	1-097	4-766
287	S-CC9	UNT to Cherrystone Creek	EpheMERal	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.899411	-79.462463	1-097	4-766
288	S-CC10	UNT to Cherrystone Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.89724	-79.458046	1-098	4-767
289	S-MM10	UNT to Cherrystone Creek	Intermittent	Pipeline ROW	none	none			Pittsylvania	36.897315	-79.456119	1-099	4-767
290	S-CC11	UNT to Cherrystone Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.895915	-79.45296	1-098	4-768
291	S-CC1	Cherrystone Creek	Wetlands; Perennial	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.895808	-79.45792	1-100	4-768
292	S-CC3	UNT to Cherrystone Creek	EpheMERal	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.894043	-79.445744	1-018	4-769
293	S-P5	UNT to Cherrystone Creek	EpheMERal	Conventional Bore	none	none			Pittsylvania	36.893727	-79.444765	1-102	4-769
294	S-UB5-EPH	UNT to Pole Bridge Branch	EpheMERal	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.892751	-79.440063	1-003	4-769
295	S-Q4	UNT to Pole Bridge Branch	Perennial	Conventional Bore	none	none			Pittsylvania	36.891451	-79.433761	1-004	4-770
296	S-Q3	Pole Bridge Branch	Wetland; Perennial	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.889114	-79.430914	1-105	4-771
297	S-Q2	UNT to Pole Bridge Branch	Perennial	Conventional Bore	none	none			Pittsylvania	36.884444	-79.42822	1-068	4-771
298	S-B6	UNT to Pole Bridge Branch	EpheMERal	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.884289	-79.427914	1-068	4-771
299	S-B8	UNT to Pole Bridge Branch	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.879063	-79.421019	1-108	4-772
300	S-B9	UNT to Pole Bridge Branch	Perennial	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.877937	-79.417992	1-009	4-773
301	S-DD4-Brand-1	UNT to Mill Creek	Intermittent	Conventional Bore	none	none			Pittsylvania	36.877416	-79.41625	1-110	4-773
302	S-KL27	UNT to Mill Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.871651	-79.404061	1-111A	4-775
303	S-KL27	UNT to Mill Creek	EpheMERal	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.871478	-79.403907	1-111	4-775
304	S-C1	Mill Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.866534	-79.400511	1-112	4-776
305	S-G2	Little Cherrystone Creek	Perennial; Wetland	Conventional Bore	none	none			Pittsylvania	36.863513	-79.397914	1-113	4-777
306	S-B2	UNT to Little Cherrystone Creek	EpheMERal	Conventional Bore	none	none			Pittsylvania	36.851931	-79.386051	1-114	4-779
307	S-H55	UNT to Little Cherrystone Creek	EpheMERal	Conventional Bore	none	none			Pittsylvania	36.849594	-79.37778	1-115	4-780
308	S-H54	UNT to Little Cherrystone Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.844896	-79.369222	1-116	4-781
309	S-G611	UNT to Little Cherrystone Creek	Perennial	Timber Mat Crossing	none	none			Pittsylvania	36.841112	-79.366846	1-117	4-781
310	S-H3	UNT to Little Cherrystone Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.841093	-79.366947	1-116	4-781
									Pittsylvania	36.834501	-79.360246	1-118	4-783

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Table 3 - DWR Time of Year Restrictions/DCR Recommendations

Assigned WVP Number	Stream ID	National Hydrological Database Stream Name	Flow Regime (WVP)	Proposed Crossing Method (WVP)	DWR Stream Designation	Instream work TOYR recommended by DWR	Sept 2020 TOYR mod request DWR response	VA Dept. of Conservation and Recreation Recommendation(s)	County (DCR)	Latitude (DCR)	Longitude (DCR)	Profile & Plan Drawing Number (WVP)	Application Figure Number (WVP)
311	S-H5	UNT to Little Cherrystone Creek	Perennial; Wetlands; Intermittent; Wetland	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.833412	-79.359823	1-118	4-783
312	S-O01	UNT to Little Cherrystone Creek	Perennial; Wetlands; Intermittent; Wetland	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.830285	-79.356518	1-119	4-783
313	S-H44	UNT to Little Cherrystone Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.829823	-79.346016	1-122	4-785
314	S-H42	UNT to Little Cherrystone Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.828993	-79.344462	1-123	4-785
315	S-H42	UNT to Little Cherrystone Creek	Perennial	Conventional Bore	none	none			Pittsylvania	36.828998	-79.344315	1-123	4-785
316	S-O02	UNT to Little Cherrystone Creek	Intermittent	Dry-Ditch Open-Cut	none	none			Pittsylvania	36.828311	-79.353849	1-120	4-784
317	S-EF26	Little Cherrystone Creek	Perennial; Wetlands	Conventional Bore	none	none			Pittsylvania	36.828207	-79.349814	1-121	4-784

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**COMPREHENSIVE STREAM AND WETLAND  
MONITORING, RESTORATION AND  
MITIGATION FRAMEWORK**

*Mountain Valley Pipeline Project*

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Project No. 0101-21-0244-005

November 9, 2021

**POTESTA**



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APPENDIX C .....	Performance Standards
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APPENDIX F .....	Supplemental Credit Determination Methodology

# COMPREHENSIVE STREAM AND WETLAND MONITORING, RESTORATION AND MITIGATION FRAMEWORK

## *Mountain Valley Pipeline Project*

### 1.0 INTRODUCTION

Mountain Valley Pipeline, LLC (Mountain Valley) is seeking an Individual Permit (IP) for the Mountain Valley Pipeline Project (the Project) from the United States Army Corps of Engineers (USACE) Pittsburgh, Huntington, and Norfolk Districts to conduct regulated activities in navigable waters under Section 10 of the Rivers and Harbors Act of 1899 and for the discharge of dredged and fill material into "Waters of the United States" (WOTUS) under Section 404 of the Clean Water Act (CWA). In addition to the USACE IP application, Mountain Valley is seeking CWA Section 401 Water Quality Certification from the West Virginia Department of Environmental Protection (WVDEP) and the Virginia Department of Environmental Quality (VADEQ) for portions of the Project within their respective jurisdictions.

This Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework (Mitigation Framework) was prepared jointly by a team of experts from Potesta & Associates, Inc.; Tetra Tech, Inc.; and Wetland Studies and Solutions, Inc. at Mountain Valley's request in response to comments from the U.S. Environmental Protection Agency (USEPA) and other parties on Mountain Valley's IP application. Although the application reflected a robust suite of stream and wetland monitoring, restoration, and mitigation measures, those measures were dispersed among various existing regulatory documents and actions proposed in the application and may not have been readily apparent to many commenters. Furthermore, Mountain Valley carefully reviewed the comments by USEPA and others to determine if additional reasonable and prudent actions could be taken to improve the Project's approach to stream and wetland monitoring, restoration, and mitigation. A significant set of additional voluntary measures were developed as a result of that review and further consultation with USACE, WVDEP, and VADEQ. The Mitigation Framework does not replace the mitigation that is required for permanent fills but is a voluntary proffered supplement for temporary impacts associated with the Project.

The purpose of this document is to consolidate the Project's proposed stream and wetland monitoring, restoration, and mitigation measures into a comprehensive framework and to outline a systematic approach to verifying that the impacts to jurisdictional aquatic resources, both wetlands and streams, associated with the construction of the Project are appropriately mitigated. This Mitigation Framework incorporates the following elements, each of which is attached hereto, to meet these objectives:

- A. Baseline Assessment Plan
- B. Restoration Work Plan
- C. Performance Standards

- D. Monitoring Plan
- E. Maintenance & Adaptive Management Plan
- F. Supplemental Credit Determination Methodology

The Baseline Assessment Plan identifies metrics for each stream and wetland. Those metrics are tracked and utilized in the other elements of the Mitigation Framework. For example, the stream survey information collected under the Baseline Assessment Plan is used to restore streams under the Restoration Work Plan. The information is then used to define the restoration success criteria in the Performance Standards which, in turn, are monitored under the Monitoring Plan. If restoration is not proceeding as intended, the survey information will inform the measures to be taken under the Maintenance & Adaptive Management Plan. The relationships between the metrics are summarized in the Mitigation Framework Process Summary table on the following page. The numbering system in the table is consistent through each plan element to show the metrics' relationships through the restoration process.

**Mountain Valley Pipeline – Baseline Assessment Plan, Restoration Work Plan, Performance Standards, Monitoring Plan, and Maintenance & Adaptive Management Plan Process Summary**

A. Baseline Assessment		B. Restoration Work Plan	C. Performance Standards	D. Monitoring Plan (annually for 3 years post restoration)	E. Maintenance & Adaptive Management Plan	F. Supplemental Credit Determination Methodology (Temporary Impacts)
Metric	Source					
<b>1.00 Wetlands - Attributes</b>						
<b>1.0.1 Cowardin Classification</b>	Project Delineation Report and related PID Table 3 in IP Application	Varies by location in ROW. Construction procedures to support reestablishment of PEM characteristics. Hand plantings in accordance with mitigation requirements and Restoration and Rehabilitation Plan	Temporary impacted wetlands will progress to a PEM system at maturity. PFO systems will have bare-root saplings planted with a required success rate of 400/acre	Wetland Determination Forms <sup>2</sup> to be completed per each monitoring event. Stems per acre to be counted in year 1 and 2 and thereafter if not met.	For all: (a) Check soil fertility, pH, organic matter percentage, and Density (b) Correct any issues found in (a) and then replant/reseed during appropriate timeframe (c) Or if no issues found - then replant/reseed during appropriate timeframe (d) Failure after 3 annual attempt - may pursue potential Credits/ILF (subject to the approval of the USACE, WVDEP, VADEQ)	In WV, the SWYM forms will be used to calculate temporal impacts at a standard 3% per year. In VA, the USM forms will be used to calculate temporal impacts at a standard 3% per year.  <b>Temporary wetland impacts associated with pipeline installation:</b> PEM wetland vegetation is expected to return within one full growing season. To conservatively compensate for any lingering temporal loss following restoration of the wetland crossing, an additional two years of compensatory mitigation will be provided (6% total).
<b>1.0.2 Wetland Area</b>	Project Delineation Report and related PID	Existing topographical surveys and field delineations	Restored wetland area shall be greater than or equal to the original wetland area	Delineated <sup>2</sup> and survey located to compare to pre-crossing area.	Evaluate wetland area; Regrade/reseed if necessary; if cannot achieve original size pursue potential Credits/ILF (subject to the approval of the USACE, WVDEP, VADEQ)	<b>Temporary wetland impacts associated with temporary fill placement:</b> The duration of the assumed construction impact will extend from the date of the installation until the date it is removed, plus an additional two years to remain consistent with the pipeline temporary impacts. No additional compensatory mitigation is proposed for restoration of PSS or PFO vegetation because, as discussed in Section 3.2 (Appendix F), compensatory mitigation has already been provided for those conversion impacts.
<b>1.0.3 Topographical Survey</b>	Existing topographical surveys and field delineations	Existing topographical surveys and field delineations	Return as close as practicable to the preconstruction contours to maintain original wetland hydrology	As-built survey to compare to pre-crossing area.	Evaluate wetland area; Regrade/reseed if necessary; if cannot achieve original size pursue potential Credits/ILF (subject to the approval of the USACE, WVDEP, VADEQ)	
<b>1.0.4 Dominant Vegetation</b>	Vegetation Strata - Wetland Determination Data Forms	Restoring upper 12 inches of pre-segregated topsoil with wetland seedbank. Seeding if necessary.	More than 50% of all dominant herbaceous plant species shall be facultative (FAC) or wetter (facultative wetland (FACW) or obligate wetland (OBL)). less than 5% coverage	Vegetation Strata - Wetland Determination Data Forms <sup>2</sup>	See 1.0.1	
<b>1.0.5 Invasive plant species cover</b>	Vegetation Strata - Wetland Determination Data Forms	Manual removal of invasive plant species.		Vegetation Strata - Wetland Determination Data Forms <sup>2</sup>		
<b>1.0.6 Native (non-invasive) herb Vegetation Coverage</b>	Vegetation Strata - Wetland Determination Data Forms	Restoring upper 12 inches of pre-segregated topsoil with wetland seedbank. Seeding if necessary.	Plant coverage shall be at least 70% unless shrub and/or canopy/crown coverage is at least 30%.	Vegetation Strata - Wetland Determination Data Forms <sup>2</sup>	Remove with Herbicides if approved, or mechanical/hand weeding Same as section 1.0.1	

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A. Baseline Assessment		B. Restoration Work Plan	C. Performance Standards	D. Monitoring Plan (annually for 3 years post restoration)	E. Maintenance & Adaptive Management Plan	F. Supplemental Credit Determination Methodology (Temporary Impacts)
Metric	Source					
1.0.7 Hydric Soils	Hydric Soil Indicators - Wetland Determination Data Forms	Restoring upper 12 inches of pre-segregated topsoil.	Presence of positive indicators of hydric soil formation	Hydric Soil Indicators - Wetland Determination Data Forms <sup>2</sup>	If positive indicators of hydric soils cannot be identified, pursue potential Credits/ILF (subject to the approval of the USACE, WVDEP, VADEQ)	
1.0.8 Hydrology Indicators	Wetland Hydrology Indicators - Wetland Determination Data Forms	Re-establish original surface hydrology and contours to maintain overland flow patterns	Presence of Group A Hydrology Indicators or the presence of other hydrologic indicators as listed on the Wetland Determination Data Forms	Wetland Hydrology Indicators - Wetland Determination Data Forms <sup>2</sup>	Check precipitation data for drought indices. If it is determined that drought conditions are present, additional actions are not required. If drought conditions do not exist, the following measures will be considered: regrading, redirecting overland flow and/or installing groundwater monitoring wells. If efforts to restore hydrology are not achieved pursue potential Credits/ILF (subject to the approval of the USACE, WVDEP, VADEQ)	
1.0.9 Bulk Density	N/A	Standard decompaction practices (disking, plowing, cultivating, tilling, or incorporation of organic matter into the topsoil horizon )	N/A	N/A	If standard decompaction practices have not sufficiently de-compacted the soil, then bulk density testing may be completed for the topsoil.	
<b>1.1 Wetlands - Resource Valuation</b>						
<b>1.1.1 WV SWVM</b>		N/A	N/A	N/A	N/A	
Assessment using Delineation Report and Data sheets						

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A. Baseline Assessment		B. Restoration Work Plan	C. Performance Standards	D. Monitoring Plan (annually for 3 years post restoration)	E. Maintenance & Adaptive Management Plan	F. Supplemental Credit Determination Methodology (Temporary Impacts)
Metric	Source					
<b>2.0 Streams - Attributes</b>						
2.0.1 Stream Survey Stream Cross Section Area (including Pool to pool spacing Max pool depth Average riffle slope Average reach slope Pebble count	Longitudinal surveys of field conditions, cross-section analysis, and in-stream surveys	Restore segregated native stream substrate. Restore according to pre-crossing cross-sectional and longitudinal profiles, cross-sections and visual assessments.	Stream Cross Sectional Area: No increase or decrease of >25% of baseline (Perennial); Restored to stable configuration (Ephemeral and Intermittent) Pool to Pool Spacing: No increase or decrease of >25% of baseline pool to pool range Max Pool Depth: No increase or decrease of >50% of baseline (Perennial); Restored to stable configuration (Ephemeral and Intermittent) Average Reach Slope: No increase or decrease >10% Average Riffle Slope: No increase or decrease >10% Pebble Count: Maintain Category	Longitudinal surveys of field conditions, cross-section analysis, and in-stream surveys. Longitudinal and cross-section surveys will be completed for the first year only unless conditions indicate additional surveys are required.	For all: (1) If monitoring indicates that success criteria issues are caused by deficiencies in adjacent ROW - correct issue (2) If caused by offsite watershed changes (outside of Mountain Valley's Control) - propose site specific stabilization plan to USACE, WVDEP, VADEQ and implement if approved; (3) Pursue potential Credits/ILF (subject to the approval of the USACE, WVDEP, VADEQ)	In WV, the SWVDM forms will be used to calculate temporal impacts at a standard 3% per year. In VA, the USM forms will be used to calculate temporal impacts at a standard 3% per year. Temporary stream impacts associated with pipeline installation: Mountain Valley will include one year of compensatory mitigation from the date the stream is impacted (3% total) Temporary stream impacts associated with temporary fill placement: The duration of the assumed construction impact will extend from the date of the installation until the date it is removed, plus an additional one year to remain consistent with the pipeline temporary impacts.
2.0.2 Stream Vegetation	Visual Assessment; See Section 2.1.5	Reseeding as per FERC and state requirements; hand planting in PPOs and site specific locations.	Monitor for a stable 70% herbaceous vegetative cover of the riparian buffer and 70% survival of woody stems. Less than 5% coverage by invasive species	Visual Assessment and photo collection	(1) Check soil fertility, pH, organic matter percentage, and density (2) Correct any issues and then replant (3) If no issues found - replant/seed; or (4) Coordinate with the agencies to determine if the riparian area is detrimental to the resource restoration and if additional mitigation credits or appropriate ILF contributions are required	
<b>2.1 Streams - Resource Valuation</b>						
2.1.1 Field water quality - Dissolved Oxygen	Field Assessment using YSI water quality meter or similar	Removing instream diversions to restore stream flow to channel.	Meet the baseline conditions or the minimum state water quality standards	Field Assessment using YSI water quality meter or similar	Consult with Agencies to address differences, if any, as watershed/time of year and precipitation will change many of	

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A. Baseline Assessment		B. Restoration Work Plan	C. Performance Standards	D. Monitoring Plan (annually for 3 years post restoration)	E. Maintenance & Adaptive Management Plan	F. Supplemental Credit Determination Methodology (Temporary Impacts)
Metric	Source					
<b>b</b>	-Specific conductivity	Removing instream diversions to restore stream flow to channel.	Within the range of 0-1,500 $\mu\text{S}/\text{cm}$ (typical range of freshwater resources in the ecoregion)		these measurements. Adaptive management actions may range from (a) additional monitoring (to see if the changes are just temporal), (b) additional plantings, (c) adding woody debris, (d) implementing stream structural changes, (e) translocating benches with habitubes (if appropriate), and/or (f) the purchase of additional credits or ILF contributions.	
<b>c</b>	-pH	Removing instream diversions to restore stream flow to channel.	Meet the baseline conditions or the state water quality standards			
<b>2.1.2</b>	Rapid Bioassessment Protocol (RBP)	Restore segregated native stream substrate; Restore according to pre-crossing cross-sectional and longitudinal profiles, cross-sections and visual assessments.	Starting with 1st year post construction, continued or maintained scores during Monitoring Period.	Field Assessment using Environmental Protection Agency (USEPA) Rapid Bioassessment Protocol (RBP) data collection forms		
<b>2.1.3</b>	Benthic Macroinvertebrates		N/A. Data collection only.	Field Assessment in accordance with WYDEP Watershed Assessment Branch Standard Operating Procedures and EPA RBP Methodologies		
<b>2.1.4</b>	HGM Assessment		Starting with 1st year post construction, continued or maintained scores during Monitoring Period.	Field Assessment according to EPA Hydrogeomorphic Protocol		
<b>2.1.5</b>	Visual Assessment Documentation	N/A	Utilized for visual comparison	Repeat Field Pictures per protocol	Utilized for visual comparison	
<b>2.1.6</b>	WV SWVM	N/A	N/A	N/A	As appropriate, Mountain Valley and the applicable agencies may use the data summarized in the baseline WV SWVM assessment in the AMP decision- making process	
<b>2.1.7</b>	USM	N/A	N/A	N/A	As appropriate, Mountain Valley and the applicable agencies may use the data summarized in the baseline WV SWVM assessment in the AMP decision- making process	

Planning required in select location - see plan  
USACE 1987 Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0 (USACE, 2012)

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## 2.0 BASELINE ASSESSMENT PLAN

The Baseline Assessment Plan (**Appendix A**) was developed to supplement and, in some cases, update the information presented in the IP application. It relies on a broad suite of assessment and monitoring methods that, in concert with the existing information in the application, will provide a detailed picture of each stream and wetland crossing included in the application.

Gathering appropriate baseline data about each proposed stream and wetland impact is valuable for several purposes, including: characterizing the resource and the nature of the impact to the resource, developing appropriate mitigation measures, guiding the post-construction restoration of impacts, and assessing whether the resources have been successfully restored. The Baseline Assessment Plan was prepared to ensure that Mountain Valley and the relevant regulatory agencies (USACE, WVDEP, VADEQ) have adequate site-specific information for each temporary impact to fulfill the goals and objectives of the Mitigation Framework. The pre-crossing information collected pursuant to this Baseline Assessment Plan also may provide additional support for the factual determinations the USACE must make under 40 C.F.R. § 230.11. Data collected under the Baseline Assessment Plan will be provided to the USACE, WVDEP, and VADEQ under separate cover.

## 3.0 RESTORATION WORK PLAN

The Restoration Work Plan (**Appendix B**) provides a comprehensive picture of the stream and wetland construction and restoration procedures to be employed on the Project. The Restoration Work Plan serves two purposes. First, it consolidates various existing construction and restoration procedures into one document. Second, it outlines how the elements of the Mitigation Framework will be implemented in the field during the post-construction restoration of temporarily impacted streams and wetlands.

The Project is subject to rigorous impact restoration requirements imposed by federal and state agencies acting within their respective jurisdictions, which are consolidated in the Restoration Work Plan. As detailed in the Federal Energy Regulatory Commission (FERC *Mountain Valley Project and Equitrans Expansion Project Final Environmental Impact Statement* (FEIS) issued on June 23, 2017, Mountain Valley agreed to adopt the FERC's general construction, restoration, and operational mitigation measures outlined in the FERC *Upland Erosion Control, Revegetation and Maintenance Plan* and the FERC *Wetland and Waterbody Construction and Mitigation Procedures*. Project construction activities also must adhere to state requirements for pipeline construction. In West Virginia, the Project's stormwater discharges are regulated by a Water Pollution Control General Act Permit for construction authorization and site-specific Erosion and Sediment Control Plans (ESCPs) approved by the WVDEP. In Virginia, Project construction must comply with Mountain Valley's *Annual Standards and Specifications* site-specific ESCPs and site-specific post-construction stormwater management plans approved by the VADEQ.



In addition to consolidating the restoration requirements noted above, the Restoration Work Plan documents how the site-specific data gathered through the Baseline Assessment Plan will be used by environmental work crews in the field to restore the impacted resources. It further explains how the post-construction restoration activities will foster attainment of the performance standards prescribed for restored streams and wetlands.

#### **4.0 PERFORMANCE STANDARDS**

Immediately after construction, temporarily-impacted streams and wetlands will be restored, and restored resources will be monitored and maintained based on established performance standards. Performance standards are a defined set of measurable goals for restored streams and wetlands that can be evaluated through post-restoration monitoring. The performance standards utilized here are based on mitigation guidance developed by the respective USACE districts. If a restored resource is not meeting one or more performance standards during the monitoring period, targeted maintenance and/or adaptive management actions will be taken. Restoration of a stream or wetland will be considered successful when post-restoration monitoring demonstrates that the resource has met all relevant performance standards.

