Mountain Valley Pipeline Project

Individual Permit Application

Attachment B: Virginia Department of Environmental Quality 401 Water Quality Certification Information and Virginia Water Protection Permit Application

February 2021

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1.0 PROJECT INFORMATION

Mountain Valley Pipeline, LLC (Mountain Valley[1]) is seeking an Individual Permit from the United States Army Corps of Engineers (USACE) Pittsburgh, Huntington, and Norfolk Districts to conduct regulated activities below the ordinary high water elevation of 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 under Section 404 of the Clean Water Act for the Mountain Valley Pipeline Project (Project). In addition to the USACE Individual Permit Application, Mountain Valley is seeking Clean Water Act (CWA) Section 401 Water Quality Certification and a Virginia Water Protection (VWP) permit from the Virginia Department of Environmental (DEQ) for portions of the Project in Virginia. Also note that MVP is requesting a permit modification from the Virginia Marine Resources Commission (VMRC) for 8 of the previously authorized crossings.

Due to the large volume of materials included in this submission, Mountain Valley has prepared this supplement for the convenience of DEQ staff in processing the VWP permit application and forthcoming certification request.

2.0 BACKGROUND

This Project is the most highly publicized, transparent, and stringently regulated construction project in the history of the Commonwealth. The public has been afforded numerous opportunities to publicly comment in person and in writing on all aspects of the Project. Mountain Valley's plans and specifications, inspection reports, monitoring data, permit applications and reports, and other information are posted online for the public and regulatory agencies to access. The Project has been thoroughly reviewed by DEQ over the past four years, including through staff and third-party inspectors dedicated solely to the Project and a first-of-its-kind erosion and sediment control plan and stormwater management plan review and approval process.

Notwithstanding the length of this application package, it is unlikely DEQ or the public will find a great deal of unfamiliar information in this submittal. The most substantial new information is a revised analysis of opportunities to avoid and minimize the Project's aquatic impacts to the extent practicable. Mountain Valley evaluated every stream and wetland crossing in light of multiple relevant factors, including available crossing methods, environmental impacts, and site-specific conditions. Where appropriate and practicable, Mountain Valley has further avoided and minimized its impacts. As a result, this application represents a significant reduction in stream and wetland impacts compared to the impacts that were previously reviewed and approved by the USACE and DEQ.

3.0 2017 JOINT PERMIT APPLICATION

Mountain Valley submitted a Joint Permit Application the USACE, DEQ, and Virginia Marine Resources Commission (VMRC) on September 11, 2017. That application included nearly every stream and wetland impact included in this application. There are a few new minor impacts in this application that were not included in the 2017 JPA due to minor shifts in the Project alignment made in early 2018. DEQ was made aware of those minor shifts through the erosion and sediment control plan review, approval, and modification process. Moreover, t the few new impacts are outweighed by the substantially greater quantity of impacts that have been reduced or completely avoided since the 2017 application.

[1] Mountain Valley is a joint venture between EQM Midstream Partners, LP; NextEra Capital Holding, Inc; Con Edison Transmission, Inc.; WGL Midstream; and RGC Midstream, LLC.

4.0 2018 NWP 12 AND VWP PERMIT

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 water quality certification for the same.[2] Under the State Water Control Board's (SWCB) regulations, Mountain Valley also obtained coverage under a VWP general permit on that date.[3] No party challenged the USACE's determination that the portions of the Project in Virginia complied with all conditions of NWP 12 and the 401 certification.

5.0 2018 SWCB REVIEW OF STREAM AND WETLAND CROSSINGS

At its April 21, 2018, meeting, the SWCB directed DEQ to solicit public comment on three issues germane to this application:

- The sufficiency of NWP 12 for Mountain Valley generally;
- The sufficiency of NWP 12's general and regional conditions as applied to Mountain Valley; and
- The sufficiency of the 401 certification for NWP 12 as applied to specific streams and wetlands crossed by the Project.

The public notice expressly requested any relevant site-specific information relevant to the Project (which had commenced construction at that time) or specific waterbodies for which NWP 12 and the 401 certification would not be adequate to protect water quality. During a 45-day comment period, DEQ received 2,543 comments on Mountain Valley (and an additional 10,218 public comments directed at the Atlantic Coast Pipeline). DEQ noted that 327 comments provided "*crossing specific technical information*" for Mountain Valley.[4] Many others were directed at Mountain Valley's crossing methods and erosion and sediment controls, water quality standards compliance, and the conditions and requirements of NWP 12.