Performance Standards for assessing the successful restoration of stream and wetland impacts are documented in **Appendix C**.

#### **5.0 MONITORING PLAN**

Mountain Valley will conduct post-restoration monitoring of each restored stream and wetland in accordance with the Monitoring Plan in **Appendix D**. The Monitoring Plan is designed to ensure that all necessary data are collected to evaluate whether restored resources are meeting the defined performance standards. If the performance standards are not being met, data collected under the plan also will be used to determine what Maintenance & Adaptive Management Plan actions should be implemented to achieve a successful restoration. It is anticipated that the monitoring period will last up to three years unless relevant performance standards have been met sooner and the agencies agree that restoration has been achieved. If the relevant performance standards at a particular monitored site have not been met after three years, a plan for corrective actions which may include continued monitoring, will be submitted to the relevant agencies for approval.

To maintain clear communication with the agencies, Mountain Valley will submit annual monitoring reports to the appropriate USACE district and the relevant state agency, WVDEP or VADEQ, that address the previous year's monitoring activities. Each annual report will include:

- All data collected for each restored stream and wetland site in accordance with the Monitoring Plan;
- Any findings that warrant action under the Maintenance & Adaptive Management Plan and, if necessary, a corrective action plan based on those findings; and

- Recommended determination of whether each monitored site has achieved the applicable performance standards or if additional monitoring is required.

## **6.0 MAINTENANCE & ADAPTIVE MANAGEMENT PLAN**

Mountain Valley's Maintenance & Adaptive Management Plan is attached as **Appendix E**.

### **6.1 Maintenance**

Mountain Valley will conduct annual inspections of the restored aquatic resources for the timeframes prescribed in the Monitoring Plan. This includes inspections for the presence of invasive plant species in restored wetlands. Restoration areas will be maintained and repaired as needed during the monitoring period to meet the objectives of this Mitigation Framework as well as other regulatory requirements.

During the post-restoration monitoring period, Mountain Valley will conduct maintenance as required for all related erosion and sediment control and stormwater management permits issued for this Project. Additionally, as monitoring indicates, any and all maintenance actions needed shall be implemented promptly, such as invasive-species controls, reseeding/replantings or soil modifications, subject to growing season and as weather conditions allow.

### **6.2 Adaptive Management**

Aquatic ecosystems are complex and dynamic entities which will often respond to natural and anthropogenic disturbances in a unique, watershed-specific manner. Adaptive management, which is often referred to as "learning by doing," is a problem-solving environmental management approach for learning through deliberately designing and applying management actions as experiments. Adaptive management is a very useful tool that emphasizes the critical role of ongoing monitoring and evaluation. Adaptive management is a cyclic process where one assesses, designs, implements, monitors, evaluates, and adjusts as projects progress.

If an annual monitoring event identifies a stream or wetland that is not meeting the performance standards, Mountain Valley will utilize adaptive management principles to develop a plan for remedial action. The proposed plan, including a description of the corrective actions and a timeline to implement them, will be included in the annual monitoring report submitted to the USACE, WVDEP, and VADEQ for review. If necessary, corrective actions and any associated supplemental monitoring may extend beyond the three-year post-construction monitoring period.

If Mountain Valley determines that adaptive management has not been and is not likely to be successful in fully restoring an impacted resource, it may propose – subject to approval by the USACE and relevant state agency, WVDEP or VADEQ – that additional compensatory mitigation credits or in-lieu-fee (ILF) payments be provided. This backstop measure provides assurance that there will be no net loss of aquatic resources.

## 7.0 SUPPLEMENTAL CREDIT DETERMINATION METHODOLOGY

The compensatory mitigation plan included in the IP application complied with the 2008 Compensatory Mitigation Rule (33 C.F.R. Part 332 & 40 C.F.R. §§ 230.91-230.98) and applicable regulations in Virginia and West Virginia. As stated in the application, compensatory mitigation has been provided for all permanent impacts in the form of mitigation bank or ILF credits in appropriate ratios, and restoration was proposed as a primary form of compensatory mitigation for temporary impacts. In consideration of the comments on the application, Mountain Valley developed the Supplemental Credit Determination Methodology in **Appendix F**.

The Supplemental Credit Determination Methodology outlines a proposal to provide voluntary supplemental compensatory mitigation for *each* temporary stream and wetland impact. To determine the quantity of supplemental mitigation credit, Mountain Valley identified the expected duration of each temporary impact associated with Project construction – which includes the time from when the impact first occurs until it is restored. Because resources are not likely to meet the Performance Standards immediately after they are restored, Mountain Valley added one year of additional compensatory mitigation to stream impacts and two years to wetland impacts. Building on a methodology developed by the West Virginia Interagency Review Team, Mountain Valley proposes to provide supplemental compensatory mitigation at a rate of 3% per year for projected period of potential impact (i.e., sum of direct impacts during construction and post-construction restoration period). This approach to supplemental compensatory mitigation exceeds the applicable federal and state regulatory requirements and the standard practices in each of the respective USACE districts. Most importantly, this proposal provides additional assurance that the goal of “no net loss” will be achieved – if not result in a *net lift* in aquatic resources.

## 8.0 REFERENCES

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*Mountain Valley Pipeline Project*

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Mountain Valley Pipeline Project

Docket No. CP16-10-000

## **Restoration and Rehabilitation Plan**

Revised September 2017



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**EXHIBIT C**  
**Resource Crossing Inspection Form**



## WEST VIRGINIA RESOURCE CROSSING INSPECTION FORM

6.	Is there adequate cover over the pipeline in accordance with DOT standards in 49 CFR 192.327 and IP? Required Depth of Cover: _____ ft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Was scour mitigation installed per the "Vertical Scour and Lateral Channel Erosion Analysis" report? If so, what mitigation measures were installed? _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Top of pipe elevation measurements at the stream crossing and HMZ (if appropriate) for scour analysis.	Elevation: _____		
9.	Are drilling/blasting/rock excavation done in accordance with the General Blasting Plan? (Sections 7.5 and 7.7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Was excavated material backfilled in the proper order or if not utilized for backfill, removed and disposed of at an upland site? (IP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Notes:</b>				

Item #	Restoration	N/A	YES	NO
1.	Was in-stream work conducted as continuous activity to minimize crossing duration? (FERC PROCEDURES, IP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Was all welding and coating debris fully removed from waterbody crossing prior returning flow to the waterbody?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Was the top 1-foot of stream substrate segregated during excavation of the stream utilized during restoration of the stream channel? (FERC PROCEDURES, IP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Were disturbed areas within riparian buffers restored to pre-construction contours? (FERC PROCEDURES, IP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Is this stream slated to have bare root saplings installed following restoration? Sapling plantings will be conducted outside of the crossing activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Was segregated wetland soil utilized for restoration of the upper 1-foot of the trench? (FERC PROCEDURES)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Was streambank stabilization and ESC fabric applied immediately following construction and prior to re-establishing the flow regime?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Was permanent seed applied to riparian areas and unsaturated wetlands at time of restoration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Was the proper seed mix and application rate utilized and seed tags saved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Do post-construction survey conditions meet pre-construction survey conditions in accordance with USACE IP permit conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Was the resource crossing construction sequence adhered to as shown on the Approved ESC General Details?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

This report was written by	_____	_____	_____
	Print Name	Signature	Date

Insert photo pages





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***Mountain Valley Pipeline Project***



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*Mountain Valley Pipeline Project*

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## Part I - Response to EPA Comments Letter to the USACE Dated 5-27-21

On March 29, 2021, the U. S. Army Corps of Engineers (USACE) public noticed their receipt of an application to construct the Mountain Valley Pipeline Project (Project). On May 27, 2021, the Environmental Protection Agency (EPA) submitted a letter to USACE providing their comments on the Project and its compliance with the Clean Water Act Section 404(b)(1) Guidelines (Guidelines). EPA identified several areas of concern and stated, “...*the project, as proposed, may not comply with the Guidelines.*” On October 7, 2021, EPA sent an email to the Department of Environmental Quality (DEQ) clarifying that the intent of their comments to the USACE were to “*ensure that the proposed project complies with Clean Water Act (CWA) Section 404(b)(1) Guidelines.*” EPA provided their comments in response to USACE’s public notice of the Project and the subsequent public comment period.

DEQ public noticed a draft Virginia Water Protection (VWP) individual permit for the Project and opened a sixty-day public comment period beginning August 28, 2021, and ending October 27, 2021. During the public comment period, DEQ received numerous submissions that referenced or attached EPA’s entire letter to the USACE. Because DEQ received EPA’s comment letter through our public comment process, DEQ is providing the following responses:

- 1. Based on the information available for review, it is not clear the proposed project represents the Least Environmentally Damaging Practical Alternative (LEDPA). EPA recommends updating the alternatives analysis with a narrative and table that identifies and compares the changes to the proposal since the project was authorized under the Nationwide Permit (NWP) 12. Specifically, the additional analysis should describe changes to the proposed route, modifications to stream and wetland crossing methods and subsequent changes to impacts (both permanent and temporary), and the impacts that have occurred from clearing of the right-of-way (ROW) and pipe that has already been laid.**

In response to this EPA comment the applicant, Mountain Valley Pipeline, LLC (MVP), provided a table documenting the reduction in temporary and permanent impacts resulting from the change in crossing methodology since the Project was authorized by NWP 12. The table also

identifies impacts that have already occurred, and those impacts are summarized in Tables 10 and 11 of the Individual Permit Application submitted to DEQ on March 1, 2021. Figure 2 of the Application is a map and tables summarizing the current status of construction, including areas that have been cleared and pipe that has been installed.

DEQ assesses VWP Permit applications for whether the application demonstrates that alternatives were evaluated and that proposed alternative is demonstrated to be the LEDPA for any given project. However, with respect to Federal Energy Regulatory Commission (FERC)-regulated interstate pipelines, the Virginia code limits the scope of DEQ's review of project alternatives in two material respects. First, Virginia Statute § 62.1-44.15:21, Impacts to wetlands, states, "*Each wetland and stream crossing shall be considered as a single and complete project; however, only one individual Virginia Water Protection Permit addressing all such crossings shall be required for any such pipeline.*" Second, Virginia Statute § 62.1-44.15:81, Application and preparation of draft certification conditions, states, "*No action by either the Department or the Board on a certification pursuant to this article shall alter the siting determination made through Federal Energy Regulatory Commission or State Corporation Commission approval.*" Given these constraints, DEQ evaluated the alternatives analysis as presented in the Application. The Application states, "*FERC, as the lead agency, reviewed the no action alternative, alternative modes of transportation, system alternatives, a number of major route alternatives, and over 25 route variations in the FEIS. Based on its technical analysis and comments received, FERC concluded that the proposed Project, with the adoption of one route variation, was the preferred alternative that could meet the project purpose.*"

DEQ provided comments and recommendations to the FERC on December 22, 2016, for the Mountain Valley Project Draft Environmental Impact Statement (FERC/DEIS-DO272, FERC Docket Number CP16-10-000; DEQ 16-194F). These comments and recommendations addressed pre-impact characterization of temporary impact locations, surface water resources, recommended mitigation, and alignment revisions based on a GIS evaluation of each pipeline crossing of a waterbody.

Therefore, the project's alignment as presented in the application for a VWP Permit has been determined by the FERC to be "*the preferred alternative that could meet the project purpose,*"



and the Code of Virginia specifically excludes DEQ from evaluating further alignment modifications. In Virginia, the MVP has already installed approximately 78% of the pipeline in the upland portions of the project right-of-way, generally leaving only the jurisdictional water crossings unconstructed.

Beyond the siting determination, avoidance and minimization includes specific on-site measures taken to reduce the size, scope, configuration, or density of the proposed project, which would avoid or result in less adverse impact to surface waters. For the purpose of evaluating on-site avoidance and minimization efforts, DEQ considers each stream and wetland crossing to be a single and complete project (9VAC25-210-50).

Although Virginia Statute § 62.1-44.15:21 J 1 requires that DEQ conduct an individual review only for waterbody crossings with a drainage area greater than 5 square miles (3,200 acres), DEQ has reviewed each crossing in the Application. Based on DEQ's review of the Application, the Department has determined the Application meets the requirement of 9 VAC 25-210-80.B.1.g. in providing an alternatives analysis for the proposed Project detailing the specific on-site and off-site measures taken during project design and development to first avoid and then minimize impacts to surface waters to the maximum extent practicable in accordance with the Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR Part 230 in terms of impacts to state waters and fish and wildlife resources.

For the reasons discussed above we have determined that the alternatives evaluated are not practicable and/or do not meet the Project's purpose and need. Given the requirements under § 62.1-44.15:21 and prohibitions under § 62.1-44.15:81, we have determined the proposed project is the LEDPA.

**2. EPA recognizes the efforts the applicant has made to adjust crossing methods to reduce aquatic impacts. However, EPA also recommends information be provided to explain how these methods, such as Direct Pipe and microtunneling, were selected to be used or not used throughout the project. EPA also recommends further consideration of using these methods at streams where not currently proposed, particularly streams that will be crossed multiple times, streams that are of good quality, and/or streams that may contain threatened or endangered aquatic species to better avoid or minimize impacts.**

The VWP Permit application included MVP's evaluation of each surface water crossing of the pipeline for the practicability of using a trenchless crossing method rather than an open cut. Open-cut crossings install the pipeline via a trench excavated in the stream or wetland. Trenchless crossing methods bore or tunnel beneath the surface water resource. Trenchless methods include Horizontal Directional Drilling (HDD), Conventional Bore, Guided Conventional Bore, Microtunneling, and Direct Pipe. The Application's "Table 15 - Crossing Method Summary" summarizes MVP's evaluation of using trenchless crossing methods at each surface water crossing to avoid and minimize impacts. MVP considered crossing length, bore-pit depth, stream depth, steep slopes, karst geology, cost, potential for bore failure and unique site-specific constraints. MVP's evaluation identified 236 locations where the pipeline crosses streams in Virginia. Of these 236 stream crossings, MVP determined that 92 could be crossed using trenchless methods, completely avoiding pipeline impacts to streams and wetlands at those locations. Based on this EPA comment, MVP has re-evaluated the crossing methodology for each stream and wetland, incorporating new information about mitigation costs into the decision matrix. Based on their analysis, the crossing methods proposed for each stream remained unchanged. DEQ reviewed the crossing method analysis, including the new information, and determined that the crossing methodology analysis as proposed in the Application is consistent with DEQ's requirements for avoidance and minimization.

**3. More than 100 of the proposed crossings will result in the intersection of multiple unique waterbodies by a single crossing. Several of these crossings are proposed to cross two to as many as ten unique waterbodies. EPA recommends the applicant examine additional avoidance opportunities for crossings that intersect multiple unique waterbodies and minimization options such as modifying crossing methods or utilizing additional effective best management practices (BMP). If these are not practicable, the rationale should be provided.**

MVP has responded to this EPA comment by explaining that, "*The number of unique identifiers included in each crossing alternative is largely a function of Mountain Valley's naming system; it is not indicative of the number of "unique waterbodies" crossed.*" DEQ's review of the Application supports MVP's response. The project crosses some braided streams and/or crosses streams that have several small ephemeral tributaries within an overall crossing area. MVP

groups these streams and resources together into a single crossing area for purposes of evaluating the crossing methodology in Table 15 of the Application. MVP states, "*Mountain Valley assigned each stream channel a unique identifier, including branching channels of the same stream. Additionally, a single same stream channel may be assigned more than one identifier if different segments have different Cowardin classifications (e.g., R3, R4).*" DEQ's review of each stream and wetland crossing in the Application supports MVP's assertion that their resource naming convention assigns unique identifiers to each element of otherwise contiguous systems and groups them as a single and complete crossing for the purpose of the crossing determination analysis.

Regardless of naming convention or the spatial proximity of individual elements of contiguous systems, DEQ reviewed each proposed individual stream and wetland crossing in consideration of the avoidance and minimization documented in the Application, including trenchless crossings and The *Mitigation Framework* that presents how MVP will restore each individual stream and wetland crossing to original condition. Based on this review, DEQ finds that it is consistent with our requirements for avoidance and minimization.

**4. While EPA appreciates the relocation of the Blackwater River crossing to downstream of the Rocky Mount water intake, EPA also recommends that the applicant use one of the new or established trenchless methods to cross Blackwater River instead of open cut methods to further avoid or minimize impacts. If not practicable, then additional rationale for crossing the river by a trench method should be provided.**

DEQ reviewed the plan and profile sheet for the crossing of the Blackwater River (Crossing I-036, Figure 4-712, Plan & Profile Sheet S-F11), Application Table 15 – Crossing Method Determination Study, and MVP's response to this comment (EPA-404-4). The site constraints at this location would require the west slope bore pit to be approximately 39 feet deep, and would generate approximately 1,600 cubic yards of excavated material requiring a 75-foot diameter stockpile. This work would require additional shoring of the deep west bank bore pit and the excavation of workbenches in the east and west riverbanks. MVP estimates that the extra earthwork required to install the Blackwater River crossing with a trenchless method would double the construction time at this location versus an open cut dry trench crossing. This would

increase this crossing's exposure to potential impacts from additional storm events. MVP moved the original crossing of the Blackwater River to the current location in response to requests to move the crossing downstream of the Town of Rocky Mount's public water intake. DEQ finds that the information provided by the applicant adequately supports their assertion that the steep slopes and work area constraints make a trenchless crossing of the Blackwater River impracticable at this location.

**5. The application states that “incurring an unreasonable cost to avoid a short-duration temporary impact to an individual crossing is not appropriate and practicable.”**

**However, the analysis of what would be practicable for these crossings did not include the consideration of the costs associated with site restoration, monitoring and management, as well as potential additional compensatory mitigation. Additionally, the applicant considered and rejected as not practicable the use of bridges to avoid permanent impacts to streams, but it is not apparent that the relative cost of compensatory mitigation was included in that analysis. EPA recommends that the applicant provide an updated analysis incorporating these factors, and consider if there are additional opportunities, including but not limited to bridging, using trenchless methods, etc., to avoid and or minimize aquatic resources either in crossings or in access road construction.**

In response to this EPA comment MVP revised Table 15 – Crossing Method Determination Study to include analysis of the costs of mitigation and monitoring at all proposed open cut crossings. The updated cost estimates in Revised Table 15 revealed that, *“The additional costs associated with compensatory mitigation and monitoring are a small fraction of the crossing costs, both individually and cumulatively... The revised analysis did not justify a change to any of the proposed crossing methods.”* DEQ VWP Permit Program regulations define "Practicable" [as] available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. DEQ finds that the applicant has considered and avoided impacts at this crossing to the maximum extent practicable.

**6. It is unclear if a baseline assessment was completed on the quality and function of the aquatic resources proposed to be impacted either permanently or temporarily. To**

**better evaluate the proposed project’s impacts and to ensure adequate functional replacement of the aquatic resources, EPA recommends the applicant conduct a baseline assessment of the condition and functions of aquatic resources to be impacted by the proposed project, including those resources subject to temporary impacts. Specifically, EPA recommends that baseline data include biological, physical, and chemical parameters consistent with the parameters used to calculate West Virginia Stream Wetland Valuation Metric (SWVM). This data should be collected for all impacts to aquatic resources in both states. A narrative describing the methodology undertaken, photographs, measurements, and other supporting should be provided to allow the agencies to confirm the findings.**

In response to this EPA comment and input from other agencies, MVP developed the *Stream and Wetland Restoration, Monitoring, and Mitigation Framework* (“*Mitigation Framework*”). The *Mitigation Framework* develops restoration designs and performance metrics using baseline data. The Baseline Assessment Plan establishes the pre-construction condition of each stream and wetland crossing included in the application. Metrics captured under the plan for wetlands include soil characterization, hydrology indicators, dominant vegetation, and percent of invasive species present. Baseline stream metrics include longitudinal profiles and cross sections, riffle-pool data, pebble counts, vegetation, dissolved oxygen, pH, EPA rapid bioassessment data, benthic macroinvertebrate data, and data related to Virginia’s Unified Stream Methodology. MVP completed the Baseline Assessment and submitted the data to DEQ in November 2021.

**7. Substantial temporary fills are associated with this project. However, the information provided for review does not describe how long the proposed temporary fills will be in place nor how they will be removed and aquatic resources restored. Without this information, it is difficult to ascertain if the temporary fill will or will not have lasting impacts on the aquatic resources or result in secondary effects to downstream resources. EPA recommends the permit be conditioned to require a restoration plan for temporary impacts, including post-construction monitoring and adaptive management, that has been reviewed and approved by the resource agencies. Depending on the quality of the resource being impacted, the sensitivity of the resource, or the number of**

times a water is being impacted, the pre and post construction monitoring requirements could vary.

At a minimum, to ensure that temporary stream and wetland impacts have no significant adverse impact to aquatic resources, the restoration plan should document baseline conditions, and elevations through georeferenced photographs and surveys, explain how all temporary fills and structures will be removed and the area restored to pre-project conditions, and require submission of post-construction georeferenced photographs and surveys to demonstrate that the impacts are in fact temporary and successfully restored.

- i. In addition, upon final stream bed restoration, the stream must have similar physical characteristics to include substrate, pattern, profile, dimension, and embeddedness of the original stream channel.
- ii. In addition, upon final wetland restoration a delineation will be conducted. At the final monitoring event a final wetland delineation will be conducted to ensure hydrology, hydric soils, and hydric vegetation communities are similar to the original wetland.
- iii. Provide a map of monitoring locations and a table illustrating this information.
- iv. Post construction monitoring for a period of three years.
- v. Should post-construction monitoring demonstrate longer term effects on the aquatic resources, EPA recommends additional corrective measures be undertaken including compensatory mitigation be provided to offset those impacts.

In addition to the foregoing, for the following types of receiving waters, EPA recommends the restoration plan include enhanced post-construction monitoring and an adaptive management plan to ensure that temporary impacts have no significant adverse effects. Specifically, resources that should have more extensive monitoring, include but are not limited to the following:

- a. Trout waters
- b. Impaired waters

- c. **Waters with threatened or endangered species or that contain critical habitat including:**
  - i. **S-S5 (Candy Darter) – proposed activity: timber mat crossing**
  - ii. **S-C21 (Roanoke Logperch) – proposed activity: timber mat crossing**
  - iii. **S-C3 (Roanoke Logperch) – proposed activity: timber mat crossing**
  - iv. **S-G36 (Roanoke Logperch) – proposed activity: temporary access road**
- d. **Streams and wetlands impacted multiple times by crossings or construction activities**

**For the resources described in ‘b’, a detailed monitoring plan should be developed to measure the chemical, physical, and biological functions of the resources, along with specific success criteria, to determine successful restoration and ensure that there will be no significant adverse effects. EPA recommends that the baseline assessment of the streams and wetlands, as described above, be used to guide the development of these success criteria. In addition to the items in the above item ‘a’, specific recommendations for more detailed monitoring plan include, but are not limited to the following items:**

- a. **Monitoring for the parameters that are used to calculate the SWVM to assess the chemical, physical, and biological condition of the stream resources.**
- b. **For stream hydrology, monitoring should be conducted to document that the flow maintains its preconstruction flow status. Wetland hydrology should be monitored to ensure that the overall seasonal hydroperiod (depth, degree, duration, and periodicity) is similar to that of the pre-construction wetland and the site is inundated or the water table is less than or equal to 12 inches below the soil surface for 14 or less consecutive days during the growing season.**
- c. **To ensure wetland soils are not compacted, an example success criteria could include that the subsoil shall have a bulk density of less than 90lbs/ cubic foot for clay textures, grading less than 112 lbs/ cubic foot for sands (prior to adding organic matter or topsoil to the site). Replaced topsoil layers should also be remediated to a similar bulk density range.**

- d. To address potential sedimentation concerns, in-stream monitoring of turbidity and sedimentation should be conducted to identify any changes in sediment load. Criteria should be protective of aquatic species and water quality standards.**
- e. For vegetation, the application states that “in unsaturated wetlands, most vegetation will be replaced by seeding when necessary...and saturated wetlands will typically be allowed to re-vegetate naturally.” However, this may allow time for invasive species that are in the seed bank to colonize the wetland. Therefore, EPA recommends planting wherever possible. Further, the application states that revegetation is considered "successful when cover of herbaceous species is at least 70 percent of the cover of the vegetation in adjacent wetland areas that were not disturbed," however this does not account for invasive species. EPA recommends a success criterion that defines no greater than 5% aerial coverage for invasive species be allowed.**
- f. Post construction monitoring for a period of five years or until data from successive monitoring periods indicate site stability and success criteria have been achieved.**
- g. Develop an adaptive management plan (AMP) that outlines measures to be taken if temporarily impacted areas fail to achieve success. Should corrective actions be needed, the AMP should guide decisions for implementing measures to address identified parameters. Actions should be specified for problems that may adversely affect aquatic resources, such as, but not limited to, erosion, sedimentation, and invasive species colonization. Should there be long term effects on the aquatic resources, EPA recommends additional compensatory mitigation be provided to offset those impacts should corrective measure fail or pre-construction conditions not be achieved.**
- h. Review of post-construction monitoring be undertaken by an independent third party that is qualified to assess water quality, stream and wetland conditions and able to make recommendations for adaptive management**



**measures and corrective actions; the applicant also should commit to implement such recommendations.**

The VWP requirement for restoration of temporary crossings requires baseline information to establish original elevations and contours, and two years of post-construction monitoring ensuring the re-establishment of those original elevations and contours. The *Mitigation Framework* meets and/or exceeds the regulatory requirements of the VWP program related to the restoration of temporary impacts. In VWP draft individual permit 21-0146, DEQ requires the applicant to submit a final restoration and compensation plan for temporary impacts, including post-construction monitoring and adaptive management, that has been reviewed and approved by DEQ prior to beginning construction in permitted areas. DEQ finds that the applicant's *Mitigation Framework* satisfies this special condition and addresses EPA's comments. MVP developed the *Mitigation Framework* in response to comments from the EPA and other parties on Mountain Valley's IP application, expressing the need for enhanced baseline data, restoration, monitoring and, potentially, supplemental mitigation for temporary impacts. Per EPA's recommendation, MVP based the *Mitigation Framework* on the West Virginia Department of Environmental Protection's (WVDEP) West Virginia Stream and Wetland Valuation Metric (SWVM).

The *Mitigation Framework* incorporates the following elements:

- A. Baseline Assessment Plan
- B. Restoration Work Plan
- C. Performance Standards
- D. Monitoring Plan
- E. Maintenance & Adaptive Management Plan
- F. Supplemental Credit Determination Methodology

The Baseline Assessment Plan identifies the metrics to capture for each stream and wetland. The survey information collected under the Baseline Assessment Plan is used to restore streams and wetlands under the Restoration Work Plan. The information is then used to define the restoration success criteria in the Performance Standards, which, in turn, are monitored under the

Monitoring Plan. If restoration is not proceeding as intended, the survey information will inform the measures to be taken under the Maintenance & Adaptive Management Plan.

### Baseline Assessment Plan

The Baseline Assessment Plan establishes the pre-construction condition of each stream and wetland crossing included in the application. Metrics captured under the plan for wetlands include soil characterization, hydrology indicators, dominant vegetation, and percent of invasive species present. Baseline stream metrics include longitudinal profiles and cross sections, riffle-pool data, pebble counts, vegetation, dissolved oxygen, pH, EPA rapid bioassessment data, benthic macroinvertebrate data, and data related to Virginia's Unified Stream Methodology. MVP completed the Baseline Assessment and submitted the data to DEQ in November 2021.

### Restoration Work Plan

The Restoration Work Plan describes the stream and wetland restoration procedures for the streams and wetlands impacted by project construction. The Restoration Work Plan consolidates existing construction and restoration procedures and outlines how MVP will implement the elements of the *Mitigation Framework* during the post-construction restoration of temporarily impacted streams and wetlands. MVP's *Mitigation Framework* narrative lists the various restoration requirements that already apply to the project and are consolidated within the *Mitigation Framework*. Existing requirements include FERC's *Upland Erosion Control, Revegetation and Maintenance Plan*, FERC's *Wetland and Waterbody Construction and Mitigation Procedures*, site-specific Erosion and Sediment Control Plans and post-construction stormwater management plans approved by DEQ under Mountain Valley's Annual Standards and Specifications. The Restoration Work Plan documents how work crews use the Baseline Assessment data in the field to restore the impacted resources and attain the *Mitigation Framework's* performance standards.

### Performance Standards

Immediately following construction MVP will restore the temporarily impacted streams and wetlands to their original condition using the baseline data. MVP will then monitor the restoration areas for successful restoration based on performance standards established in the

*Mitigation Framework.* If a restored resource is not meeting one or more performance standards during the monitoring period, MVP will perform targeted maintenance and/or adaptive management actions. Restoration of a stream or wetland will be considered successful when post-restoration monitoring demonstrates that the resource has met all relevant performance standards.

### Monitoring Plan

Mountain Valley will conduct post-restoration monitoring of each restored stream and wetland in accordance with the Monitoring Plan. The Monitoring Plan details the methodology proposed to ensure that restoration areas are meeting the defined performance standards. MVP anticipates that the monitoring period will last up to three years, or less time if performance standards have been met and DEQ and the Corps agree that successful restoration has been achieved. If the performance standards at a restoration area have not been met after three years, MVP will submit a plan for agency approval proposing corrective actions, which may include continued monitoring.

MVP will submit annual monitoring reports to the appropriate Corps district and DEQ that address the previous year's monitoring activities. Each annual report will include:

- All data collected for each restored stream and wetland site in accordance with the Monitoring Plan;
- Any findings that warrant action under the Maintenance & Adaptive Management Plan and, if necessary, a corrective action plan based on those findings; and
- Recommended determination of whether each monitored site has achieved the applicable performance standards or if additional monitoring is required.

### Maintenance and Adaptive Management Plan

MVP will conduct annual maintenance inspections of the stream and wetland restoration areas. MVP will maintain and repair restoration areas as needed during the monitoring period to meet the objectives of the *Mitigation Framework*.

MVP will also conduct maintenance as required for all related erosion and sediment controls and as necessary to comply with stormwater management permits issued for this Project. MVP will promptly conduct all required maintenance, such as invasive-species controls, reseeding/replanting or soil modifications, subject to growing season constraints.

If annual monitoring indicates that a stream or wetland restoration area that is not meeting the performance standards, then MVP will use adaptive management principles to develop a corrective action plan. The proposed plan, including a description of the corrective actions and a timeline to implement them, will be included in the annual monitoring report submitted to DEQ for review. Corrective actions, and any associated supplemental monitoring, may extend beyond the proposed three-year post-construction monitoring period.

If MVP determines that adaptive management has not been and is not likely to be successful in fully restoring an impacted resource, it may propose the purchase of additional compensatory mitigation credits or in-lieu-fee (ILF) payments. Any supplemental credit purchases would be to ensure that the project results in no net loss of aquatic resources.

Documentation of the purchase of any required mitigation credits, as necessary to fulfill any additional mitigation requirements, shall be submitted to and received by DEQ prior to initiating work in the impact areas authorized by this permit.

For the period ending December 31 of each calendar year, the permittee shall submit to DEQ by January 15 a summary of the amount of surface water impacts initiated; the amount of compensation completed and compensation requirement remaining; the status of initiating any remaining surface water impacts; and the status of completing any remaining compensation requirement.

#### Supplemental Credit Determination Methodology

MVP provided compensatory mitigation for all permanent impacts in the form of mitigation bank or ILF credits in appropriate ratios. Per DEQ regulations, restoration is the primary form of compensatory mitigation for temporary impacts. Based on EPA's comments on the MVP Project that were provided to the Corps of Engineers, MVP developed the Supplemental Credit

Determination Methodology. The *Mitigation Framework* narrative provides the following description of the methodology:

*“To determine the quantity of supplemental mitigation credit, Mountain Valley identified the expected duration of each temporary impact associated with Project construction – which includes the time from when the impact first occurs until it is restored. Because resources are not likely to meet the Performance Standards immediately after they are restored, Mountain Valley added one year of additional compensatory mitigation to stream impacts and two years to wetland impacts. Building on a methodology developed by the West Virginia Interagency Review Team, Mountain Valley proposes to provide supplemental compensatory mitigation at a rate of 3% per year for projected period of potential impact (i.e., sum of direct impacts during construction and post-construction restoration period). This approach to supplemental compensatory mitigation exceeds the applicable federal and state regulatory requirements and the standard practices in each of the respective USACE districts. Most importantly, this proposal provides additional assurance that the goal of “no net loss” will be achieved....”*

DEQ reviewed and provided comment on the draft *Mitigation Framework*. MVP submitted a revised version of the *Mitigation Framework* to address comments from DEQ, the Corps and WVDEP. The revised *Mitigation Framework* is under review, and must be approved by all the permitting agencies before any work is initiated under the VWP permit.

- 8. It appears that the ROW could sever upstream reaches from downstream resources. EPA recommends analyzing the potential for effects to downstream reaches, such as, but not limited to, changes to the hydrogeomorphology and impacts of sedimentation and compaction from construction activities, to better determine if secondary impacts will occur to the remaining stream resource. Secondary effects to these downstream resources should be avoided and minimized to the maximum extent practicable. Should unavoidable secondary impacts remain, then EPA recommends additional compensatory mitigation be provided to offset those effects.**

The Application establishes that MVP will maintain normal downstream flows during the construction of each stream crossing. MVP will maintain stream-flow connectivity between the upstream and downstream segments of the crossing during the period of active construction by

the use of flumes and/or water pumps. Under the requirements of the *Mitigation Framework*, MVP will return the post construction streams to their original elevations and contours and restore normal flow. For access-road crossings, MVP proposes appropriately sized culverts with countersinking, in accordance with any final VWP individual permit issued by the board, to allow the passage of aquatic life and adequately convey flows. The *Mitigation Framework* proposes to retain and segregate the streambed materials during trenching and to reinstall the natural substrate post construction. Returning the streambed to a stable, natural condition will reduce sedimentation when MVP removes the temporary stream diversion. Based on the requirements of the *Mitigation Framework*, DEQ anticipates minimal, temporary increases in turbidity and nominal impacts to downstream resources.

- 9. Although the information provided included some analysis of cumulative effects, EPA recommends a conclusive evaluation of cumulative effects at a watershed scale (i.e. HUC 12) be provided to ensure that measures are undertaken to avoid and minimize the potential of cumulative impacts.**

While DEQ regulation does not require a cumulative impact assessment, MVP prepared a supplemental evaluation of cumulative impacts within each Hydrologic Unit Code 12 (HUC12) watershed crossed by the Project to address EPA's comments. The results of that evaluation are included as Attachment 4 in MVP's Response to the Corps' Request for Information.

- 10. After all practicable avoidance and minimization measures have been incorporated into the proposed project, compensatory mitigation for those unavoidable impacts to waters of the US should be undertaken. Due to the significant amount of temporary impacts caused by this project and the potential for secondary and cumulative effects, it is currently unclear if the proposed mitigation will be sufficient to offset the loss of function of the impacted and downstream aquatic resources.**

**Section 332.3(b)(1) of the 2008 Mitigation Rule states that the required compensatory mitigation should be located within the same watershed as the impact site and should be located where it is most likely to successfully replace lost functions and service. To ensure a timely and functional replacement of aquatic resources in the impacted watershed, EPA recommends using a mitigation bank whose primary service area**

**encompasses the project locations. Additionally, basic information about the work performed at the bank, how the credits were generated (e.g. restoration, enhancement, preservation, etc.), and the credit type should be provided to ensure adequate compensation for the proposed impacts.**

**Should a bank be used whose secondary service area (SSA) includes the project, EPA recommends that the applicant provide the Corps a narrative documenting how the use of that bank is offsetting the project impacts since SSAs are geographically large and sometimes drain to different river basins.**

In Virginia, the Interagency Review Team (IRT) approves the service areas for mitigation banks, including secondary service areas. The IRT is comprised of members from DEQ, Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service, (USFWS), National Marine Fisheries Service (NMFS), U.S. Department of Agriculture (USDA), National Oceanic and Atmospheric Administration (NOAA), Virginia Institute of Marine Science (VIMS), Virginia Department of Historic Resources (VDHR), Virginia Department of Wildlife Resources (VDWR), Virginia Department of Conservation and Recreation (VDCR), Virginia Department of Forestry (VDOF), and local governments. DEQ finds that the IRT's review and approval of a mitigation bank's credits and service area provide sufficient assurance to DEQ that the approved credits adequately offset the loss of wetland and stream functions when applied at the compensation ratios specified in regulation.

**Mountain Valley Pipeline, LLC  
Response to August 30, 2021  
Request for Information**

**Attachment 4**

**Supplemental evaluation of cumulative  
impacts within each HUC12 watershed**



**CUMULATIVE IMPACT  
ASSESSMENT REPORT – HYDROLOGY**

***Mountain Valley Pipeline***

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Project No. 0101-17-0451-016

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**POTESTA**

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# CUMULATIVE IMPACT ASSESSMENT REPORT – HYDROLOGY

## *Mountain Valley Pipeline*

### 1.0 INTRODUCTION

Mountain Valley Pipeline, LLC (Mountain Valley) is seeking an Individual Permit (IP) for the Mountain Valley Pipeline Project (the Project) from the United States Army Corps of Engineers (USACE) Pittsburgh, Huntington, and Norfolk Districts to conduct regulated activities in navigable waters under Section 10 of the Rivers and Harbors Act of 1899 and for the discharge of dredged and fill material into “Waters of the United States” (WOTUS) under Section 404 of the Clean Water Act (CWA). In addition to the USACE IP application, Mountain Valley is seeking CWA Section 401 Water Quality Certification from the West Virginia Department of Environmental Protection (WVDEP) and the Virginia Department of Environmental Quality (VADEQ) for portions of the Project within their respective jurisdictions.

On August 31, 2021, Mountain Valley received a letter from the USACE Pittsburgh, Huntington, and Norfolk Districts requesting additional information that is considered necessary by the USACE to continue its evaluation of the Project. This document addresses Item No. 4, an assessment of cumulative effects (40 CFR § 230.11 (g)) to the aquatic environment associated with the completed and proposed discharge of dredged and/or fill material into WOTUS for each 12-digit Hydrological Unit Code (HUC). Please note that this document only addresses impacts associated with the Project and not other potential impacts that may have occurred in the listed 12-digit HUC (HUC 12) watersheds. The Project impacts include those proposed as part of the Project’s IP application and work that was completed under Mountain Valley’s previous Nationwide Permit No. 12 authorization.

### 2.0 METHODS

ArcGIS Spatial Analyst was used to delineate the 12-digit HUC watersheds that are intersected by the Project area utilizing available digital elevation models (DEMs). DEMs are an array of evenly-spaced grid cells that have elevation values for each cell. ArcGIS utilizes the DEM to compute the direction of flow down a slope and in how many cells flow accumulate. Before the DEMs were delineated as watersheds, the boundaries of the focus areas were delimited. Once the study watershed areas were defined, a depression-less surface was created for each watershed utilizing the hydrologic modeling ‘Fill’ tool. This tool fills sinks in a surface raster to remove small imperfections in the data.

To calculate a drainage network or watersheds, a grid must exist that is coded for the direction in which each cell in the surface drains. The ‘flow direction’ hydrologic modeling tool was used to determine where a landscape drains and is necessary to determine the direction of flow for each

cell in the watershed. For every cell in the surface grid, the ArcGIS grid processor finds the direction of steepest downward descent.

Flow accumulation was the next step in hydrologic modeling. Watersheds are defined spatially by the geomorphological property of drainage. In order to generate a drainage network, it is necessary to determine the ultimate flow path of every cell on the landscape grid. Flow accumulation was used to generate a drainage network, based on the direction of flow of each cell. By selecting cells with the greatest accumulated flow, a network of high-flow cells was generated. These high-flow cells lie on stream channels and at valley bottoms. In order to visualize the drainage network, the symbology method was changed to 'classified' to utilize two classes. The threshold was then adjusted to be as consistent as possible with known delineation or verified delineation data.

The 'flow length' tool was then used to show flow length to the closest downstream high-flow pathway. Using flow length with a weighted grid, a new raster was generated showing the drainage network for the appropriate threshold as determined by the known delineation data. Raster calculations make a new grid where the flow accumulation cells have a value greater than or equal to the threshold value, making those output cells null; where the flow accumulation cells are less than the threshold values, the output cells have a value of 1. The new grid was used as a weighted grid in the flow length tool. The output grid values represent the flow-length distance to the closest high-flow pathway. The raster was then converted to a stream network as line shape. After the raster was converted to a polyline format, the lines were reviewed for redundancy and adjusted in the footprint of lakes and large rivers based on aerial mapping. All the hydrologic tools in ArcGIS are available only after enabling the Spatial Analyst Extension.

As noted above, this evaluation used existing delineations to determine the effectiveness of the model and its prediction of streamlines in these watersheds. While the goal is to create streamlines that overlap, the vast majority of data runs utilized in this report did not extend to the extreme headwater reaches where small ephemeral drains were identified in the Project's delineations. Achieving streamlines that extend to the extreme headwaters to what is sometimes referred to as the zero order, or the end of the linear ordinary high water mark, resulted in the model distorting and splintering streamlines in an unrealistic fashion. As a result, the modeling effort may not include the last few feet of ephemeral channels that transition into swales, no longer exhibiting bed and bank at the top of ridges in the delineated watersheds. This results in fewer feet being included in the watershed estimate than likely exist in the drain and the percentages associated with the impacts from the Project being conservative, or a slight overestimate of cumulative impacts associated with the Project.

A summary of total wetland impacts in each 12-digit HUC is also provided in Section 4.0 of this document. These impacts include those proposed as part of the Project's IP application and work that was completed under Mountain Valley's previous Nationwide Permit No. 12 authorization.

### 3.0 RESULTS

The Project extends 304 miles across 11 HUC 8 watersheds (**Figures 1 and 2, Appendix A**), which contain 62 HUC 12 watersheds with associated impacts to water resources. The 11 HUC 8 are listed in **Table 1**. Please note that the Upper New in West Virginia and the Middle New in Virginia are the same HUC 8 watershed. To better facilitate the discussion herein, the data are grouped by HUC 8 watershed. Please note that only the 12-digit HUCs with impacts to aquatic resources are included in this report.

**Table 1**  
*HUC 8 Watersheds within the Project Area*

HUC 8 Watershed	County	State
Middle Ohio-North (05030201)	Marion, Harrison, Lewis	West Virginia
West Fork (05020002)	Wetzel, Doddridge	West Virginia
Little Kanawha (05030203)	Lewis, Braxton	West Virginia
Elk (05050007)	Braxton, Webster	West Virginia
Gauley (05050005)	Webster, Nicholas, Greenbrier	West Virginia
Lower New (05050004)	Summers	West Virginia
Greenbrier (05050003)	Summers, Monroe	West Virginia
Upper/Middle New (05050002)	Monroe (WV), Giles, Craig (VA)	West Virginia, Virginia
Upper James (02080201)	Montgomery	Virginia
Upper Roanoke (03010101)	Montgomery, Roanoke, Franklin Pittsylvania	Virginia
Banister (03010105)	Pittsylvania	Virginia

#### 3.1 Middle Ohio-North

The Project crosses four 12-digit HUC watersheds in the Middle Ohio-North HUC 8 watershed (**Figure 3, Appendix A**). These include the North Fork Fishing Creek (050302010202), the Headwaters South Fork Fishing Creek (050302010201), Buckeye Creek (050302010402), and Meathouse Fork (050302010403) (**Table 2**). The Middle Ohio-North watershed is approximately 1,813.5 square miles (mi<sup>2</sup>). These four HUC 12 watersheds have a combined drainage area of 171.1 mi<sup>2</sup> or less than 10 percent of the HUC 8 watershed.

##### 3.1.1 North Fork Fishing Creek

There are 13 stream crossings in the North Fork Fishing Creek watershed. Stream impacts include temporary and permanent access roads, temporary work spaces, timber mat crossings, and pipeline right-of-way (ROW) stream crossings. The Mobley Interconnect is also located in the North Fork Fishing Creek watershed. Permanent stream impacts in this watershed are approximately 303 linear feet, all of which are associated with the Mobley Interconnect facility. Total stream impacts,

both temporary and permanent, total 937 linear feet, which represent less than 0.0591% of the modeled streams found in this HUC 12 watershed (**Figure 4, Appendix A**).

### **3.1.2 Headwaters South Fork Fishing Creek**

There are 22 stream crossings in the Headwaters South Fork Fishing Creek watershed. The watershed is located adjacent to the North Fork Fishing Creek watershed (**Figure 3, Appendix A**). The permanent fill in this drain is associated with four permanent access roads. Most of the temporary stream impacts are related to timber mats that are used to cross streams. Total stream impacts, both temporary and permanent, in the Headwaters South Fork Fishing Creek total 1,173 linear feet, which represent less than 0.0770% of the modeled streams found in this HUC 12 watershed (**Figure 5, Appendix A**).

### **3.1.3 Buckeye Creek Watershed**

The Project will cross a small portion of the upper reaches of the Buckeye Creek watershed. There are two stream crossings whose temporary impacts are associated with pipeline ROW crossings. Stream impacts, all of which are temporary, in the watershed total 130 linear feet, which represent less than 0.0081% of the modeled streams found in this HUC 12 watershed (**Figure 6, Appendix A**).

### **3.1.4 Meathouse Fork**

Meathouse Fork is the last HUC 12 watershed that the Project crosses in the Middle Ohio-North drain. There are 13 stream crossings in this watershed. The only permanent stream impacts are associated with a permanent access road. The temporary stream impacts are the result of timber mat or pipeline ROW crossings. Stream impacts, both temporary and permanent, in the Meathouse Fork total 710 linear feet, which represent less than 0.0357% of the streams found in this HUC 12 watershed (**Figure 7, Appendix A**).