DEQ reviewed the comments and made a presentation to the SWCB at its August 21, 2018, meeting. Regarding the sufficiency of NWP 12 generally, DEQ concluded that of the 46 regional and general conditions applicable to NWP 12, only two were different from what is required by the VWP permit program. However, DEQ noted that Mountain Valley had offered to comply with those two provisions—meaning that the Project was in full compliance with the VWP permit program. DEQ noted that many of the public comments alleged that the NWP 12 permit process is inadequate "because it is a blanket permit that does not provide any crossing-specific review or information."[5] DEQ responded that it conducted a detailed site-specific review of the Project's stream and wetland crossings during the erosion and sediment control plan review and approval process.[6] More specifically, DEQ staff explained that three of the Erosion and Sediment Control Regulation's minimum standards apply directly to stream and wetland crossings and that "under [DEQ's] Erosion and Sediment Control Plan review *every stream crossing is reviewed*."[7] Regarding the 327 comments with site-specific information related to the Project, DEQ concluded: "*No new, crossing-*

[2] A verification letter was initially issued December 26, 2017. The January 2018 verification letter made a technical correction requested by Mountain Valley.
[3] 9 VAC 25-210-130.J.
[4] DEQ Presentation to SWCB (Aug. 21, 2018), included here as Attachment E-2 ("DEQ Presentation").
[5] Transcript of SWCB Mtg. at 20 (Aug. 21, 2018), excerpt included here as Attachment E-3 ("Transcript") (DEQ staff presenting).
[6] *Id*.
[7] Transcript at 22 (emphasis added); *see also id*. 22–40 (describing the crossing-specific review process performed by DEQ).

specific information supports conclusion that NWP12 is not protective of any specific wetland and/or stream."[8]

Following DEQ's presentation, the floor was opened for additional public comment. The SWCB took no action to amend or modify the 401 certification with respect to Mountain Valley's NWP 12 verification.

6.0 2017 UPLAND 401 CERTIFICATION AND 2018 APPEAL

The SWCB unanimously voted to issue a separate water quality certification to Mountain Valley on December 8, 2017 ("Upland 401 Certification"). The Upland 401 Certification applied solely to "Project activities in upland areas outside of the Corps jurisdictional areas under 33 U.S.C. § 1344 and water withdrawal activities that are exempt from coverage under the Virginia Water Protection Permit Program Regulation."

The Upland 401 Certification was issued after an extensive public comment process that drew over 8,000 comments, two public hearings in the Project area before a member of the SWCB serving as a hearing officer, and a two-day public hearing before the full SWCB. In the certification, the SWCB makes the following finding:

> The additional conditions contained in Section V of this Certification along with the requirements imposed by the VWP regulation, the Corps Section 404 permitting requirements, and prior regulatory actions associated with the approval and requirements of the June 2017 Annual Standards and Specifications, and the April 7, 2017 Section 401 Water Quality Certification of the Corps Nationwide Permit 12 provide reasonable assurance that water quality standards will not be violated. . . . This Certification constitutes the Commonwealth's final decision on the upland activities associated with the construction, operation, maintenance, and repair of the Project under the requirement of Clean Water Act § 401.

A group of Project opponents 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 SWCB's unanimous decision to issue the Upland 401 Certification.[9] Of particular relevance to this present application, the court held:

> Petitioners (and amicus Chesapeake Bay Foundation) also challenge the State Agencies' decision to analyze the impacts from activities covered by NWP 12 separately from the impacts from upland activities related to construction. In light of this segmentation, Petitioners maintain that issuance of the December 401 Certification was arbitrary and capricious because the State Agencies "fail[ed] to consider the combined effect of the upland activities and the stream and wetland crossings." We disagree.
>
> . . . .
>
> What we do consider today is Petitioners' argument that the State Agencies erred by not including the impact of activities covered by NWP 12 within the scope of their supplemental 401 process.
>
> We find this criticism to be unfounded. Contrary to Petitioners' suggestion, DEQ "did not review the Project's potential upland impacts in a vacuum." Rather, DEQ "fully integrated [its earlier] analysis into its review of upland impacts." . . . . DEQ's analysis in the

[8] DEQ Presentation (emphasis added).
[9] *Sierra Club v. SWCB*, 898 F.3d 383 (4th Cir. 2018).