**Table 2**  
**Cumulative Project-Related Stream Impacts in the HUC 12 Watersheds that fall within the Middle Ohio-North Watershed**

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the watershed
		Perm	Temp	Perm	Temp			
North Fork Fishing Creek	13	0	222	412	525	1,586,148	937	0.0591%
Headwaters South Fork Fishing Creek	22	199	527	199	974	1,523,728	1,173	0.0770%
Buckeye Creek	2	0	130	0	130	1,609,870	130	0.0081%
Meathouse Fork	13	25	355	25	685	1,990,839	710	0.0357%

### 3.2 West Fork

The Project crosses seven 12-digit HUC watersheds in the West Fork HUC 8 watershed (**Figure 8, Appendix A**). These include the Little Tenmile Creek (050200020503), the Outlet Tenmile Creek (050200020504), the Headwaters Tenmile Creek (050200020502), Salem Fork (050200020501), Kincheloe Creek (050200020302), Freemans Creek (050500020301), and Polk Creek-West Fork River (050200020105) (**Table 3**). The West Fork watershed is approximately 879.8 mi<sup>2</sup>, while the seven 12-digit HUC watersheds total 210.2 mi<sup>2</sup>.

#### 3.2.1 Little Tenmile Creek

Little Tenmile Creek is the first HUC 12 watershed in the West Fork watershed with stream crossings. There are 12 stream crossings, six of which are timber mat crossings. Two of the stream crossings are associated with permanent access roads. Stream impacts, both temporary and permanent, in the Little Tenmile Creek watershed total 570 linear feet, which represent less than 0.0481% of the modeled streams found in this HUC 12 watershed (**Figure 9, Appendix A**).

#### 3.2.2 Outlet Tenmile Creek

There are five stream crossings in the Project area in the Outlet Tenmile Creek watershed. Only one of the crossings is associated with permanent impacts, a permanent access road. The



remaining stream crossings are a timber mat and three pipeline ROW crossings. Stream impacts, both temporary and permanent, in the Outlet Tenmile Creek watershed total 376 linear feet, which represent less than 0.0209% of the modeled streams found in this HUC 12 watershed (**Figure 10, Appendix A**).

### **3.2.3 Headwaters Tenmile Creek**

The Headwaters Tenmile Creek watershed borders the northern and eastern edges of the Salem Fork watershed. This results in the Project crossing this watershed twice (**Figure 8, Appendix A**). There are 24 stream crossings in this watershed. Only two crossings have permanent impacts (access roads). Fourteen of the stream crossings are pipeline ROW crossings, seven are timber mat crossings and the remaining crossing is a temporary access road. Stream impacts, both temporary and permanent, in the Headwaters Tenmile Creek watershed total approximately 1,408 linear feet, which represent less than 0.0839% of the modeled streams found in this HUC 12 watershed (**Figure 11, Appendix A**).

### **3.2.4 Salem Fork**

There is only one stream crossing, a pipeline ROW crossing, in the Salem Fork watershed. Stream impacts, which are temporary, are limited to 76 linear feet, which represent less than 0.0104% of the modeled streams found in this HUC 12 watershed (**Figure 12, Appendix A**).

### **3.2.5 Kincheloe Creek**

There are seven stream crossings in the Kincheloe Creek watershed, four pipeline ROW crossings, two timber mat crossings, and a temporary access road. All of these are temporary stream crossings, totaling approximately 701 linear feet of stream. This represents less than 0.0782% of the modeled streams mapped in this HUC 12 watershed (**Figure 13, Appendix A**).

### **3.2.6 Freemans Creek**

There are 14 stream crossings in the Freemans Creek watershed, eight pipeline ROW crossings, five timber mat crossings, and a temporary access road. Like the Kincheloe Creek watershed, these are all temporary in nature. Stream crossing impacts in the Freemans Creek watershed total approximately 812 linear feet of stream, which represent less than 0.556% of the modeled streams mapped in this HUC 12 watershed (**Figure 14, Appendix A**).

### **3.2.7 Polk Creek-West Fork River**

The Polk Creek-West Fork River watershed is the last drain with aquatic resource crossings in the West Fork HUC 8 watershed. However, there are no impacts, temporary or permanent, to streams in the Polk Creek-West Fork River watershed (**Figure 15, Appendix A**).

**Table 3**  
**Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the West Fork Watershed**

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Little Tenmile Creek	12	86	115	86	484	1,184,108	570	0.0481%
Outlet Tenmile Creek	5	29	232	29	347	1,796,037	376	0.0209%
Headwaters Tenmile Creek	24	77	702	77	1331	1,678,285	1,408	0.0839%
Salem Fork	1	0	76	0	76	734,073	76	0.0104%
Kincheloe Creek	7	0	395	0	701	896,119	701	0.0782%
Freemans Creek	14	0	436	0	812	1,459,867	812	0.0556%
Polk Creek – West Fork River	0	0	0	0	0	1,496,397	0	0.0000%

### 3.3 Little Kanawha

The Project crosses seven 12-digit HUC watersheds in the Little Kanawha HUC 8 watershed (**Figure 16, Appendix A**). These include Fink Creek (050302030201), the Headwaters Leading Creek (050302030202), the Headwaters Sand Fork (050302030101), Indian Fork (050302030102), Oil Creek (050302030306), Burnsville Lake-Little Kanawha River (050302030305), and Falls Run-Little Kanawha River (050302030303) (**Table 4**). The Little Kanawha watershed is approximately 2,307.7 mi<sup>2</sup>. The combined drainage of the seven listed watersheds is approximately 235.1 mi<sup>2</sup> or less than 10% of the HUC 8 watershed.

#### 3.3.1 Fink Creek

Fink Creek is the first watershed with stream crossings in the Little Kanawha watershed. Stream impacts include four temporary crossings, two of which are timber mats crossings, totaling approximately 240 linear feet of stream. This represents less than 0.0137% of the modeled streams mapped in this HUC 12 watershed (**Figure 17, Appendix A**).

#### 3.3.2 Headwaters Leading Creek

The Headwaters Leading Creek watershed has two stream crossings, a timber mat crossing and a pipeline ROW crossing. Both of these stream crossings are temporary and total approximately 89

linear feet. This represents less than 0.0064% of the modeled streams in the Headwaters Leading Creek watershed (Figure 18, Appendix A).

### **3.3.3 Headwaters Sand Fork**

There are 21 stream crossings in the Headwaters Sand Fork watershed. Permanent impacts are limited to two permanent access road stream crossings. The remaining stream impacts are primarily timber mat and pipeline ROW crossings. Stream impacts, both temporary and permanent, in the watershed total approximately 1,068 linear feet, which represent less than 0.0712% of the modeled streams found in this HUC 12 watershed (Figure 19, Appendix A).

### **3.3.4 Indian Fork**

There are five stream crossings in the Indian Fork watershed (Table 4), four pipeline ROW crossings, one timber mat crossing, and an access road. None of the associated stream impacts are permanent. Stream impacts total approximately 367 linear feet or less than 0.0407% of this HUC 12 watershed (Figure 20, Appendix A).

### **3.3.5 Oil Creek**

The Oil Creek watershed has 22 stream crossings. There are three permanent access road crossings that are associated with permanent impacts each being 30 feet or less. The remaining stream crossings are temporary access roads, timber mats, and the pipeline ROW crossings. Stream impacts, both temporary and permanent, total 1,664 linear feet in this watershed. This is less than 0.1270% of the total modeled streams in the Oil Creek watershed (Figure 21, Appendix A).

### **3.3.6 Burnsville Lake-Little Kanawha River**

The Burnsville Lake falls in this watershed. As noted on Figure 22 (Appendix A), this feature is not included in the total stream length. Without Burnsville Lake, which represents more than 10 miles of stream that have been converted to a lake, there are an estimated 1,158,723 linear feet (220 miles) of stream in Burnsville Lake-Little Kanawha River watershed. There are 12 stream crossings within this watershed in the Project area. Most of the impacts are temporary in nature. The permanent impacts are associated with access roads. Stream impacts, both temporary and permanent, total approximately 639 linear feet. This is less than 0.0551% of the modeled streams in this HUC 12 watershed.

### **3.3.7 Falls Run-Little Kanawha River**

There are 25 stream crossings in the 21,120-acre Falls Run-Little Kanawha River watershed. This is the most southern HUC 12 watershed along the Project route in the Little Kanawha HUC 8 watershed. The only permanent impacts in this watershed are associated with the Harris Compressor Station. The total stream crossing impacts in this watershed are approximately 2,053 linear feet. While this represents the largest total amount of impacts in any of the 12-digit HUC

in the West Virginia portion of the Project area, the percentage of modeled streams in the watershed is approximately 0.1536% (Figure 23, Appendix A).

**Table 4**  
*Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Little Kanawha Watershed*

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Fink Creek	4	0	44	0	240	1,757,227	240	0.0137%
Headwaters Leading Creek	2	0	22	0	89	1,391,441	89	0.0064%
Headwaters Sand Fork	21	53	294	53	1,015	1,500,869	1,068	0.0712%
Indian Fork	5	0	367	0	367	902,452	367	0.0407%
Oil Creek	22	83	1,333	83	1,581	1,310,301	1,664	0.1270%
Burnsville Lake – Little Kanawha River	12	136	311	136	503	1,158,723	639	0.0551%
Falls Run – Little Kanawha River	25	0	1,227	94	1,959	1,336,392	2,053	0.1536%

### 3.4 Elk

The Project crosses eight 12-digit HUC watersheds in the Little Kanawha HUC 8 watershed (Figure 24, Appendix A). These include the Outlet Holly River (050500070304), the Left Fork Holly River (050500070301), the Outlet Right Fork Holly River (050500070303), Upper Sutton Lake-Elk River (050500070602), Big Run-Elk River (050500070601), the Headwaters Laurel Creek (050500070201), Outlet Laurel Creek (050500070202), and Upper Birch River (050500070401) (Table 5). The Elk watershed is approximately 1,532.1 mi<sup>2</sup>, while the eight 12-digit HUC watersheds total 268.1 mi<sup>2</sup>.

#### 3.4.1 Outlet Holly River

There are 13 stream crossings in the Outlet Holly River watershed. Nine of these stream crossings are pipeline ROW crossings, while three are timber mat crossings. The last is a temporary access

road. The stream crossing impacts in this watershed are temporary in nature. Stream impacts in the Outlet Holly River watershed total approximately 794 linear feet or less than 0.0642% of the modeled streams in this HUC 12 watershed (**Figure 25, Appendix A**).

### **3.4.2 Headwaters Holly River**

The Headwaters Holly River watershed is sometimes referred to as the Left Fork Holly River watershed. There are approximately 634 linear feet of temporary impacts associated with four pipeline ROW stream crossings in this watershed. This represents less than 0.0290% of the modeled stream in this HUC 12 watershed (**Figure 26, Appendix A**).

### **3.4.3 Outlet Right Fork Holly River**

The Outlet Right Fork Holly River watershed has three stream crossings. This includes permanent impacts associated with a permanent access road and temporary impacts from a pipeline ROW crossing and an additional temporary work space (ATWS). The total stream crossing impacts are approximately 136 linear feet. This equates to less than 0.0141% of the stream length modeled in this HUC 12 watershed (**Figure 27, Appendix A**).

### **3.4.4 Upper Sutton Lake-Elk River**

The Upper Sutton Lake-Elk River watershed contains the tailwaters of Sutton Lake. For the reasons explained in Section 2.0 above, and as noted in **Figure 28 (Appendix A)**, this aquatic resource is excluded from the stream model. There are six stream crossings in this watershed, which total 208 linear feet of temporary impacts. This includes four timber mat crossings and two pipeline ROW crossings. The total impacts equate to less than 0.0305% of the stream length modeled in this HUC 12 watershed.

### **3.4.5 Big Run Elk River**

There are four stream crossings in the Big Run-Elk River watershed, three pipeline ROW crossings, and one timber mat crossings. These impacts are temporary and total approximately 114 linear feet of stream. This represents less than 0.0102% of the stream length modeled in this HUC 12 watershed (**Figure 29, Appendix A**).

### **3.4.6 Outlet Laurel Creek**

There are 12 stream crossings in the Outlet Laurel Creek watershed. The only permanent stream crossing impacts are associated with a permanent access road. Other stream crossings include pipeline ROW crossings and a temporary access road. Stream impacts, both permanent and temporary, total approximately 803 linear feet or less than 0.0549% of the modeled stream in this HUC 12 watershed (**Figure 30, Appendix A**).

### 3.4.7 Headwaters Laurel Creek

The Headwaters Laurel Creek watershed has 19 stream crossings with approximately 1,498 linear feet of stream crossing impacts. Thirteen of the stream crossings are pipeline ROW crossings. The remaining are timber mat crossings and temporary access roads. The stream impacts in this watershed are temporary in nature. Combined, these impacts represent less than 0.1179% of the modeled streams in this HUC 12 watershed (Figure 31, Appendix A).

### 3.4.8 Upper Birch River

The Upper Birch River watershed is the southernmost 12-digit HUC crossed by the Project in the Elk HUC 8 watershed. The 22 stream crossings, 9 pipeline ROW crossings, 7 timber mat crossings, and 7 temporary access roads, are all temporary in nature. Like the Headwaters Holly River, the Upper Birch River watershed is one of the large drains crossed in the Project area (approximately 30,975 acres). The total stream crossing impacts are approximately 751 linear feet. These impacts are temporary in nature and amount to less than 0.0343% of the streams mapped in the Upper Birch River watershed (Figure 32, Appendix A).

**Table 5**  
*Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Elk Watershed*

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Outlet Holly River	13	0	743	0	794	1,236,071	794	0.0642%
Headwaters Holly River	4	0	634	0	634	2,183,798	634	0.0290%
Outlet Right Fork Holly River	3	29	107	29	107	964,639	136	0.0141%
Upper Sutton Lake – Elk River	6	0	208	0	208	681,017	208	0.0305%
Big Run – Elk River	4	0	114	0	114	1,122,166	114	0.0102%
Outlet Laurel Creek	12	30	773	30	773	1,463,657	803	0.0549%

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Headwaters Laurel Creek	19	0	1,197	0	1,498	1,270,457	1,498	0.1179%
Upper Birch River	22	0	489	0	751	2,191,918	751	0.0343%

### 3.5 Gauley

The Project crosses ten 12-digit HUC watersheds in the Gauley HUC 8 watershed (**Figure 33, Appendix A**) near the center of the watershed. These include Big Laurel Creek-Gauley River (050500050303), Big Beaver Creek (050500050801), Panther Creek-Gauley River (050500050804), the Outlet Hominy Creek (050500050502), the Headwaters Hominy Creek (050500050501), Anglins Creek (050500050607), Meadow Creek-Meadow River (050500050606), Mill Creek-Meadow River (050500050605), Sewell Creek (050500050604), and Otter Creek-Meadow River (050500050602) (**Table 6**). The Gauley watershed is approximately 1,419.7 mi<sup>2</sup>. The combined drainage of the ten listed watersheds is approximately 465.8 mi<sup>2</sup>.

#### 3.5.1 Big Laurel Creek-Gauley River

Big Laurel Creek-Gauley River is the first watershed 12-digit HUC in the Gauley watershed with stream crossings in the Project area. There are 18 stream crossings in this 36,220-acre watershed. It is one of the largest 12-digit HUCs that the Project passes through in West Virginia. Ten of the stream crossings are pipeline ROW crossings, while six are timber mat crossings and two are temporary access roads. The impacts in this watershed are all temporary in nature. The total stream impacts, an estimated 855 linear feet of stream, represent less than 0.0335% of the modeled streams in the Big Laurel Creek-Gauley River watershed (**Figure 34, Appendix A**).

#### 3.5.2 Big Beaver Creek

The Big Beaver Creek watershed has 21 stream crossings. Ten of these are pipeline ROW crossings, while nine stream crossings are associated with timber mat crossings and two are associated with temporary road crossings. These are all temporary in nature. The total stream impacts, approximately 1,216 linear feet of stream, represent less than 0.0589% of the modeled streams in this HUC 12 watershed (**Figure 35, Appendix A**).

### **3.5.3 Panther Creek-Gauley River**

There are eight stream crossings in the Panther Creek-Gauley River watershed. These are primarily pipeline ROW crossings (one timber mat crossing). The stream impacts, which total approximately 604 linear feet, are temporary. The impact total represents less than 0.0343% of the modeled streams in this HUC 12 watershed (**Figure 36, Appendix A**).

### **3.5.4 Outlet Hominy Creek**

The Outlet Hominy Creek watershed is another large drain, approximately 32,064 acres, in the Gauley watershed. There are 11 stream crossings in the upper reaches of the Outlet Hominy Creek watershed, all temporary in nature. Nine of the stream crossings are pipeline ROW crossings. The remaining two stream crossings are a timber mat crossing and a temporary access road. The total stream impacts, an estimated 782 linear feet of stream, represent less than 0.0344% of the modeled streams in this HUC 12 watershed (**Figure 37, Appendix A**).

### **3.5.5 Headwaters Hominy Creek**

There are 17 stream crossings in the Headwaters Hominy Creek watershed. Fifteen of these crossings are pipeline ROW crossings, and two are timber mat crossings. The stream impacts are all temporary in nature. These total approximately 1,261 linear feet of stream, which represents less than 0.0516% of the modeled streams in this HUC 12 watershed (**Figure 38, Appendix A**).

### **3.5.6 Anglins Creek**

The Project area also crosses the Anglins Creek watershed. However, there are no stream crossings in this watershed (**Figure 39, Appendix A**).

### **3.5.7 Meadow Creek-Meadow River**

There are six crossings in the Meadow Creek-Meadow River watershed, three timber mat crossings and three pipeline ROW crossings. The stream impacts in this watershed, approximately 315 linear feet, represent less than 0.0127% of the modeled streams in this HUC 12 watershed. These impacts are temporary in nature (**Figure 40, Appendix A**).

### **3.5.8 Mill Creek-Meadow River**

The Mill Creek-Meadow River watershed may also be referred to as the Big Clear Creek-Meadow River watershed. There are three pipeline ROW crossings in this watershed, each with temporary impacts only. The total stream impacts, an estimated 496 linear feet of stream, represent less than 0.0230% of the modeled streams in this HUC 12 watershed (**Figure 41, Appendix A**).



### 3.5.9 Sewell Creek

There are 16 stream crossings in the Sewell Creek watershed. This includes three permanent access roads, three timber mat crossings and ten pipeline ROW crossings. The total temporary and permanent stream impacts, an estimated 899 linear feet of stream, represent less than 0.0423% of the modeled streams in this HUC 12 watershed (Figure 42, Appendix A).

### 3.5.10 Otter Creek-Meadow River

The Otter Creek-Meadow River watershed is the last drain with stream crossings in the Gauley River watershed. The permanent stream impacts in this watershed are associated with the Stallworth Compressor Station and two permanent access roads. Temporary stream impacts are associated with ten pipeline ROW crossings, three access roads, two ATWS, and the Stallworth Compressor Station. The total temporary and permanent stream impacts, an estimated 1,582 linear feet of stream, represent less than 0.0533% of the modeled streams in this HUC 12 watershed (Figure 43, Appendix A).

**Table 6**  
*Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Gauley Watershed*

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Big Laurel Creek – Gauley River	18	0	741	0	855	2,550,891	855	0.0335%
Big Beaver Creek	21	0	1,216	0	1,216	2,064,382	1,216	0.0589%
Panther Creek – Gauley River	8	0	604	0	604	1,758,427	604	0.0343%
Outlet Hominy Creek	11	0	782	0	782	2,272,489	782	0.0344%
Headwaters Hominy Creek	17	0	995	0	1261	2,445,086	1,261	0.0516%

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Anglins Creek	0	0	0	0	0	1,365,792	0	0.0000%
Meadow Creek – Meadow River	6	0	219	0	315	2,483,496	315	0.0127%
Mill Creek – Meadow River	3	0	371	0	496	2,160,428	496	0.0230%
Sewell Creek	16	84	703	84	815	2,127,081	899	0.0423%
Otter Creek – Meadow River	19	59	992	421	1,161	2,968,000	1,582	0.0533%

### 3.6 Lower New

The Project crosses one 12-digit HUC watershed in the Lower New HUC 8 watershed (**Figure 44, Appendix A**), Meadow Creek (050500040204) (**Table 7**). The Lower New watershed is approximately 690.9 mi<sup>2</sup>. The drainage of the Meadow Creek watershed is approximately 39.2 mi<sup>2</sup> or less than 10% of the HUC 8 watershed.

#### 3.6.1 Meadow Creek

The Meadow Creek watershed is located on the eastern edge of the Lower New watershed. This drain is sometimes referred to as Lick Creek. The Project area includes 18 stream crossings in the watershed. The stream impacts include two permanent access roads. Temporary stream impacts are associated with ten pipeline ROW crossings, five timber mat crossings, and a temporary access road. The total temporary and permanent impacts, an estimated 1,148 linear feet of stream, represent less than 0.0540% of the modeled streams in this HUC 12 watershed (**Figure 45, Appendix A**).

**Table 7**  
***Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Lower New Watershed***

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Meadow Creek	18	64	651	64	1,084	2,125,309	1,148	0.0540%

### 3.7 Greenbrier

The Project crosses two 12-digit HUC watersheds in the Greenbrier HUC 8 watershed (**Figure 46, Appendix A**), Hungard Creek-Greenbrier River (050500030906) and Stony Creek-Greenbrier River (050500030907) (**Table 8**). The Greenbrier watershed is approximately 1,678.5 mi<sup>2</sup>. The combined drainage of the two listed watersheds is approximately 51.2 mi<sup>2</sup> or less than 10% of the HUC 8 watershed.

#### 3.7.1 Hungard Creek-Greenbrier River

The Project area includes 28 stream crossings in the Hungard Creek-Greenbrier River watershed. There are two stream crossings, access roads, that have permanent impacts. The remaining stream crossing impacts, thirteen pipeline ROW crossings, six timber mat crossings, and two temporary access roads, are temporary in nature. The total impacts, an estimated 1,488 linear feet of stream, represent less than 0.0853% of the modeled streams in this HUC 12 watershed (**Figure 47, Appendix A**).

#### 3.7.2 Stony Creek-Greenbrier River

There are five stream crossings in the Stony Creek-Greenbrier River watershed, two timber mat crossings, and three pipeline ROW crossings. These impacts are all temporary in nature. The total impacts, an estimated 274 linear feet of stream, represent less than 0.0349% of the modeled streams in this HUC 12 watershed (**Figure 48, Appendix A**).

**Table 8**  
**Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Greenbrier Watershed**

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Hungard Creek – Greenbrier River	28	53	1,048	53	1,435	1,744,033	1,488	0.0853%
Stony Creek – Greenbrier River	5	0	122	0	274	786,091	274	0.0349%

### 3.8 Middle/Upper New

The Project crosses six 12-digit HUC watersheds in the Middle/Upper New HUC 8 watershed (Figure 49, Appendix A). These include East River (050500020604), Rich Creek (050500020404), Stony Creek (050500020305), Little Stony Creek-New River (050500020304), Lower Sinking Creek (050500020303), and Upper Sinking Creek (050500020302) (Table 9). The Middle/Upper New watershed is approximately 1,687.8 mi<sup>2</sup>. The combined drainage of the six listed watersheds is approximately 282.2 mi<sup>2</sup>.

#### 3.8.1 East River

There are 28 stream crossings in the East River watershed. This watershed is sometimes referred to as Middle Indian Creek. This includes four permanent access roads. Twenty of the stream crossings are pipeline ROW crossings, while four are timber mat crossings. The total stream impacts, an estimated 1,469 linear feet of stream, represent less than 0.0529% of the modeled streams in this HUC 12 watershed (Figure 50, Appendix A).

#### 3.8.2 Rich Creek

There are nine stream crossings in the Rich Creek watershed. These impacts are limited to seven pipeline ROW crossings and two timber mat crossings. The stream impacts are temporary in nature. The total stream impacts, an estimated 766 linear feet of stream, represent less than 0.0308% of the modeled streams in this HUC 12 watershed (Figure 51, Appendix A).

### 3.8.3 Stony Creek

There are six stream crossings in the southern portion of the Stony Creek watershed. These impacts are limited to three timber mat and three pipeline ROW crossings and are temporary in nature. The total impacts, an estimated 344 linear feet of stream, represent less than 0.0240% of the modeled streams in this HUC 12 watershed (Figure 52, Appendix A).

### 3.8.4 Little Stony Creek-New River

There are 20 stream crossings in the Little Stony Creek-New River watershed. These stream impacts are limited to 13 timber mat and 7 pipeline ROW crossings and are temporary in nature. The total stream impacts, an estimated 879 linear feet of stream, represent less than 0.0707% of the modeled streams in this HUC 12 watershed (Figure 53, Appendix A).

### 3.8.5 Lower Sinking Creek

There are 20 stream crossings in the Lower Sinking Creek watershed. This includes ten access roads, eight pipeline ROW crossings, and 2 timber mat crossings. Permanent stream impacts are limited to an access road crossing of an ephemeral stream. The total temporary and permanent impacts, an estimated 901 linear feet of stream, represent less than 0.1048% of the modeled streams in this HUC 12 watershed (Figure 54, Appendix A).

### 3.8.6 Upper Sinking Creek

There are 13 stream crossings in the Upper Sinking Creek watershed. Ten of these crossings are pipeline ROW crossings, while two are temporary access roads, and one is a timber mat crossing. Impacts associated with these stream crossings are temporary in nature. The total impacts, an estimated 884 linear feet of stream, represent less than 0.0585% of the modeled streams in this HUC 12 watershed (Figure 55, Appendix A).

**Table 9**  
*Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Middle/Upper New Watershed*

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
East River	28	109	1,208	109	1,360	2,777,615	1,469	0.0529%
Rich Creek	9	0	766	0	766	2,487,504	766	0.0308%
Stony Creek	6	0	344	0	344	1,392,380	344	0.0240%

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Little Stony Creek – New River	20	0	879	0	879	1,243,725	879	0.0707%
Lower Sinking Creek	20	31	870	31	870	860,082	901	0.1048%
Upper Sinking Creek	13	0	884	0	884	1,509,862	884	0.0585%

### 3.9 Upper James

The Project crosses one 12-digit HUC watersheds in the Upper James HUC 8 watershed (**Figure 56, Appendix A**), Trout Creek-Craig Creek (020802011001) (**Table 10**). The Upper James watershed is approximately 2,210.7 mi<sup>2</sup>. The drainage of the Trout Creek-Craig Creek watershed is approximately 51.9 mi<sup>2</sup> or less than 3% of the HUC 8 watershed.

#### 3.9.1 Trout Creek-Craig Creek

There are seven stream crossings in the Trout Creek-Craig Creek watershed, six timber mat crossings and one temporary access road. These are the only stream crossings in the Upper James HUC 8 watershed. The stream impacts are all temporary in nature and total approximately 200 linear feet. This represents less than 0.0121% of the modeled streams in this HUC 12 watershed (**Figure 57, Appendix A**).

**Table 10**  
**Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall**  
**within the Upper James Watershed**

HUC 12 Watershed	Total Number of Proposed Stream	Proposed Impacts in Application (feet)		Total Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Trout Creek – Craig Creek	7	0	200	0	200	1,655,432	200	0.0121%

### 3.10 Upper Roanoke

The Project crosses thirteen 12-digit HUC watersheds in the Upper Roanoke HUC 8 watershed (**Figure 58, Appendix A**). These include Dry Run-North Fork Roanoke River (030101010201), Wilson Creek-North Fork Roanoke River (030101010202), Bradshaw Creek-North Fork Roanoke River (030101010203), Brake Branch-South Fork Roanoke River (030101010105), Sawmill Hollow-Roanoke River (030101010301), Bottom Creek (030101010102), South Fork Blackwater River (030101010502), North Fork Blackwater River (030101010501), Madcap Creek-Blackwater River (030101010503), Maggodee Creek (030101010504), Standiford Creek-Smith Mountain Lake (030101010601), Owens Creek-Pigg River (030101010804), and Tomahawk Creek-Pigg River (030101011001) (**Table 11**). The Upper Roanoke watershed is approximately 2,189.9 mi<sup>2</sup>. The combined drainage of the thirteen listed watersheds is approximately 529.6 mi<sup>2</sup>.

#### 3.10.1 Dry Run-North Fork Roanoke River

There are 13 stream crossings in the Dry Run-North Fork Roanoke River watershed, 9 pipeline ROW crossings, three timber mat crossings, and 1 temporary access road. These stream impacts are all temporary in nature. The total stream impacts, an estimated 947 linear feet of stream, represent less than 0.0701% of the modeled streams in this HUC 12 watershed (**Figure 59, Appendix A**).

#### 3.10.2 Wilson Creek-North Fork Roanoke River

There are 10 stream crossings in the Wilson Creek-North Fork Roanoke River watershed. Nine of the stream crossings are pipeline ROW crossings, while the remaining crossing is a timber mat. These stream impacts are all temporary in nature. The total impacts, an estimated 760 linear feet of stream, represent less than 0.0751% of the modeled streams in this HUC 12 watershed (**Figure 60, Appendix A**).

### **3.10.3 Bradshaw Creek-North Fork Roanoke River**

There are three stream crossings in the Bradshaw Creek-North Fork Roanoke River watershed. Two of the stream crossings are pipeline ROW crossings, while the remaining crossing is a timber mat crossing. These impacts are all temporary in nature. The total impacts, an estimated 248 linear feet of stream, represent less than 0.0345% of the modeled streams in this HUC 12 watershed (**Figure 61, Appendix A**).

### **3.10.4 Brake Branch-South Fork Roanoke River**

There is only one stream crossing in the Brake Branch-South Fork Roanoke River watershed. The pipeline ROW crossing is temporary in nature. The total impacts, an estimated 79 linear feet of stream, represent less than 0.0102% of the modeled streams in this HUC 12 watershed (**Figure 62, Appendix A**).

### **3.10.5 Sawmill Hollow-Roanoke River**

There are seven stream crossings in the Sawmill Hollow-Roanoke River watershed. These stream impacts are all temporary in nature and includes four pipeline ROW and three timber mat crossings. The total stream impacts, an estimated 468 linear feet of stream, represent less than 0.0284% of the modeled streams in this HUC 12 watershed (**Figure 63, Appendix A**).

### **3.10.6 Bottom Creek**

There are 25 stream crossings in the Bottom Creek watershed. Twenty-three of these crossings are associated with timber mat crossings (11) and pipeline ROW crossings (2). The remaining two are temporary access roads. These stream impacts are all temporary in nature. The total impacts, an estimated 1,225 linear feet of stream, represent less than 0.1871% of the modeled streams in this HUC 12 watershed (**Figure 64, Appendix A**).

### **3.10.7 South Fork Blackwater River**

There are nine stream crossings in the South Fork Roanoke River watershed. Five of the crossings are pipeline ROW crossings, three are timber mat crossings, and one is an access road. These stream impacts are all temporary in nature. The total impacts, an estimated 421 linear feet of stream, represent less than 0.0606% of the modeled streams in this HUC 12 watershed (**Figure 65, Appendix A**).

### **3.10.8 North Fork Blackwater River**

There are 22 stream crossings in the North Fork Blackwater River watershed. These stream impacts are all temporary in nature and include 16 pipeline ROW crossings and 6 timber mat crossings. The total impacts, an estimated 1,588 linear feet of stream, represent less than 0.1866% of the modeled streams in this HUC 12 watershed (**Figure 66, Appendix A**).



### **3.10.9 Madcap Creek-Blackwater River**

There are 55 stream crossings in the Madcap Creek-Blackwater River watershed. This total includes 40 pipeline ROW crossings and 18 timber mat crossings. These stream impacts are all temporary in nature. The total stream crossing impacts in this watershed are approximately 3,373 linear feet. While this represents the largest total amount of impacts in any of the 12-digit HUCs in the Virginia portion of the Project area, the percentage of modeled streams in the watershed is less than 0.2301% (Figure 67, Appendix A).

### **3.10.10 Maggodee Creek**

There are seven stream crossings in the Maggodee Creek watershed, five pipeline ROW crossings and two timber mat crossings. These stream impacts are all temporary in nature. The total impacts, an estimated 497 linear feet of stream, represent less than 0.0420% of the modeled streams in this HUC 12 watershed (Figure 68, Appendix A).

### **3.10.11 Standiford Creek-Smith Mountain Lake**

There are 28 stream crossings in the Standiford Creek-Smith Mountain Lake watershed. As noted in other drains, lakes are not included in stream miles in the model that was used to estimate stream lengths. Stream impacts, 16 pipeline ROW crossings, 10 timber mat crossings, and 2 access roads, in this watershed are temporary in nature and are associated with timber mat or pipeline ROW crossings. The total impacts, an estimated 1,577 linear feet of stream, represent less than 0.1725% of the modeled streams in this HUC 12 watershed (Figure 69, Appendix A).

### **3.10.12 Owens Creek-Pigg River**

There are 31 stream crossings in the Owens Creek-Pigg River watershed. Stream impacts in this watershed are temporary in nature and are associated with 13 timber mat and 18 pipeline ROW crossings. The total impacts, an estimated 1,330 linear feet of stream, represent less than 0.1511% of the modeled streams in this HUC 12 watershed (Figure 70, Appendix A).

### **3.10.13 Tomahawk Creek-Pigg River**

There are 22 stream crossings in the Tomahawk Creek-Pigg River watershed. Stream impacts in this watershed are temporary in nature and are associated with 10 timber mat crossings and 12 pipeline ROW crossings. The total impacts, an estimated 1,191 linear feet of stream, represent less than 0.1194% of the modeled streams in this HUC 12 watershed (Figure 71, Appendix A).

**Table 11**  
**Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall**  
**within the Upper Roanoke (03010101) Watershed**

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Dry Run – North Fork Roanoke River	13	0	656	0	947	1,350,145	947	0.0701%
Wilson Creek – North Fork Roanoke River	10	0	760	0	760	1,012,489	760	0.0751
Bradshaw Creek – North Fork Roanoke River	3	0	248	0	248	719,801	248	0.0345%
Brake Branch – South Fork Roanoke River	1	0	79	0	79	777,601	79	0.0102%
Sawmill Hollow – Roanoke River	7	0	468	0	468	1,648,284	468	0.0284%
Bottom Creek	25	0	1,225	0	1,225	654,699	1,225	0.1871%
South Fork Blackwater River	9	0	185	0	421	695,228	421	0.0606%
North Fork Blackwater River	22	0	1,211	0	1,588	851,091	1,588	0.1866%
Madcap Creek –	55	0	2,379	0	3,373	1,466,132	3,373	0.2301%

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Blackwater River								
Maggodee Creek	7	0	497	0	497	1,184,040	497	0.0420%
Standiford Creek – Smith Mountain Lake	28	0	1,499	0	1,577	914,176	1,577	0.1725%
Owens Creek – Pigg River	31	0	1,330	0	1,330	880,190	1,330	0.1511%
Tomahawk Creek – Pigg River	22	0	1,191	0	1,191	997,467	1,191	0.1194%

### 3.11 Banister

The Project crosses three 12-digit HUC watersheds in the Banister HUC 8 watershed (**Figure 72, Appendix A**). These include Cherrystone Creek (030101050104), Mill Creek-Whitehorn Creek (030101050201), and Shockoe Creek-Banister River (030101050203) (**Table 12**). The Banister watershed is approximately 596.7 mi<sup>2</sup>, the smallest in the Project area. The combined drainage of the three listed watersheds is approximately 116.6 mi<sup>2</sup>. This includes the Shockoe Creek-Banister River watershed that has no stream impacts.

#### 3.11.1 Cherrystone Creek

There are 34 stream crossings in the Cherrystone Creek watershed. There is one permanent access road. The 33 remaining stream crossings are associated with 18 timber mat crossings and 15 pipeline ROW crossings. These impacts are temporary in nature. The total impacts, an estimated 1,646 linear feet of stream, represent less than 0.1519% of the modeled streams in this HUC 12 watershed (**Figure 73, Appendix A**).

### 3.11.2 Mill Creek-Whitehorn Creek

There are four pipeline ROW stream crossings in the Mill Creek-Whitehorn Creek watershed. These impacts are temporary in nature. The total impacts, an estimated 390 linear feet of stream, represent less than 0.0394% of the modeled streams in this HUC 12 watershed (Figure 74, Appendix A).

### 3.11.3 Shockoe Creek-Banister River

The Project area includes the Shockoe Creek-Banister River watershed. However, there are no stream crossings in this watershed (Figure 75, Appendix A).

**Table 13**  
*Cumulative Project Stream Impacts in the HUC 12 Watersheds that fall within the Banister (03010105) Watershed*

HUC 12 Watershed	Total Number of Proposed Stream Crossings	Proposed Impacts in Application (feet)		Total Project-Related Impacts (feet)		Estimated Linear Feet of Streams in Watershed	Project-Related Cumulative Impacts (feet)	Percentage of Impacted Streams Estimated in the Watershed
		Perm	Temp	Perm	Temp			
Cherrystone Creek	34	32	1,646	32	1,646	1,083,738	1,646	0.1519%
Mill Creek – Whitehorn Creek	4	0	390	0	390	989,566	390	0.0394
Shockoe Creek – Banister River	0	0	0	0	0	703,910	0	0%

## 4.0 WETLANDS

Combined wetland impacts in each of the 12-digit HUC watersheds in the Project Area are provided in Table 14. Note that reliable data on the total wetland area in each watershed are not available. Accordingly, Table 14 does not provide estimates for the percentages of the total wetland area in each watershed affected by the Project. The Total Temporary Impacts column in Table 14 tallies palustrine emergent (PEM) wetlands that will be restored to preconstruction conditions. For simplicity, the Total Permanent Impacts column represents the combined impacts from (1) permanent fill and (2) the conversion of palustrine forested and palustrine scrub-shrub wetlands to

PEM wetlands. Most of the “permanent” impacts (approximately 88%) are conversion from PFO or PSS wetlands to PEM wetlands, which means there will be no loss of wetland acreage for these impacts. Additionally, the wetland impact areas were calculated using the preliminary jurisdictional determination, which likely overstates the extent of impacted areas that qualify as waters of the United States.

**Table 14**  
***Cumulative Project Wetland Impacts in the HUC 12 Watersheds that fall within the Project Area***

<b>12-digit HUC</b>	<b>Total Temporary Impacts (acres)</b>	<b>Total Permanent Conversion Impacts (acres)</b>	<b>Total Permanent Fill Impacts (acres)</b>	<b>Total Impacts (acres)</b>
North Fork Fishing Creek	0.2819	0	0	0.2819
Headwater of South Fork Fishing Creek	0.2061	0.0547	0.0082	0.269
Buckeye Creek	0.0422	0	0.0115	0.0537
Meathouse Creek	0.297	0	0.0579	0.3549
Little Tenmile Creek	0.0471	0	0	0.0471
Outlet Tenmile Creek	0.3939	0	0	0.3939
Headwaters Tenmile Creek	0.8434	0.1489	0	0.9923
Salem Fork	0	0.011	0	0.011
Kincheloe Creek	0.5264	0	0	0.5264
Fink Creek	0.2133	0.0024	0	0.2157
Freemans Creek	0.5913	0	0	0.5913
Polk Creek-West Fork River	0.0231	0	0	0.0231
Headwaters Leading Creek	0.018	0	0.0086	0.0266
Headwaters Sand Fork	0.306	0	0	0.306
Indian Fork	0.1138	0	0.0331	0.1469
Oil Creek	0.549	0.0478	0	0.5968
Burnsville Lake-Little Kanawha River	0	0	0	0
Falls Run-Little Kanawha River	0.2446	0	0	0.2446
Outlet Holly River	0.1703	0	0	0.1703
Headwaters Holly River	0	0	0	0
Outlet Right Fork Holly River	0	0	0	0
Big Run-Elk River	0.1013	0	0	0.1013
Upper Sutton Lake-Elk River	0.0662	0	0	0.0662
Outlet Laurel Creek	0.4076	0.4849	0.0907	0.9832
Headwaters Laurel Creek	0.2553	0.0108	0.0400	0.3061
Upper Birch River	0.1746	0.0188	0	0.1934
Big Laurel Creek-Gauley River	0.6279	0.0978	0	0.7257
Big Beaver Creek	0.2264	0.1598	0	0.3862
Panther Creek-Gauley River	0.0974	0.1226	0	0.22
Outlet Hominy Creek	0.0197	0	0	0.0197

12-digit HUC	Total Temporary Impacts (acres)	Total Permanent Conversion Impacts (acres)	Total Permanent Fill Impacts (acres)	Total Impacts (acres)
Headwaters Hominy Creek	0.3511	0	0.0177	0.3688
Anglins Creek	0.1011	0.0039	0	0.105
Meadow Creek-Meadow River	0.0951	0.0744	0	0.1695
Big Clear Creek-Meadow River	0.3104	0	0.0370	0.3474
Sewell Creek	0.2442	0	0.0633	0.3075
Otter Creek-Meadow River	1.3753	0.0885	0.0621	1.5259
Lick Creek	0.1517	0	0	0.1517
Hungard Creek-Greenbrier River	0.1376	0.299	0	0.4366
Stony Creek-Greenbrier River	0.1359	0	0	0.3607
Middle Indian Creek	0.5132	0.2020	0.0228	0.7380
Rich Creek	0.2632	0	0	0.2632
Stony Creek	0	0	0	0
Little Stony Creek-New River	0.0262	0.0136	0	0.0398
Lower Sinking Creek	0	0	0	0
Upper Sinking Creek	0.0518	0	0	0.0518
Trout Creek-Craig Creek	0	0	0	0
Dry Run-North Fork Roanoke River	0.0529	0	0	0.0529
Wilson Creek-North Fork Roanoke River	0.2659	0.1153	0	0.3812
Bradshaw Creek-North Fork Roanoke River	0.0454	0	0	0.0454
Sawmill Hollow-Roanoke River	0.004	0.0852	0	0.0892
Brake Branch-South Fork Roanoke River	0	0	0.0392	0.0392
Bottom Creek	1.3295	0.7001	0	2.0296
South Fork Blackwater River	0.1871	0	0	0.1871
North Fork Blackwater River	0.0611	0	0	0.0611
Madcap Creek-Blackwater River	0.4095	0.2372	0	0.6467
Maggodee Creek	0.0004	0	0	0.0004
Standiford Creek-Smith Mountain Lake	0.1464	0.0697	0	0.2161
Owens Creek- Pigg River	0.1057	0.0440	0	0.1497
Tomahawk Creek-Pigg River	0.2378	0.0047	0	0.2425
Cherrystone Creek	1.0421	0.5706	0	1.6127
Mill Creek-Whitehorn Creek	0	0	0	0
Shockoe Creek-Banister River	0	0.0773	0	0.0773

## 5.0 CONCLUSIONS

This report evaluates the percentage of stream impacts in the 12-digit HUC watersheds with aquatic resources in the Project area. This process included the modeling of stream flow paths to establish the total linear feet of stream in each watershed. Using the model for this type of evaluation provides a more accurate estimate than using National Hydrologic Data (NHD) streamlines. The NHD values typically are limited to blue-line or hatched blue-line streams and in most instances do not count high-gradient intermittent and ephemeral streams that fall within the United States Army Corps of Engineers' jurisdiction.

Based on the information generated for this analysis, the Project will have negligible impacts in each 12-digit watershed. Permanent stream impacts are limited and are primarily the result of installing, repairing, or replacing culverts under access roads. Although those impacts are classified as permanent, they will not result in any post-construction reduction in the linear feet of stream channel within the watersheds. Temporary impacts are primarily associated with timber mat crossings or the pipeline ROW. Timber mats are placed within the ordinary high water mark and thus are included in the impacts; however, they do not sit in the streambed and do not alter substrate. These structures also have little to no potential to affect water quality or aquatic habitat. Temporary pipeline ROW crossings are very short term, with construction crews completing these types of crossings within a few hours to few days, when practicable. These crossings are also staggered, so the stream crossing impacts represented in this document are not occurring simultaneously. Instead, installation in any particular drain will likely occur on different days, sometimes weeks apart, reducing the potential for additive or cumulative impacts during any particular timeframe. Further, crossings in many of the intermittent and ephemeral streams will be completed during low-flow/no flow conditions, minimizing the potential for downstream water-quality impacts. All of these factors play a role in minimizing the potential effects both individually and cumulatively.

All permanent and conversion impacts have been mitigated for using banks or in-lieu fee programs. Temporary impacts will be restored post construction. The result is an extremely small fraction of permanent impacts, and in some cases no permanent impacts, in each 12-digit HUC watershed.

The combined impacts on wetlands within each 12-digit HUC watershed are similarly insignificant. Eight of the of the watersheds have no wetland impacts. The watershed with the largest combined wetland impact is Bottom Creek, with 2.03 acres of impact in a large watershed with a total drainage area exceeding 18,000 acres. However, two-thirds of the temporary impacts in this watershed (1.33 acres) are PEM wetlands that will be restored to preconstruction conditions. The Project will not cause the "loss" of any wetland acreage in this watershed; the 0.70 acres of "permanent" impacts are all conversions that will be restored to PEM wetlands. The watershed with the greatest area of combined permanent wetland fill is Outlet Laurel Creek, which has six small areas of fill associated with access road construction that sum to less than 0.10 acre (before accounting for compensatory mitigation). In short, the total Project-related wetland impacts in each



12-digit HUC watershed are comparable to or less than many garden-variety construction and development projects.



Hardwick, Steven &lt;steven.hardwick@deq.virginia.gov&gt;

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**Fwd: Clarification of MVP Comments**

1 message

**Davenport, Melanie** <melanie.davenport@deq.virginia.gov>

Thu, Oct 7, 2021 at 12:54 PM

To: Davis David qom72801 &lt;dave.davis@deq.virginia.gov&gt;, Golden James bia20947 &lt;james.golden@deq.virginia.gov&gt;, Hardwick Steven glr19607 &lt;steven.hardwick@deq.virginia.gov&gt;

----- Forwarded message -----

From: **Paylor, David** <david.paylor@deq.virginia.gov>

Date: Thu, Oct 7, 2021 at 12:53 PM

Subject: Fwd: Clarification of MVP Comments

To: Davenport, Melanie &lt;melanie.davenport@deq.virginia.gov&gt;, Steers Jeffery qxk60523 &lt;jeffery.steers@deq.virginia.gov&gt;, W. Brandon Bull &lt;w.brandon.bull@deq.virginia.gov&gt;

----- Forwarded message -----

From: **Esher, Diana** <Esher.Diana@epa.gov>

Date: Thu, Oct 7, 2021 at 12:02 PM

Subject: Clarification of MVP Comments

To: david.paylor@deq.virginia.gov &lt;david.paylor@deq.virginia.gov&gt;

Dave,

I'd like to clarify EPA's comments on the Mountain Valley Pipeline. Our review was intended to ensure that the proposed project complies with the Clean Water Act (CWA) Section 404(b)(1) Guidelines (Guidelines) (40 C.F.R. Part 230), which provide the substantive environmental review criteria for CWA Section 404 permit applications. Based on the information available, we identified significant concerns with the project in our letter. Specifically, we wanted to assure that all feasible avoidance and minimization measures would be undertaken. Additionally, we recognized the large amount of temporary discharges from the proposal to the aquatic resources, warrants careful review and action.