> supplemental process included consideration of the impacts the activities covered by NWP 12 were expected to have. Thus, although the December 401 Certification "addresse[d] only activities in upland areas," and determined that there was reasonable assurance that allowing these activities would not reduce water quality, DEQ made this determination with full awareness and consideration of the fact that the NWP 12-covered activities would also be occurring. And in the end, DEQ made clear that it was only "[t]he additional conditions contained in Section V of the draft certification along with the requirements imposed by the VWP regulation, the Corps Section 404 permitting requirements, and prior regulatory actions associated with the approval and requirements of the June 2017 [Annual Standards and Specifications]," that "provide[d] reasonable assurance that water quality standards will not be violated." Finally, as we have discussed, a significant basis for the State Agencies' reasonable-assurance certification was the existence of monitoring requirements that would allow DEQ to make prompt adjustments if samples revealed exceedances of pre-construction sedimentation levels. In this way, the monitoring plan protected against any degradation of water quality from the Project, without regard to what particular activities (or combination of activities) was the cause. For all of these reasons, we conclude that the State Agencies' segmented approach to the December 401 Certification, even if unorthodox, was not arbitrary and capricious.

To summarize, DEQ and SWCB's review of the Project for the Upland 401 Certification included a *cumulative impacts review* of potential water quality impacts associated with (1) upland construction *and* (2) stream and wetland crossings. The SWCB's reasonable assurance finding was made on the basis of an extensive record, fully informed by public input. Lastly, the SWCB's finding and rationale held up under the scrutiny of a legal challenge and judicial review.

7.0 2021 DECISION TO APPLY FOR NEW PERMITS

Mountain Valley is obligated to submit this application to DEQ not due to any change in the Project, but due solely to an unfortunate coincidence of litigation unrelated to Project activities in Virginia and a recent change in state law. The Project's NWP 12 verification for Virginia was suspended due to technical legal challenges to an NWP 12 verification issued for a portion of the Project in West Virginia. Mountain Valley was subsequently compelled to submit this individual CWA § 404 permit application to the USACE.[10]

But for a recent change in state law, that application would not obligate Mountain Valley to apply for an individual VWP permit and 401 certification. The Project satisfied in 2017—and still satisfies—every substantive requirement of the applicable VWP general permit.[11] However, a change in state law made a very narrow class of pipelines (Federal Energy Regulatory Commission (FERC)-certificated interstate natural gas pipelines greater than 36 inches in diameter) ineligible for coverage under the VWP general permit.[12] That statutory change applied only to applications for FERC certificates or federal permits submitted after July 1, 2018.[13] At that time, Mountain Valley held a valid FERC certificate and CWA § 404 permit from the USACE.

[10] Mountain Valley's decision to seek an individual permit from the USACE is explained further in Section 1.2 of the Individual Permit Application narrative.
[11] 9 VAC 25-670-100.
[12] Va. Code § 62.1-44.15:21.J.
[13] 2018 Va. Acts Ch. 636 § 2.

If not for litigation in West Virginia that caused Mountain Valley to reapply for a permit from the USACE and a recent change in state law that otherwise would not have applied to Mountain Valley, the Project's crossings in Virginia could have been completed under the NWP 12 verification, 401 certification, and VWP permit Mountain Valley obtained in December 2017 and which DEQ and SWCB found to be sufficient to protect water quality in 2018. In sum, Mountain Valley is obligated to request a new VWP permit and new 401 certification strictly for legal reasons. However, the SWCB and DEQ already made (and re-affirmed) those decisions. The only new and relevant factual information is that the Project's aquatic impacts have been *reduced* since those decisions were initially made.

3.0 VWP PERMIT APPLICATION

Mountain Valley submits this application for an individual VWP permit in accordance with Va. Code §§ 62.1-44.15:20.D and :21.J. As DEQ is aware, large areas of the Project right-of-way in Virginia remain in a state of temporarily stabilized construction. The best environmental outcome for water quality is for the construction to be competed as soon as possible so that those areas can be fully restored and revegetated. Construction cannot be completed until Mountain Valley re-secures authorization to complete stream and wetland crossings. Although this application package is voluminous, DEQ is familiar with the Project's construction practices and has previously reviewed every stream and wetland crossing in this application. For these reasons, Mountain Valley respectfully requests that DEQ process this application in an expedited manner in accordance with Va. Code § 62.1-44.15:21.E.