We provided very detailed technical comments which, if followed, will assure that the project can proceed in compliance with the CWA. We recommended modifications to the project and permit application be undertaken to address our detailed comments. The USCOE is working with the applicant to implement our comments so the project can move forward in compliance with the Guidelines.

Diana

Diana Esher

Acting Regional Administrator

US EPA Region 3

215-814-2706

esher.diana@epa.gov

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David K. Paylor  
804-698-4020

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Melanie Davenport- Virginia DEQ.  
Sent from my iPad - Please excuse any autocorrect errors



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

Michael Hatten, Chief  
Regulatory Branch  
Huntington District  
U.S. Army Corps of Engineers  
502 Eighth Street  
Huntington, West Virginia 25701

Re: LRH-2015-00592-GBR, LRP-2015-798, NAO-2015-0898; Mountain Valley Pipeline, LLC;  
Mountain Valley Pipeline, Wetzel County, West Virginia to Pittsylvania County, Virginia

Dear Mr. Hatten:

The U.S. Environmental Protection Agency (EPA) has reviewed the public notice (PN) for the proposal by Mountain Valley Pipeline, LLC (MVP) for the discharge of dredged and/or fill material into waters of the United States associated with construction of the MVP Pipeline within the Huntington, Pittsburgh, and Norfolk Districts of the U.S. Army Corps of Engineers regulatory boundaries. The project is proposed to be approximately 304 miles long and begin at the existing Equitrans, L.P. transmission system near the Mobley processing facility in Wetzel County, West Virginia and end at the Transcontinental Gas Pipe Line Company, LLC's (Transco) Zone 5 Compressor Station 165 in Transco Village, Pittsylvania County, Virginia. Proposed discharges associated with the project would permanently impact 1,198 linear feet (lf) of streams and 0.5 acre (ac) of wetlands, temporarily impact 38,312 lf of streams and 13.92 ac of wetlands, and permanently convert 3.7 ac of forested and scrub-shrub wetlands to emergent wetlands. EPA's comments, provided herein, are based upon the PN and supplemental documentation, including the application, associated attachments, and maps, in addition to state databases.

EPA's review is intended to help ensure that the proposed project complies with the Clean Water Act (CWA) Section 404(b)(1) Guidelines (Guidelines) (40 C.F.R. Part 230), which provide the substantive environmental review criteria for CWA Section 404 permit applications. Based on the information available for review, EPA has identified a number of substantial concerns with the project as currently proposed, including whether all feasible avoidance and minimization measures have been undertaken, deficient characterization of the aquatic resources to be impacted, insufficient assessment of secondary and cumulative impacts and potential for significant degradation, and the proposed mitigation. More detailed concerns and comments are set forth below and in the attached enclosure.

While EPA recognizes the proposed project's purpose and need for providing transmission of natural gas, the extent of anticipated impacts, notably the large amount of temporary discharges from the proposal to the aquatic resources, warrants careful review. The project proposes impacts within streams



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and wetlands of the Little Muskingum – Middle Island, West Fork, Little Kanawha, Elk, Gauley, Lower New, Greenbriar, Middle New, Upper James, Upper Roanoke, and Banister watersheds in West Virginia and Virginia. The scientific literature provides strong weight of evidence that tributaries and their wetlands are vital components of the aquatic ecosystem.<sup>1</sup> They collectively provide habitat, water quality improvements, flood control, sediment transport, water supply, nutrient cycling, and organic matter sources, leading to maintenance of downstream aquatic communities and water quality. Even though some waterbodies may not exhibit surface flow every day of the year, they perform many of the foregoing important functions and contribute approximately 60% of the mean annual flow to all northeastern U.S. streams and rivers. Therefore, the proposed discharges to these aquatic resources have implications not only for the direct impacts, but also downstream waters.

Based on the information provided to EPA for review, more than 200 of the proposed 719 stream impacts are proposed in the Upper Roanoke watershed. This watershed includes Natural and Stockable Trout Waters, as well as habitat for Roanoke logperch (*Percina rex*), an endangered species. The Gauley and the Elk watersheds include Category B-2 Trout Waters and are proposed to have a combined total of nearly 200 stream impacts. The Middle New watershed is proposed to have nearly 100 stream impacts, one of which is a direct impact to a stream designated as critical habitat for the endangered Candy darter (*Etheostoma osburni*). Additionally, many of the waters within these watersheds already are impaired for a variety of parameters, including pH, fecal coliform, iron, other metals, and biology.

Because of the multitude of functions the existing streams and their wetlands provide and the documented water quality issues in these watersheds, every effort should be made to avoid and minimize impacts from discharges associated with this project consistent with the Guidelines. Furthermore, the direct, secondary, and cumulative impacts from the discharges associated with this project to these watersheds may result in significant degradation of the waters of the United States and reduce the ability for remaining aquatic resources to maintain hydrologic, geochemical, and biological functions. The above-mentioned qualities of these aquatic resources demonstrate the value they provide. For these reasons, EPA considers the protection of the proposed receiving waters to be important to the overall quality of the aquatic ecosystem both regionally and nationally.

In conclusion, it appears that the project, as proposed, may not comply with the Guidelines. It is not apparent that all impacts have been minimized, nor is it evident that the direct, secondary, and cumulative impacts have been thoroughly evaluated and mitigated so that the proposed project will not cause or contribute to significant degradation of the waters of the United States. EPA recommends modifications to the permit application and project be undertaken to address the detailed comments identified in the attached enclosure. EPA also requests the opportunity to meet with the Corps and others to work collaboratively to address EPA comments. At this time, EPA recommends that the permit not be issued until modifications described in the attachment, including the recommended special conditions, have been addressed and incorporated into the project.

Thank you for the opportunity to review and provide comment on the PN for the Mountain Valley Pipeline. EPA looks forward to continuing to work with the Corps and the applicant. Should you have questions, please do not hesitate to contact Christine Mazzarella, the Wetlands Branch Team Lead, at 215-814-5756 or by email at [mazzarella.christine@epa.gov](mailto:mazzarella.christine@epa.gov).

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<sup>1</sup> Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence  
EPA/600/R-14/475F

Sincerely,

**JEFFREY LAPP** Digitally signed by JEFFREY LAPP  
Date: 2021.05.27 16:54:01 -04'00'

**Jeffrey D. Lapp, Chief  
Wetlands Branch**

**cc: Scott Hans, Chief, Regulatory Branch, Pittsburgh District, U.S. Army Corps of Engineers  
Tom Walker, Chief, Regulatory Branch, Norfolk District, U.S. Army Corps of Engineers**

## ENCLOSURE

### EPA's Technical Comments on LRH-2015-00592-GBR, LRP-2015-798, NAO-2015-0898; Mountain Valley Pipeline, Mountain Valley Pipeline, LLC, Wetzel, Harrison, Doddridge, Lewis, Braxton, Webster, Nicholas, Greenbrier, Summers, and Monroe Counties, WV and Giles, Craig, Montgomery, Roanoke, Franklin, and Pittsylvania Counties, VA

The CWA 404(b)(1) Guidelines (40 C.F.R Part 230) direct the consideration of whether the proposed fill will cause and contribute to violations of any applicable State water quality standard or to significant degradation of waters of the U.S. (230.10(b) & (c)). This includes significant adverse effects of the discharge on aquatic ecosystem diversity, productivity, and stability. EPA is concerned that the applicant has not yet demonstrated that the discharges from the project, as proposed, will not cause or contribute to water quality standards exceedances or significant degradation of receiving waters. The project proposes a substantial amount of temporary impacts in conjunction with permanent impacts. Approximately 7.25 miles of streams and 13.92 ac of wetlands are proposed to be temporarily impacted across eleven watersheds in two states. Of the 1,095 total proposed discharges of fill, 850 of them are within the Upper Roanoke, Gauley, Elk, Middle New, and Greenbrier watersheds. The streams and rivers in these watersheds have many good quality designations, such as trout waters, and provide habitat to freshwater mussels, trout, and threatened and endangered aquatic species, such as the Roanoke logperch (*Percina rex*) and Candy darter (*Etheostoma osburni*). Additionally, some of these watersheds contain streams listed as impaired for iron, other metals, biology, etc. While many of the discharges of fill associated with the proposed construction activity may be considered temporary, the impacts from those discharges may have lasting effects, particularly due to the sensitivity of the aquatic resources and the repetitive nature of impacts to some of the tributaries. The scientific literature provides strong weight of evidence that tributaries and their wetlands are vital components of the aquatic ecosystem.<sup>2</sup> Therefore, the impacts to these aquatic resources, including the loss of functions provided to downstream resources such as dilution, biogeochemical processes, and biodiversity, have the potential to result in significant degradation of waters of the United States and should be thoroughly assessed. To ensure that the proposed project does not result in significant degradation of waters of the United States through significant adverse effects of the discharges on aquatic ecosystems, EPA offers the following recommendations to be addressed prior to any permit decision.

#### ***Avoidance and Minimization***

As directed by the Section 404(b)(1) Guidelines, the Corps' issued permit should reflect the least environmentally damaging practicable alternative (LEDPA) (230.10(a)). To identify the LEDPA, a full range of practicable alternatives, defined by the purpose and need for the project, is recommended for evaluation. Alternatives include not only geographical siting but also operational options, such as design modifications. Based on the information available for review, it is not clear that the proposed project represents the LEDPA. EPA recommends that additional examination and documentation of functional alternatives that avoid and minimize impacts be provided to ensure the proposed project is the LEDPA. Specific recommendations are provided in the following list.

1. EPA recommends updating the alternatives analysis with a narrative and table that identifies and compares the changes to the proposal since the project was authorized under the Nationwide Permit (NWP) 12. Specifically, the additional analysis should describe changes to the proposed route, modifications to stream and wetland crossing methods and subsequent changes to impacts

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<sup>2</sup> Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence  
EPA/600/R-14/475F

(both permanent and temporary), and the impacts that have occurred from clearing of the right-of-way (ROW) and pipe that has already been laid.

2. EPA recognizes the efforts the applicant has made to adjust crossing methods to reduce aquatic impacts. However, EPA also recommends information be provided to explain how these methods, such as Direct Pipe and microtunneling, were selected to be used or not used throughout the project. EPA also recommends further consideration of using these methods at streams where not currently proposed, particularly streams that will be crossed multiple times, streams that are of good quality, and/or streams that may contain threatened or endangered aquatic species to better avoid or minimize impacts.
3. More than 100 of the proposed crossings will result in the intersection of multiple unique waterbodies by a single crossing. Several of these crossings are proposed to cross two to as many as ten unique waterbodies. EPA recommends the applicant examine additional avoidance opportunities for crossings that intersect multiple unique waterbodies and minimization options such as modifying crossing methods or utilizing additional effective best management practices (BMP). If these are not practicable, the rationale should be provided. Specific examples of crossings with more than four waterbodies include, but are not limited to, the following:
  - A-016, Dry-Ditch Open-Cut, 5 waterbodies crossed
  - C-032, Dry-Ditch Open-Cut, 4 waterbodies crossed
  - C-034, Dry-Ditch Open-Cut, 4 waterbodies crossed
  - C-038, Dry-Ditch Open-Cut, 10 waterbodies crossed
  - D-028, Conventional Bore, 4 waterbodies crossed
  - E-020, Dry-Ditch Open-Cut, 5 waterbodies crossed
  - E-022, Dry-Ditch Open-Cut, 4 waterbodies crossed
  - F-001, Dry-Ditch Open-Cut, 8 waterbodies crossed
  - F-029-030, Dry-Ditch Open-Cut, 4 waterbodies crossed
  - F-037, Dry-Ditch Open-Cut, 8 waterbodies crossed
  - F-045, Dry-Ditch Open-Cut, 4 waterbodies crossed
  - G-013, Guided Conventional Bore, 5 waterbodies crossed
  - H-031, Conventional Bore, 6 waterbodies crossed
  - H-036, Dry-Ditch Open-Cut, 8 waterbodies crossed
  - H-042, Conventional Bore, 4 waterbodies crossed
  - I-046, Conventional Bore, 4 waterbodies crossed
  - I-121, Conventional Bore, 5 waterbodies crossed
4. While EPA appreciates the relocation of the Blackwater River crossing to downstream of the Rocky Mount water intake, EPA also recommends that the applicant use one of the new or established trenchless methods to cross Blackwater River instead of open cut methods to further avoid or minimize impacts. If not practicable, then additional rationale for crossing the river by a trench method should be provided.
5. The application states that “incurring an unreasonable cost to avoid a short-duration temporary impact to an individual crossing is not appropriate and practicable.” However, the analysis of what would be practicable for these crossings did not include the consideration of the costs associated with site restoration, monitoring and management, as well as potential additional compensatory mitigation. Additionally, the applicant considered and rejected as not practicable the use of bridges to avoid permanent impacts to streams, but it is not apparent that the relative cost of compensatory mitigation was included in that analysis. EPA recommends that the applicant provide an updated analysis incorporating these factors, and consider if there are



additional opportunities, including but not limited to bridging, using trenchless methods, etc., to avoid and or minimize aquatic resources either in crossings or in access road construction.

***Aquatic Resource Characterization & Direct, Secondary and Cumulative Impacts***

To fully assess the alternatives and impacts under Section 404(b)(1) Guidelines, the quality of the aquatic resources in the proposed project area must be considered. This data is needed to help inform avoidance and minimization opportunities and assess the direct, secondary, and cumulative impacts of the proposal. Furthermore, it is necessary to demonstrate the adequacy of the mitigation proposal. The data provided in the application is insufficient to determine accurate baseline conditions of the aquatic resources. Below are specific recommendations to be addressed.

1. It is unclear if a baseline assessment was completed on the quality and function of the aquatic resources proposed to be impacted either permanently or temporarily. To better evaluate the proposed project's impacts and to ensure adequate functional replacement of the aquatic resources, EPA recommends the applicant conduct a baseline assessment of the condition and functions of aquatic resources to be impacted by the proposed project, including those resources subject to temporary impacts.
  - a. Specifically, EPA recommends that baseline data include biological, physical, and chemical parameters consistent with the parameters used to calculate West Virginia Stream Wetland Valuation Metric (SWVM). This data should be collected for all impacts to aquatic resources in both states.
  - b. A narrative describing the methodology undertaken, photographs, measurements, and other supporting should be provided to allow the agencies to confirm the findings.
2. Substantial temporary fills are associated with this project. However, the information provided for review does not describe how long the proposed temporary fills will be in place nor how they will be removed and aquatic resources restored. Without this information, it is difficult to ascertain if the temporary fill will or will not have lasting impacts on the aquatic resources or result in secondary effects to downstream resources. **EPA recommends the permit be conditioned to require a restoration plan for temporary impacts, including post-construction monitoring and adaptive management, that has been reviewed and approved by the resource agencies.** Depending on the quality of the resource being impacted, the sensitivity of the resource, or the number of times a water is being impacted, the pre and post construction monitoring requirements could vary.
  - a. At a minimum, to ensure that temporary stream and wetland impacts have no significant adverse impact to aquatic resources, the restoration plan should document baseline conditions, and elevations through georeferenced photographs and surveys, explain how all temporary fills and structures will be removed and the area restored to pre-project conditions, and require submission of post-construction georeferenced photographs and surveys to demonstrate that the impacts are in fact temporary and successfully restored.
    - i. In addition, upon final stream bed restoration, the stream must have similar physical characteristics to include substrate, pattern, profile, dimension, and embeddedness of the original stream channel.
    - ii. In addition, upon final wetland restoration a delineation will be conducted. At the final monitoring event a final wetland delineation will be conducted to ensure hydrology, hydric soils, and hydric vegetation communities are similar to the original wetland.
    - iii. Provide a map of monitoring locations and a table illustrating this information.
    - iv. Post construction monitoring for a period of three years.

- v. Should post-construction monitoring demonstrate longer term effects on the aquatic resources, EPA recommends additional corrective measures be undertaken including compensatory mitigation be provided to offset those impacts.
- b. In addition to the foregoing, for the following types of receiving waters, EPA recommends the restoration plan include enhanced post-construction monitoring and an adaptive management plan to ensure that temporary impacts have no significant adverse effects. Specifically, resources that should have more extensive monitoring, include but are not limited to the following:
  - i. Trout waters
  - ii. Impaired waters
  - iii. Waters with threatened or endangered species or that contain critical habitat including:
    - 1. S-S5 (Candy Darter) – proposed activity: timber mat crossing
    - 2. S-C21 (Roanoke Logperch) – proposed activity: timber mat crossing
    - 3. S-C3 (Roanoke Logperch) – proposed activity: timber mat crossing
    - 4. S-G36 (Roanoke Logperch) – proposed activity: temporary access road
  - iv. Streams and wetlands impacted multiple times by crossings or construction activities
    - 1. Table 15 lists more than 15 streams and wetlands crossed multiple times by the pipeline
    - 2. Table 2 and 3 list single streams and wetlands that incur multiple impacts from timber mats, access roads, and ROW clearing
- c. For the resources described in ‘b’, a detailed monitoring plan should be developed to measure the chemical, physical, and biological functions of the resources, along with specific success criteria, to determine successful restoration and ensure that there will be no significant adverse effects. EPA recommends that the baseline assessment of the streams and wetlands, as described above, be used to guide the development of these success criteria. In addition to the items in the above item ‘a’, specific recommendations for more detailed monitoring plan include, but are not limited to the following items:
  - i. Monitoring for the parameters that are used to calculate the SWVM to assess the chemical, physical, and biological condition of the stream resources.
  - ii. For stream hydrology, monitoring should be conducted to document that the flow maintains its preconstruction flow status. Wetland hydrology should be monitored to ensure that the overall seasonal hydroperiod (depth, degree, duration, and periodicity) is similar to that of the pre-construction wetland and the site is inundated or the water table is less than or equal to 12 inches below the soil surface for 14 or less consecutive days during the growing season.
  - iii. To ensure wetland soils are not compacted, an example success criteria could include that the subsoil shall have a bulk density of less than 90lbs/ cubic foot for clay textures, grading less than 112 lbs/ cubic foot for sands (prior to adding organic matter or topsoil to the site). Replaced topsoil layers should also be remediated to a similar bulk density range.
  - iv. To address potential sedimentation concerns, in-stream monitoring of turbidity and sedimentation should be conducted to identify any changes in sediment load. Criteria should be protective of aquatic species and water quality standards.

- v. For vegetation, the application states that “in unsaturated wetlands, most vegetation will be replaced by seeding when necessary...and saturated wetlands will typically be allowed to re-vegetate naturally.” However, this may allow time for invasive species that are in the seed bank to colonize the wetland. Therefore, EPA recommends planting wherever possible. Further, the application states that revegetation is considered "successful when cover of herbaceous species is at least 70 percent of the cover of the vegetation in adjacent wetland areas that were not disturbed," however this does not account for invasive species. EPA recommends a success criterion that defines no greater than 5% aerial coverage for invasive species be allowed.
  - vi. Post construction monitoring for a period of five years or until data from successive monitoring periods indicate site stability and success criteria have been achieved.
  - vii. Develop an adaptive management plan (AMP) that outlines measures to be taken if temporarily impacted areas fail to achieve success. Should corrective actions be needed, the AMP should guide decisions for implementing measures to address identified parameters. Actions should be specified for problems that may adversely affect aquatic resources, such as, but not limited to, erosion, sedimentation, and invasive species colonization. Should there be long term effects on the aquatic resources, EPA recommends additional compensatory mitigation be provided to offset those impacts should corrective measure fail or pre-construction conditions not be achieved.
  - viii. Review of post-construction monitoring be undertaken by an independent third party that is qualified to assess water quality, stream and wetland conditions and able to make recommendations for adaptive management measures and corrective actions; the applicant also should commit to implement such recommendations.
3. Additionally, it appears that the ROW could sever upstream reaches from downstream resources. EPA recommends analyzing the potential for effects to downstream reaches, such as, but not limited to, changes to the hydrogeomorphology and impacts of sedimentation and compaction from construction activities, to better determine if secondary impacts will occur to the remaining stream resource. Secondary effects to these downstream resources should be avoided and minimized to the maximum extent practicable. Should unavoidable secondary impacts remain, then EPA recommends additional compensatory mitigation be provided to offset those effects.
  4. Although the information provided included some analysis of cumulative effects, EPA recommends a conclusive evaluation of cumulative effects at a watershed scale (i.e. HUC 12) be provided to ensure that measures are undertaken to avoid and minimize the potential of cumulative impacts.

### ***Compensatory Mitigation***

After all practicable avoidance and minimization measures have been incorporated into the proposed project, compensatory mitigation for those unavoidable impacts to waters of the US should be undertaken. Due to the significant amount of temporary impacts caused by this project and the potential for secondary and cumulative effects, it is currently unclear if the proposed mitigation will be sufficient to offset the loss of function of the impacted and downstream aquatic resources.

1. Section 332.3(b)(1) of the 2008 Mitigation Rule states that the required compensatory mitigation should be located within the same watershed as the impact site and should be located where it is

most likely to successfully replace lost functions and service. To ensure a timely and functional replacement of aquatic resources in the impacted watershed, EPA recommends using a mitigation bank whose primary service area encompasses the project locations. Additionally, basic information about the work performed at the bank, how the credits were generated (e.g. restoration, enhancement, preservation, etc.), and the credit type should be provided to ensure adequate compensation for the proposed impacts.

2. Should a bank be used whose secondary service area (SSA) includes the project, EPA recommends that the applicant provide the Corps a narrative documenting how the use of that bank is offsetting the project impacts since SSAs are geographically large and sometimes drain to different river basins.

## **Part II – Additional DEQ Responses to Public Comments**

DEQ has broadly stated these issues and provided responses herein, as well as providing related information in DEQ's *Response to EPA Comments Letter to the USACE Dated 5-27-21* and the draft VWP individual permit Fact Sheet.

A Virginia Water Protection (VWP) individual permit authorizes some of the activities otherwise unlawful under § 62.1-44.5 of the Code of Virginia – activities such as excavating a wetland; draining a wetland; altering or degrading wetland acreage or functions; filling, dumping, and permanently flooding or impounding wetlands; and altering the physical, chemical, or biological properties of state waters, making them detrimental to the public health, animal or aquatic life, or other uses (full text at § 62.1-44.15:20 of the Code of Virginia). Issuance of a Virginia Water Protection Permit shall constitute the certification required under § 401 of the Clean Water Act, except for any applicant to the Federal Energy Regulatory Commission for a certificate of public convenience and necessity pursuant to § 7c of the federal Natural Gas Act (15 U.S.C. § 717f(c)) to construct any natural gas transmission pipeline greater than 36 inches inside diameter, in which case issuance of a Virginia Water Protection Permit pursuant to Article 2.2 (§ 62.1-44.15:20 *et seq.*) this article and a certification issued pursuant to Article 2.6 (§ 62.1-44.15:80 *et seq.*) shall together constitute the certification required under § 401 of the federal Clean Water Act. The use of “Upland Section 401 Certification” in this document refers to the Section 401 Water Quality Certification issued in 2017 pursuant to Article 2.6 (§ 62.1-44.15:80 *et seq.*) of the Code of Virginia and upheld by the 4<sup>th</sup> Circuit, United States Court of Appeals in its August 1, 2018 decision.

Between August 25, 2021, and August 28, 2021, public notification was made announcing two public hearings to seek public comments on a draft VWP individual permit for surface water impacts at the remaining water body crossings being proposed for the Mountain Valley Pipeline (MVP) project (Project). A public notice was published in fourteen newspapers with circulation areas that covered the counties and localities affected by these project crossings. 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 as an Attachment to the Board book for its December 14, 2021 meeting. Over 7,900 comments on the draft VWP individual permit were received during the 60-day public comment period that ran from August 28th to October 27th, 2021. Comments were submitted via postal letters and postcards, hand-delivered notes and letters, electronic mail, petitions, photographs, technical reports, and oral comments at the two hearings.

Although thousands of comments were received, both in opposition to and support of the draft VWP individual permit, there were very clear and recurring issues and themes raised by the commenters based on DEQ's review. DEQ has broadly stated these issues and provided responses herein, as well as providing related information in DEQ's *Response to EPA Comments Letter to the USACE Dated 5-27-21* and the draft VWP individual permit Fact Sheet. 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.

MVP provided to the U.S. Army Corps of Engineers (USACE) and DEQ its own responses to the majority of public comments received by these agencies. These are available upon request.

DEQ has exercised its authority to revise the draft VWP individual permit special conditions that it deemed necessary based on the public comments received, and upon its interpretation of the Code of Virginia as reflected in the VWP Permit Program regulations.

**1. DEQ has failed to properly evaluate potential impacts to water quality including identification of which water quality standards might be affected and its application of the antidegradation policy.**

As was explained during the 2017 proceedings regarding the Upland 401 Water Quality Certification, there are many regulatory programs and permits that apply to the construction of the Mountain Valley Pipeline. These tools provide comprehensive oversight and technical evaluation to ensure that Virginia's water quality is protected both during and after construction. In summary, there are state environmental impact review during the Federal Energy Regulatory Commission (FERC) certification process, review and approval of

stormwater and erosion and sediment control plans and revisions, federal and state wetland and stream protections, Section 401 water quality certification, water quality monitoring, rigorous field inspection program and if necessary, authority to issue stop work instructions. Relevant here, the requirements and conditions of the Virginia Water Protection Permit (VWPP) incorporate appropriate erosion and sediment control practices during construction of the stream crossings. Two erosion and sediment control requirements are incorporated into the draft VWP individual permit for the Project. DEQ's review and approval of sediment and erosion control plans are required by every VWP individual permit. For this Project, a second requirement was added by reference, namely the Annual Standards and Specifications contained in the Upland Section 401 Certification.

Related to this second requirement are conditions in the draft VWP individual permit that specifies how excavated materials are to be handled, and DEQ regulates their placement with specific requirements that are enforced as part of the Project's Annual Standards & Specifications and Erosion & Sediment Control Plans. For example, spoil piles and dewatering structures are largely placed on a site-specific basis to be discharged away from waterbodies and wetlands. Based on public comment, the draft VWP individual permit was revised to include a condition regarding the management of dredge material dewatering areas.

However, the VWP permit cannot be viewed alone – the requirements of other construction authorizations embody the obligation to comply with erosion and sediment regulations. In general, both state and federal law regulate stormwater from construction activities that disturb more than one acre. While Congress has clearly exempted stormwater discharges from land disturbing activity associated with construction of the pipeline from a section 402 discharge permit, Virginia applies its annual standards and specifications program to such construction. The 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 Virginia Pollutant Discharge Elimination System (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.

When Virginia's Construction General Permit was adopted by the Board on December 17, 2013, it 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 (VESC) 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 Stormwater Management (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 Construction General Permit:

- General Information (Section B.1(d) and (e) of Part II)
- Erosion and Sediment Control Plan
- Stormwater Management Plan
- Pollution Prevention Plan (Section B.4 of Part II)
- SWPPP Requirements for Impaired, Total Maximum Daily Load (TMDL) and exceptional waters. (Section B.5 and B.7 of Part II)
- Qualified Personnel (Section B.8 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, in DEQ's best professional judgement compliance with approved Annual Standards and Specifications and any necessary site specific plans 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 National Pollutant Discharge Elimination System (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.<sup>1</sup> The reality of construction, whether it is a pipeline carrying drinking water, sewage or natural gas, an industrial scale solar farm, a new or expanded highway, a new hospital or school, is that there is no engineering available to eliminate all precipitation driven runoff. The essential approach of the Construction General Permit and Virginia's erosion and sediment control regulation is that erosion controls and management practices be installed and maintained to capture and treat as much stormwater as is possible and minimize the transport of sediment offsite.

In fact, the Board's duly adopted water quality standards specifically do not prohibit temporary discharges. Virginia's antidegradation policy is found at 9VAC25-260-30. Generally, the policy describes three tiers of water quality with Tier 3 being the highest or exceptional quality. The policy then explains how existing water quality must be protected. Tiers 1 and 2 are relevant in the calculation of effluent limits. The regulation provides designation and notice procedures for determining Tier 3 waters. The policy states:

“All surface waters of the Commonwealth shall be provided one of the following three levels, or tiers, of antidegradation protection. This antidegradation policy shall be applied whenever any activity is proposed that has the potential to affect existing surface water quality.

1. As a minimum, existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
2. Where the quality of the waters exceed water quality standards, that quality shall be maintained and protected unless the board finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the Commonwealth's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the board shall assure water quality adequate to protect existing uses fully. Further, the board shall assure that there shall be

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<sup>1</sup> This approach to protecting water quality was upheld by the Fourth Circuit when it reviewed the Board's 2017 upland water quality certification – *Sierra Club v. State Water Control Board*, 898 F.3d 383 (4<sup>th</sup> Cir. 2018)

achieved the highest statutory and regulatory requirements applicable to all new or existing point source discharges of effluent and all cost-effective and reasonable best management practices for nonpoint source control.

3. Surface waters, or portions of these, which provide exceptional environmental settings and exceptional aquatic communities or exceptional recreational opportunities may be designated and protected as described in subdivisions 3 a, b and c of this subsection”

The regulation goes on to prohibit new, additional, or increased discharge of sewage, industrial wastes or other pollution into Tier 3 waters but clearly authorizes “Activities causing temporary sources of pollution may be allowed in waters designated in subdivision 3 c of this subsection even if degradation may be expected to temporarily occur provided that after a minimal period of time the waters are returned or restored to conditions equal to or better than those existing just prior to the temporary source of pollution”.

Installation of a crossing is a temporary activity that does not result in any permanent, permitted discharge. Since temporary discharges are allowed into the highest quality of state waters, DEQ rationally concludes that they are also authorized in Tier 1 and 2 waters. In addition to raising issues with antidegradation, commenters also allege that Virginia’s narrative standard will be violated by the temporary construction activity. This is not consistent with how Virginia evaluates data and assesses water quality.

Virginia’s narrative standard is found in 9VAC25-260-20 and reads: “State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life”. Designated uses are specified in the water quality standards regulation for each water body, whether or not they are being attained. All Virginia waters are designated for the following uses: recreational uses, such as swimming and boating; propagation and growth of a balanced, indigenous population of aquatic life, including game fish; wildlife, and the production of edible and marketable natural resources, e.g., fish and shellfish. Certain specific water bodies are also designated public water

supplies. Virginia's numerical criteria and the narrative standard describe the water quality necessary to protect the designated use.

DEQ conducts regular water quality monitoring in accordance with its monitoring plan. During the water quality assessment process, monitoring results are analyzed to determine if the water quality meets set standards and is suitable enough for swimming, fishing public water supply and other uses. DEQ utilizes a number of objective, data driven indicators to assess water quality. These include: dissolved oxygen, pH, temperature, water column and sediment toxics, toxicity tests, bottom-dwelling macroinvertebrates, submerged aquatic vegetation, notices published by the Virginia Department of Health, fish tissue toxics, and bacteria. Specifically, recreational uses are evaluated using the primary indicator of bacteria. Virginia prepares its §305(b)/§303(d) Integrated (i.e., combined Water Quality Assessment and Impaired Waters) Report every two years. For each assessment, Virginia publishes a Water Quality Assessment Guidance Manual, which contains the assessment procedures and analytical methods to be used for the development of that biennial assessment. The data window is identified and monitoring data is reviewed and analyzed according to the manual. This is a very controlled, specific, repeatable analysis. There is no methodology to evaluate short term, subjective accounts of the narrative standard, such as an interference in recreational activity, as the commenters suggest. These procedures are developed to address all of the key elements of the U.S. Environmental Protection Agency (EPA) 2006 (and subsequent updates) Assessment Guidance.

**2. Mountain Valley Pipeline has not complied with erosion and sedimentation requirements, it has violated water quality requirements more than 300 times, ongoing violations have affected water quality and this should be the basis of denying the Virginia Water Protection Permit**

DEQ received a number of comments alleging that thousands of water bodies have been destroyed by the construction activity that has taken place, there have been numerous impacts to streams and violations of water quality standards, the approved erosion and sedimentation

plans are not adequate and that MVP violated erosion and sediment control requirements over 300 times, as evidenced by the October 2019 consent decree.

For the last several years, DEQ has been providing the Board with regular construction and compliance updates on MVP at every one of its meetings. These updates report on the extent of construction, significant events/interactions with citizens and complaint and inspection statistics. At many of these meetings, the Board also heard complaints and criticisms about MVP and DEQ from citizens during its public forums. Citizens submitted many reports to the Board alleging violations of erosion and sediment control requirements. In numerous instances, DEQ followed up on these citizen comments and complaints with further inspections and outreach, which were subsequently reported to the Board at a later meeting. DEQ also delivered multiple presentations that included photographic documentation of temporary stabilization, documentation of stream restoration after completion of stream crossing construction, and ongoing construction activities.

DEQ does not agree that there have been widespread impacts and destruction related to the construction of MVP. In fact, there has never been any reported evidence of a fish kill, nor has any fish kill been observed by DEQ inspectors. Very little citizen monitoring has occurred, and that which has did not identify violations of water quality standards – such as the measurement of water clarity, rather than turbidity, neither of which has a Virginia water quality standard. Additionally, ongoing United States Geological Survey (USGS) total suspended solids data do not reflect any pipeline construction related events.

DEQ also does not agree there are ongoing, significant regular violations of erosion and sediment controls or water quality standards. These conclusions are based on a consistent almost daily field presence of both DEQ inspectors and DEQ's third party compliance inspectors. There are two contract inspectors assigned to each spread and they travel to each spread at least five days a week. These third party inspectors are DEQ certified.

Additionally, DEQ staffs a pipeline team, which includes one to three erosion and sediment control inspectors and, as needed, a wetland and stream compliance inspector. DEQ staff are on the right of way almost daily, conducting inspections and responding to complaints.

A number of commenters pointed to the 2019 consent decree as a reason to deny the VWP permit. Virginia's VWP regulation articulates the reasons for permit denial: 9VAC25-210-230 states that "The board shall make a decision to tentatively deny the VWP permit or variance request if the requirements of this chapter are not met. Basis for denial include, but are not limited to, ...", and the regulation goes on to list nine reasons for denial. Nowhere in this list, or in any other place of the regulation, is noncompliance with erosion and sediment control requirements a reason for VWP permit denial.

Additionally, many commenters mischaracterize, or intentionally fail to accurately characterize, the violations that are resolved in the enforcement settlement. The December 2018 complaint identified ten specific kinds of violations<sup>2</sup> related mostly to improper erosion control and stormwater management. The majority of these violations did not result in any impact to water quality or the environment. A number were paperwork violations, such as failing to keep a daily log of project activities related to environmental permit compliance and corrective measures implementation. In summary, approximately 180 violations were failure to repair a control structure within 24 hours, approximately 58 violations related to inadequate temporary stabilization, approximately 65 violations related to inadequate stabilization of stockpiles and approximately 42 related to sediment moving off the right of way. Of the citations related to sediment moving off the right of way, about 20 resulted in a discharge of sediment into state waters. In every instance where MVP was given landowner permission to access off site properties, the sediment release to streams was remediated. In a number of cases, MVP was not given access permission to address and/or remedy sedimentation control issues.

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<sup>2</sup> These are unpermitted discharge, failure to maintain and repair erosion and sediment control structures, failure to repair erosion and sediment controls within required timeframe, failure to apply temporary or permanent stabilization, sediment off of right of way, failure to install clean water diversions, failure to keep a daily log of activity documenting project activities related to environmental permit compliance and corrective measures implemented, failure to install adequate channel, flume, or slope drain structure, failure to construct vehicular stream crossing and failure to maintain access roads.

The above is not intended to minimize the violations, only to note that the vast majority did not result in any environmental harm. Environmental permit compliance and corrective measures aim to ensure no water quality violations occur. Failure to implement these measures can potentially result in environmental harm.

### 3. Clean Water Act Section 404(b)(1) Guidelines (“404(b)(1) Guidelines”).

Clean Water Act Section 404(b)(1) Guidelines is a portion of federal regulations (40 CFR 230) that guide the U.S. Army Corps of Engineers (the Corps) in reviewing applications for federal permits to ensure that a project considers on-site and off-site alternatives in light of avoiding and minimizing impacts to Waters of the United States through the regulation of discharges of dredged or fill material. Further, the 404(b)(1) Guidelines are designed to address potential impacts to “special aquatic sites”. Special aquatic sites are identified in 40 CFR 230 as sanctuaries and refuges; wetlands; mud flats; vegetated shallows; coral reefs; and riffle and pool complexes.

The Virginia Water Protection (VWP) Permit regulations (9VAC25-210-10 *et seq.*) implements the portion of State Water Control Law (Code of Virginia 62.1-44.15:20 and 62.1-44.15:21) that regulate activities and impacts in state surface waters, including wetlands. For the purposes of State Water Control Law and VWP program regulations, the federal 404(b)(1) Guidelines are referenced to guide applicants for a VWP permit on the need to conduct an alternatives analysis to document avoidance and minimization efforts, which is the first step in compensatory mitigation. This documentation is necessary to qualify for a complete VWP application (9VAC25-210-80). Specifically, 9VAC25-210-80(B)(1)(g) states:

*“An alternatives analysis for the proposed project detailing the specific on-site and off-site measures taken during project design and development to first avoid and then minimize impacts to surface waters to the maximum extent practicable in accordance with the Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR Part 230. Avoidance and minimization includes, but is not limited to, the specific on-site and off-site measures taken to reduce the size, scope,*



*configuration, or density of the proposed project, including review of alternative sites where required for the project, which would avoid or result in less adverse impact to surface waters, and documentation demonstrating the reason the applicant determined less damaging alternatives are not practicable. The analysis shall demonstrate to the satisfaction of the board that avoidance and minimization opportunities have been identified and measures have been applied to the proposed activity such that the proposed activity in terms of impacts to state waters and fish and wildlife resources is the least environmentally damaging practicable alternative.” (emphasis added)*

Since the inception of the VWP program in 2001, DEQ has consistently interpreted the reference to the Section 404(b)(1) Guidelines to apply specifically to an analysis of project alternatives that avoid and minimize impacts to state surface waters, as it appears in 9VAC25-210-80. Neither DEQ nor the State Water Control Board (SWCB) have interpreted this reference in such a manner that every component of the 404(b)(1) Guidelines must be considered before issuing a VWP permit. Full consideration of the 404(b)(1) Guidelines is a requirement of EPA and the Corps in the federal permitting processes.

Some commenters contend that by listing a reference to the 404(b)(1) Guidelines in the VWP regulations (9VAC25-210-10 *et seq.*), DEQ and the SWCB must evaluate all components listed in the 404(b)(1) Guidelines. This contention is misplaced. The reference to the 404(b)(1) Guidelines is simply that: a reference for VWP permit applicants to refer to the alternatives analysis information, in context of the original document, as they prepare an alternatives analysis that addresses avoidance and minimization issues to state surface waters, including wetlands.

Regardless of the application of 9VAC25-210-80.B.1.g, the SWCB is mandated by § 62.1-44.15:81.F to not alter the siting determination made through Federal Energy Regulatory Commission [FERC] or State Corporation Commission [SCC] approval. Mountain Valley Pipeline received its Certificate of Public Convenience and Necessity from FERC on October 13, 2017, and numerous FERC approvals for project siting adjustments.

#### **4. Cumulative impacts to state waters.**

In accordance with the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) (40 C.F.R. § 1508.7), 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 Equitrans Expansion Project 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-order 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 USACE. 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.

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.”

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 under a VWP individual permit<sup>3</sup>. The concept of evaluating a project’s total impacts to wetlands is found in Virginia’s VWP regulation regarding compensatory mitigation. 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.”

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<sup>3</sup> Cumulative impacts is not an evaluation set forth in the VWP Permit Program regulations. However, it is a criterion under Section 404(b)(1) Guidelines, the framework for USACE and EPA authorizations under Section 404 of the Clean Water Act. See #3 in these response to comments.

DEQ's Fact Sheet for the draft VWP individual permit contains information on avoidance, minimization, and compensatory mitigation for unavoidable impacts incurred for the activities subject to the draft permit. Although Virginia Statute § 62.1-44.15:21 J 1 requires that DEQ conduct an individual review *only* for waterbody crossings with a drainage area greater than 5 square miles, DEQ has reviewed each crossing in the Application. Based on DEQ review of the Application, the Department has determined the Application meets the requirement of 9 VAC 25-210-80.B.1.g.

Per VWP Permit Program regulations, certain pipelines shall be constructed in a manner that minimizes temporary and permanent impacts to state waters and protects water quality to the maximum extent practicable, including by the use of applicable best management practices that the board determines to be necessary to protect water quality (9VAC25-210-50.C.2). DEQ VWP Permit Program regulations define "Practicable" [as] available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. DEQ VWP Permit Program regulations define "Temporary impacts" [as] impacts to wetlands or other surface waters that do not cause a permanent alteration of the physical, chemical, or biological properties of surface waters or the permanent alteration or degradation of existing wetland acreage or functions. Temporary impacts include activities in which the impact area is restored to its preconstruction elevations and contours with topsoil from the impact area where practicable, such that previous wetland acreage and functions or surface water functions are restored. The draft VWP individual permit is being revised to clarify conditions regarding restoration of temporary impacts.

#### **5. Public Water Supplies are at risk.**

MVP has contacted all public water suppliers in the watersheds in which construction activities will take place. 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.

Mountain Valley worked with Red Sulphur Public Service District (PSD) to address its concerns and develop a contingency plan to protect the PSD water supplies.

The Town of Rocky Mount was supportive of Mountain Valley's relocation of the Blackwater River crossing, now approximately 3.3 miles downstream of the Rocky Mount water intake. DEQ likewise concluded the Project would adequately protect public water supplies, including Rocky Mount's, in light of the conditions imposed in the Upland Section 401 certification.

Most recently, MVP is working with the Western Virginia Water Authority to address its concerns regarding work activities in the Roanoke River basin in general and specifically in the vicinity of surface water crossings upstream of the Spring Hollow Reservoir.

The draft VWP individual permit for the MVP water body crossings, as public noticed, does not authorize impacts to public water supplies, nor does it authorize a surface water or groundwater withdrawal. Groundwater drinking water supply wells are not under the jurisdiction of the VWP permit program. However, as part of the draft VWP individual permit development, DEQ requested agency comments from several agencies including the Virginia Department of Health (VDH). VDH recommended best management practices be employed including erosion and sediment controls, spill prevention controls and management of materials on site and during transport. Additionally, to minimize the potential for impacts from construction in karst, and to stabilize a karst feature and minimize connectivity and sediment transport to nearby water-resource receptors (wells, springs, surface water) during pipeline construction, Mountain Valley has implemented enhanced industry erosion control best management practices to minimize construction impacts on groundwater. In some cases, MVP worked with DEQ and landowners to modify their plans and enhance erosion and sediment control measures near springs.

## 6. Data gathered, analyzed, considered is inadequate.

The following sources of information were considered in its decisions regarding the draft VWP individual permit, including the Special Conditions:

- FERC issued draft Environmental Impact Statement (DEIS), September 16, 2016.
- FERC issued final Environmental Impact Statement (FEIS), June 2017.
- Section 401 Upland Water Quality Certification, issued in December 2017 pursuant to Article 2.6 (§ 62.1-44.15:80 *et seq.*) of the Code of Virginia and upheld by the 4<sup>th</sup> Circuit, United States Court of Appeals in its August 1, 2018 decision.
- MVP Joint Permit Application, March 2021.
- DEQ Agency Coordination, April 2021.
- EPA Comments Letter to the USACE Dated May 27, 2021.
- MVP response to EPA's May 27, 2021 Comments.
- MVP *Mitigation Framework*, through August 2021 through November 2021.
- MVP Cumulative Impact Study, through October 2021 through November 2021.
- Judicial Consent Decree dated October 2019 between DEQ and Mountain Valley Pipeline, LLC.
- Meetings from January to November 2021.
- Public comments received between August 28 and October 27, 2021.

Formal review of multiple environmental aspects of the Project was initiated during the Environmental Impact Review (EIR) process. DEQ reviewed numerous environmental considerations of the Project including many relevant to the protection of water quality. DEQ submitted comments during the EIR process. DEQ comments on the draft Environmental Impact Statement have either been addressed in the Final Environmental Impact Statement (FEIS); by incorporating provisions into the Upland Section 401 Certification; or through subsequent regulatory actions by other state and federal agencies.

DEQ has thoroughly reviewed the documents enumerated in Section IV of the Upland Section 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). DEQ relied, in part, on its own review and approval of the Project's upland *and* instream construction activities, which was embodied in the Annual Standards and Specifications approved by DEQ in June 2017. DEQ also considered the reviews and regulatory authorities of other federal and state agencies that have a bearing on the predicted cumulative impacts to water quality.

The Upland Section 401 Certification required 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 USACE jurisdiction. Monitoring reports were submitted to DEQ from March to November 2018, which reflected results obtained through October 2018 when USACE suspended its Nationwide Permit 12 verification. If necessary, changes will be made to approved erosion and sediment control plans based on conditions encountered in the field during construction. Also, continuous water quality monitoring has been occurring – information can be obtained on DEQ's web site <https://www.deq.virginia.gov/water/water-quality/monitoring> and on the United States Geologic Survey web site at [USGS water data](#) (link also on DEQ's web page).

DEQ has reviewed the submitted Joint Permit Application, all associated attachments, and subsequently requested information. The application was deemed complete on June 4, 2021. State Water Control Law (62.1-44.15:20.I.1) authorizes DEQ to review those pipeline transmission crossings in areas that have a five square mile or great drainage area. Five square miles equals 3,200 acres. Of the MVP water body crossings in Virginia, approximately two dozen crossings have a drainage area of five square miles or greater. However, DEQ reviewed all water body crossings submitted in the Joint Permit Application.

DEQ received evaluations and comments from the Virginia Department of Wildlife Resources and Virginia Department of Conservation and Recreation regarding potential impacts to aquatic resources. Comments included measures to reduce the risk of unauthorized takings of threatened and endangered species and critical habitat. These were incorporated into the draft VWP individual permit conditions and are further detailed in the

Fact Sheet for the draft VWP individual permit. Additionally, Mountain Valley has updated and refined the baseline assessments for aquatic resources in response to U.S. Environmental Protection Agency (EPA) comments. Condition Part I.E.1 has been revised in the draft VWP individual permit is being revised to make minor clarifications to the time of year restriction language.

Potential effects from Project-related sediment have been analyzed thoroughly, and that analysis and the underlying methodology were peer reviewed by numerous independent federal agency subject-matter experts. The U.S. Fish and Wildlife Service (USFWS) also fully accounted for all previously identified sediment losses from the Project and their potential effects to species and their habitat. After considering the best available scientific information, USFWS did not find that Project-related sediment has or will cause impairment of aquatic life movement. USFWS requires Mountain Valley to continuously monitor for and report on any Project-related sediment that might enter Flatwoods Branch, North Fork Roanoke River, and numerous locations along the Project corridor. DEQ's draft VWP individual permit contains a condition addressing movement impediments.

Approximately ten meetings have been held with MVP, DEQ, and/or other regulatory agencies to discuss the proposed activities being considered for authorization under the draft VWP individual permit.

**7. DEQ and Board processes failed to hear concerns, no opportunity to speak at December Board Meeting.**

Two public hearings were held for the draft VWP individual permit – one on September 27<sup>th</sup> and 28<sup>th</sup>, 2021. The hearing dates and opportunity to provide relevant comments about the draft VWP individual permit were published in 14 newspapers.

A quorum of the State Water Control Board was present at each hearing where oral comments were heard, and paper comments were submitted to and received by DEQ staff. These hearings were recorded, and transcripts will be provided to all Board members.



Additionally, DEQ received over 7,900 comments on the draft VWP individual permit, which will also be provided to all Board members.

At the public hearings, and as posted on DEQ's web site prior to those hearings, the next steps in the process were conveyed to the public, including the following: "Comments will be reviewed and considered by DEQ in developing its final recommendations on the permit action. DEQ will prepare responses to relevant comments on the draft permit. DEQ will present its responses to comments and its recommended action to the State Water Control Board for its consideration and final action. The Board will consider the comments received, DEQ's responses to comments and recommendation, and take final action at their meeting currently being planned for December 14, 2021. Since there will be a quorum of the Board at both public hearings held on the draft permit, there will not be an opportunity for public comment on the draft permit at the December Board meeting. The State Water Control Law does not require that there be an opportunity for public comment at the meeting when the public hearing regarding that action is conducted by a quorum of the Board."

**8. DEQ permit processes, regulations, and policies are flawed.**

The only authority that the Board and DEQ has is that which is granted to it by the Virginia General Assembly. How DEQ evaluates a VWP permit application, under what circumstances DEQ can deny a VWP permit application, and the public participation procedures DEQ follows in VWP permitting have all been set out by the Virginia General Assembly in state law.

Several acts by Virginia's General Assembly affected how the Virginia Water Protection (VWP) Permit Program reviews and processes applications for certain gas pipeline projects. More specifically addressing the Project, several State Water Control Law amendments resulted in amendments to VWP Permit Program regulations that apply to the draft VWP individual permit. The Code of Virginia was amended in March 2018 by 1) revising § 62.1-44.15:20.D (Virginia Water Protection Permit) as to what approvals are required beginning July 1, 2018, for the certification required under § 401 of the Clean Water Act for applicants

to the Federal Energy Regulatory Commission for certain natural gas transmission pipelines, including a size limitation, and requiring the individual review of each proposed water body crossing with an upstream drainage area of five square miles or greater; 2) revising § 62.1-44.15:21 (Impacts to wetlands) to limit the board's decision time line, to disallow the issuance of a VWP general permit coverage for certain pipelines, and to require a VWP individual permit for certain pipelines; and 3) adding a new Article 2.6 (§ 62.1-44.15:80 *et seq.*) for additional upland conditions for Water Quality Certification, including prohibition of altering siting determinations made by FERC or State Corporation Commission (SCC) in Virginia, including off-site alternatives. Additionally, Code amendments in 2020 and 2021 for Article 2.6 included submittal a detailed erosion and sediment control plan and stormwater management plan with an application for a VWP permit and a prohibition to waive Water Quality Certification.

From 2018 to 2021, there were also numerous Code and regulation amendments that affected other DEQ programs, several federal and state court decisions, and at least three federal rulemakings that coincided with the proposed project approval timeline and that affected agency policies as a whole.

Due to all of these legislative, judicial, regulatory, and administrative actions, staff has reviewed the Project, considered all available information, and processed the VWP permit application as rigorously as it has for other linear utility projects to date.

## **9. Complaints.**

DEQ received several complaints during the public comment period. Those that appeared to be new complaints were passed to DEQ's Compliance Program for review. There were a number of complaints that DEQ has heard over the past three or more years, which DEQ has done its best to address. While DEQ appreciates the concerns expressed, many of these complainant's comments are based on conjecture, based on potential circumstances versus actual circumstances, contain misinformation, made with a lack of understanding of

construction projects in general and pipeline construction in particular, or expressions of disagreement with the Project and/or DEQ's processes, procedures, policies, and actions.

## **10. Acknowledgement of Out-of-Scope Comments.**

Many of the comments submitted to DEQ are outside the scope of the draft VWP individual permit and/or DEQ's Authority.

The following topics were the subject of numerous comments received from organizations and individuals, many using standardized language provided to them from various sources:

- Seismic activity along the pipeline route.
- Groundwater wells, karst.
- Leaks, discharges, or explosions once the pipeline is operational.
- Necessity or justification for the pipeline Project.
- Air emissions and climate change from increased production or use of natural gas in lieu of alternative energy sources.
- Permitting, certification, or compliance actions taken by other states regarding pipeline projects.
- Pipeline siting suitability, off-site alternatives.
- Economic development, manufacturing and job creation.
- Human trafficking, transient populations.
- Need for Project completion due to negative impacts on landowners' properties and businesses.

These comments regarding broader issues involving the pipeline are acknowledged. Consideration of these issues were not within the scope of the Upland Section 401 Certification, and many are also not within the scope of the VWP Permit Program and/or draft VWP individual permit being considered now. However, it should be noted that other regulatory authorities exist to address such issues. Additionally, issues related to energy production and energy alternatives, including other energy production technology, may be

relevant or considered in other regulatory reviews for the proposed pipeline Project as a whole.

## Public Comments

NOTE: Public comment files were previously provided to each Board member. Included in this tab are some of the comments received; specifically:

Lawrence Beyer

Robert Bell, Price Gregory International

Josalyn Johnson, Pipeliners Local 798

Tommy Oliver, Roanoke Gas Company

Paul Schneider, Roanoke Gas Company

Jim Shockley, Roanoke Gas

Ashley Washington, Virginia Association of Municipal Wastewater Agencies

Roberta Bondurant, Preserve Bent Mountain

Betty Werner, Four Corners Farm

Joshua Vana

Jacqueline Goodrum, Wild Virginia

David Sligh, Wild Virginia

Ben Lockett, Appalachian Mountain Advocates, and Allegheny-Blue Ridge Alliance, Appalachian Voices, Blue Ridge Environmental Defense League, Chesapeake Climate Action Network, Defenders of Wildlife, National Parks Conservation Association, Natural Resources Defense Council, Preserve Bent Mountain, Preserve Craig, Inc., Preserve Franklin, Preserve Giles, Preserve Montgomery County VA, Preserve Salem, Protect Our Water, Heritage, Rights (POWHR), Sierra Club Virginia Chapter, Virginia Conservation Network, and Wild Virginia





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**MEMORANDUM**

**TO:** State Water Control Board Members

**FROM:** Karen M. Doran, Clean Water Financing and Assistance Program

**DATE:** November 9, 2021

**SUBJECT:** FY 2022 Virginia Clean Water Revolving Loan Fund Final Authorizations

**Purpose**

Title IV of the Clean Water Act requires the annual submission of a Project Priority List and Intended Use Plan in conjunction with Virginia's Clean Water Revolving Loan Fund Capitalization Grant application. Section 62.1-229 of Chapter 22, Code of Virginia, authorizes the Board to establish to whom loans are made, the loan amounts, and repayment terms. The next step in this process is for the Board to set the loan terms and authorize the execution of the loan agreements.

**Background**

On June 7, 2021, Clean Water Financing and Assistance Program (CWFAP) staff solicited applications from the Commonwealth's localities and wastewater authorities as well as potential land conservation, living shoreline, and brownfield remediation applicants. July 30, 2021 was established as the deadline for receiving applications. Based on this solicitation, DEQ received 28 wastewater improvement applications requesting \$397,437,076, including seven (7) Southwest Virginia Pilot Program construction projects, four (4) stormwater applications requesting \$44,913,868, and one (1) combined living shoreline and on-site septic local program application requesting \$3,000,000, bringing the total amount requested to \$445,350,944.

CWFAP staff determined that all projects could be funded by the VCWRLF, with the HRSD programmatic loan request for \$200,000,000 reduced to \$100,000,000. By memorandum dated September 24, 2021, the Director of DEQ tentatively approved the list of 33 projects for a total of

\$345,350,944 in loan assistance from available and anticipated FY 2022 resources and authorized staff to proceed to public comment. A listing of the projects in priority order, a brief description of each, and amount of assistance requested is included in Attachment A. A public meeting was convened on October 29, 2021. Notice of the meeting was posted on the Virginia Regulatory Town Hall and DEQ's CWFAP website. No comments were received.

### **Discussion**

The staff has conducted initial meetings with the FY 2022 targeted recipients and has finalized the recommended loan amounts, interest rates, and loan terms in accordance with the Board's guidelines. One change from the tentative approval list was made, the City of Hopewell withdrew its application and it was removed from the list. The final list proposed for Board approval includes 32 projects and \$343,745,944 in assistance.

The loan rates and terms listed in the table below are submitted for Board consideration. In accordance with Board guidelines, a residential user charge impact analysis was conducted for each project. This analysis determines the anticipated user charges as a result of the project relative to the affordable rate as a percentage of the applicant's median household income (MHI). Projects involving higher user charges relative to income generally receive lower interest rates than those with relatively lower user charges. This year, the program adjusted the MHI brackets using the most recently published estimated MHI data from the American Community Survey, performed by the U.S. Census Bureau.

Congress has not finalized the federal State Revolving Fund appropriation for FY 2022. As such, we are unsure as to the amount, if any, that could be made available as principal forgiveness in FY 2022. The staff will analyze the projects with regard to the program's hardship affordability criteria and will be prepared to work with the Director on providing principal forgiveness to some projects as allowed by previous delegations if it is provided for by the federal appropriation.

As in the last several years, we are proposing that the subsidized program rate for wastewater related projects differ depending on the term of the loan, such that 20-year term program rates are set at 1.50% (150 basis points) below market, 25-year term program rates are 1.25% (125 basis points) below market, and 30-year term program rates are 1.00% (100 basis points) below market. Market rates would be based on an evaluation by Virginia Resource Authority (VRA) of the market conditions that exist about a month prior to each loan closing. For stormwater projects, if the local government has adopted a dedicated source of revenue to implement a stormwater control program in accordance with 15.2-2114 of the Code of Virginia, the loan recipient is entitled to an additional interest rate reduction of 1%. For living shorelines local programs, the interest rate is set at 0%. The program is recommending the interest rate for the Southwest Virginia Pilot Program construction projects be set at 0%, the hardship interest rate be set at 0.5%, and a minimum interest rate of 1% for all other loans.

For projects such as wastewater treatment plants and pump stations that involve significant mechanical equipment, the maximum loan term would be up to 25 years, whereas the term for projects that primarily involve wastewater conveyance piping installation or improvements and projects funded using programmatic financing could be up to 30 years and no longer than the



expected useful life of the project. For stormwater projects and on-site septic and living shoreline local programs, loan terms are set at 20 years.

<b>FY 2022 Proposed Interest Rates and Loan Authorizations</b>		
<b>Locality</b>	<b>Loan Amount</b>	<b>Rates and Loan Terms</b>
1 Town of Saltville	\$ 349,800	0%, up to 30 years
2 Town of Abingdon	\$ 3,336,800	0%, up to 30 years
3 Town of Big Stone Gap	\$ 2,965,566	0%, up to 30 years
4 Town of Chilhowie	\$ 2,069,974	0%, up to 30 years
5 Wythe County	\$ 1,209,000	0%, up to 30 years
6 Town of Wytheville	\$ 1,967,137	0%, up to 30 years
7 Town of Independence	\$ 1,010,840	0%, up to 30 years
8 South Central Wastewater Authority	\$ 30,626,407	PR*, up to 25 years
9 BVU Authority	\$ 9,532,000	0.5%, up to 30 years
10 Stafford County	\$ 26,326,000	PR*, up to 25 years
11 City of Lynchburg	\$ 6,500,000	0.5%, up to 30 years
12 Hampton Roads Sanitation District	\$ 100,000,000	PR*, up to 25 years
13 City of Fredericksburg	\$ 60,000,000	PR*, up to 25 years
14 Wise County Public Service Authority	\$ 8,424,060	0.5%, up to 30 years
15 Town of Marion	\$ 295,240	0.5%, up to 25 years
16 Town of Marion	\$ 442,000	0.5%, up to 30 years
17 Town of Lebanon	\$ 6,715,000	0.5%, up to 25 years
18 Middlesex County	\$ 2,550,000	PR*, up to 30 years
19 City of Portsmouth	\$ 509,458	0.5%, up to 30 years
20 City of Portsmouth	\$ 865,368	0.5%, up to 30 years
21 City of Portsmouth	\$ 761,673	0.5%, up to 30 years
22 City of Portsmouth	\$ 2,104,545	0.5%, up to 30 years
23 City of Portsmouth	\$ 1,499,963	0.5%, up to 30 years
24 City of Norfolk Dept of Public Utilities	\$ 6,000,000	0.5%, up to 30 years
25 City of Salem	\$ 2,300,437	PR*, up to 25 years
26 Town of Vinton	\$ 710,808	0.5%, up to 25 years
27 City of Petersburg	\$ 16,760,000	0.5%, up to 30 years
28 City of Norfolk Dept. of Public Works	\$ 4,513,868	0.5%, up to 20 years
29 City of Lynchburg	\$ 10,000,000	0.5%, up to 20 years
30 City of Norfolk Dept. of Public Works	\$ 400,000	0.5%, up to 20 years
31 Fairfax County	\$ 30,000,000	PR*-1%, up to 20 years
32 Middle Peninsula Planning District Comm	\$ 3,000,000	0%, up to 20 years
<b>TOTAL \$</b>		<b>343,745,944</b>
PR = Program Rate *minimum 1%		

**Staff Recommendations**

Authorize the execution of loan agreements for the projects, loan amounts, interest rates and terms listed above, and that 20-year term program rates are set at 1.5% (150 basis points) below market, 25-year term program rates are 1.25% (125 basis points) below market, and 30-year term program rates are 1.00% (100 basis points) below market, based on VRA's evaluation of the market conditions that exist about a month prior to each loan closing. The interest rate for the local program project and Southwest Virginia Pilot Program construction projects will be 0%, the hardship interest rate will be 0.5%, and the minimum interest rate will be 1% for all other loans. Loan closings will be subject to receipt of a favorable financial capability analysis report and supporting recommendation from VRA for each loan recipient.

VCWRLF FY22 PPL - Attachment A

FY 2022 Applicants	Amount Requested	Project Description	Points	Projected Project Start
<b>Wastewater - Southwest Virginia Pilot Program Phase 1 Step 2 Projects</b>				
Town of Saltville	\$ 349,800.00	Sewer lining, sewer rehabilitation, and Route 634 aerial crossing replacement.	424.79	Summer 2022
Town of Abingdon	\$ 3,336,800.00	Phase I Collection System Rehabilitation, based on SSES report, that will include 141 manholes, 11,900 linear feet of pipe, and 119 laterals.	408.98	Summer 2022
Town of Big Stone Gap	\$ 2,965,566.00	This project will rehabilitate the Hospital sewershed within the Big Stone Gap sewer system.	386.97	Winter 2022
Town of Chilhowie	\$ 2,069,974.00	This project consists of rehabilitation of the collection system in the Town of Chilhowie to correct I&I issues.	349.79	Spring 2023
Wythe County	\$ 1,209,000.00	This project focuses on the most critical repairs identified in the SSES report of May 2021. The repairs consist of repairs in the Fort Chiswell collection system to reduce I&I.	313.48	Summer 2022
Town of Wytheville	\$ 1,967,137.00	This project is Phase 1 of the repairs proposed improvements resulting from the SSES. It will include improvements to the collection system: WWTP drainage basin, Pump Station #6	313.48	Spring 2023
Town of Independence	\$ 1,010,840.00	This project consists of CIPP lining of sewer line along N. Independence Ave, along with rehabilitation of 29 manholes.	293.53	Fall 2022
SWVAPP Phase 1 Step 2 Projects Subtotal:	\$ 12,909,117.00			

<b>Wastewater Projects</b>				
South Central Wastewater Authority	\$ 30,626,407.00	Various improvements to the South Central Wastewater Treatment Plant in order to comply with permit requirements.	419.66	Summer 2022
BVU Authority	\$ 9,532,000.00	Beaver Creek Interceptor Rehabilitation Project Phase 1: This project will focus on the first phase of improvements in the Beaver Creek sewershed identified in BVU Authority's SSES report.	412.94	Summer 2022
Stafford County	\$ 26,326,000.00	This project consists of upgrades at the Little Falls Run plant. The upgrades contain 5 components: preliminary treatment, biological treatment, effluent treatment, biosolids management, and the chemical feed system.	408.82	Fall 2022
City of Lynchburg	\$ 6,500,000.00	CSO 70 Improvement: Replace regulator with a new structure and replace interceptors and sewer with larger structures to decrease overflows. CSO 14 Improvement: Install a new CSO regulator and new 60' sewer to provide inline storage of combined sewage along the	408.60	Summer 2022
Hampton Roads Sanitation District	\$ 200,000,000.00	Programmatic funding of several capital projects.	386.25	Spring 2022
City of Fredericksburg	\$ 60,000,000.00	This project consists of the expansion and upgrade of the Fredericksburg Wastewater Treatment Plant.	358.42	Winter 2023
Wise County Public Service Authority	\$ 8,424,060.00	This project consists of replacement and/or relocation of the interceptor system of the Town of Pound and refinancing of existing debt.	354.97	Summer 2023
Town of Marion	\$ 295,240.00	WWTP Improvements Project: This project will replace critical components at the Town's existing WWTP.	354.79	Summer 2022
Town of Marion	\$ 442,000.00	Hollow Road Sewer Replacement: This project will replace the existing sewer line to reduce I&I and sewer blockages.	349.79	Summer 2022
Town of Lebanon	\$ 6,715,000.00	This project will focus on needed improvements at the Town's WWTP, replacement of the Industrial Park pump station, and substantial renovations of the Big Cedar pump station.	344.16	Summer 2023
City of Hopewell	\$ 1,605,000.00	This project consists of a pilot program for water reuse from Hopewell Water Renewal to be used as a source of industrial non-potable water.	339.65	Spring 2022
Middlesex County	\$ 2,550,000.00	This project consists of construction of a new collection system in the Topping service area, connecting to HRSD's interceptor.	338.89	Summer 2022
City of Portsmouth	\$ 509,458.00	Piedmont Avenue Water and Sewer Replacement: This project will replace sanitary sewer along Piedmont Avenue between Watts Avenue and Jefferson Street.	337.85	Summer 2022
City of Portsmouth	\$ 865,368.00	Florida Avenue Infrastructure Improvements: This project consists of replacement of sanitary sewer along Florida Avenue between London Boulevard and Queen Street.	337.85	Spring 2022
City of Portsmouth	\$ 761,673.00	Ericsson Street Sewer Replacement: This project will replace sanitary sewer along Ericsson Street between Gillis Road and Dahlgren Avenue.	337.85	Spring 2022
City of Portsmouth	\$ 2,104,545.00	Kirby Street Utility Replacement: This project will replace the sanitary sewer along Kirby Street between Maupin Avenue and Deep Creek Boulevard.	337.85	Spring 2022
City of Portsmouth	\$ 1,499,963.00	Carney Farms Water and Sewer Replacement: This project will replace 1,300 linear feet of sanitary sewer, service laterals, and manholes along Carney Farms Lane.	337.85	Spring 2022
City of Norfolk Dept of Public Utilities	\$ 6,000,000.00	This application includes three projects: Ballentine Place Ph 1 Sewer Replacement, River Forest Shores Ph 1 Pump Station Upgrade, and Wards Corner Ph 7 Sewer Replacement.	336.49	Winter 2022
City of Salem	\$ 2,300,437.00	This project includes renovation of existing anaerobic digester facilities.	317.28	Spring 2022
Town of Vinton	\$ 710,808.00	This project consists of structural rehabilitation of five primary digesters and installation of new mixing equipment.	314.59	Spring 2022
City of Petersburg	\$ 16,760,000.00	This project will replace the Poor Creek Force Main in a new alignment. The project will also include pump station improvements.	294.26	Summer 2022
Wastewater Projects Subtotal:	\$ 384,527,959.00			

<b>Stormwater Projects</b>				
City of Norfolk Dept. of Public Works	\$ 4,513,868.00	This project consists of construction of the first phase of the St. Paul's Blue-Greenway.	561.49	Winter 2022
City of Lynchburg	\$ 10,000,000.00	Removal of the College Lake Dam and stream restoration through the impoundment area and upstream tributaries.	540.60	October 2022
City of Norfolk Dept. of Public Works	\$ 400,000.00	This project consists of 2 projects: Mason Creek Outfall Repair and Replacement and Riverside Memorial Park Shoreline Management	536.49	Spring 2022
Fairfax County	\$ 30,000,000.00	This project will provide additional funding to dredge Lake Accotink.	466.66	Summer 2023
Stormwater Projects Subtotal:	\$ 44,913,868.00			

<b>Living Shoreline/On-Site Project</b>				
Middle Peninsula PDC	\$ 3,000,000.00	This project proposes to combine the existing Living Shoreline and On-Site programs as well as recapitalize them with additional funds.	N/A	Spring 2022
Living Shoreline/On-Site Project Subtotal:	\$ 3,000,000.00			

**Total Requested \$ 445,350,944.00**