To facilitate DEQ's review, Mountain Valley has endeavored to prepare a complete application that provides all necessary information to make a tentative permit decision. Appended to this narrative as Attachment E-1 is a checklist that includes every application requirement in the VWP regulations and a reference to the location in this application package where the relevant information can be found.

To streamline the process of developing conditions for a tentative draft permit, Mountain Valley suggests that DEQ incorporate all conditions that were previously required for Project construction in the 2017 NWP 12 (including its general, regional, and special conditions) and the Commonwealth's 401 certification for the same. DEQ and the SWCB found those conditions to be protective of water quality standards in December 2017 (which was sustained by the Fourth Circuit) and again August 2018—both times after lengthy public comment and hearing processes.[14] To support this suggestion, the checklist in Attachment E-1 also includes a listing of every permit application requirement and permit condition that previously applied to the Project's crossings in Virginia, with references to where Mountain Valley has or proposes to satisfy the condition.[15]

As noted above, the most significant difference between this application and 2017 Joint Permit Application is that Mountain Valley is proposing to avoid and minimize additional aquatic impacts by using trenchless crossing methods where appropriate and practicable. Trenchless crossing methods significantly reduce the direct aquatic impacts associated with stream and wetland crossings. Due to site logistics, trenchless crossings sometimes necessitate that timber mats or other structures be placed in aquatic resources (temporary fill) for the duration of the crossing to support the construction equipment crossing. Mountain

[14] Mountain Valley also refers DEQ to the comments Mountain Valley submitted on June 15, 2018, in response to the solicitation of comments on the sufficiency of NWP 12 and the 401 certification. Those comments detailed, on a site-specific basis, how Mountain Valley's crossings comply with each applicable permit condition.

[15] The checklist also includes any applicable new substantive requirements in the 2021 NWP 12 and related 401 certification issued by DEQ in December 2020. Mountain Valley has no objection to complying with those conditions as well.

Valley's site-specific analysis of alternative crossing methods for each single and complete project can be found in Section 5.1.1 and Table 15 of the Individual Permit Application narrative. Plan and Profile Crossing Drawings for every crossing included in this application can be found in Attachment H of the Individual Permit Application.

As compared to the September 2017 Joint Permit Application, Mountain Valley is proposing further mitigation in the form of additional avoidance and minimization. No additional compensatory mitigation is being proposed. Mountain Valley provided compensatory mitigation for all permanent impacts, including conversion impacts and impacts that fall below the NWP 12 compensatory mitigation thresholds (i.e., 300 linear feet of stream loss or 1/10 acre wetland loss), in concert with the September 2017 Joint Permit Application. The permanent impacts included in this application are less than was originally permitted in 2018, so Mountain Valley has provided sufficient compensatory mitigation to comply with the VWP permit program regulatory requirements for all permanent impacts. Please refer to Section 5.3 of the Individual Permit Application narrative for additional information on compensatory mitigation.

4.0 401 CERTIFICATION REQUEST

Under state law, a VWP permit issued to Mountain Valley would constitute Clean Water Act § 401 water quality certification for the Project with respect to stream and wetland crossings subject to the jurisdiction of the USACE.[16] By satisfying the requirements of a complete VWP permit application, this submission has been prepared to provide the factual information necessary for DEQ to make a water quality certification decision in accordance with state law. However, this application does not constitute Mountain Valley's request for certification. A formal request for certification will be submitted to DEQ no sooner than February 25, 2021.[17]

The proposed stream and wetland impacts reflected in this application fall outside the scope of the Upland 401 Certification, which remains valid and in effect. Furthermore, the proposed changes in crossing methods from open cuts to trenchless crossings do not constitute a modification of the "Project" as that term is defined in the certification. Out of an abundance of caution, however, Mountain Valley makes the following statement consistent with certification condition V.12: Any proposed crossing method changes, including work in or under aquatic resources and any immediately adjacent work in uplands, (1) are wholly within the limits of disturbance previously approved by FERC and are subject to approval by FERC; (2) reduce the Project's direct and cumulative impacts on water quality; and (3) will not affect Mountain Valley's compliance with any condition of the certification.

5.0 ADDITIONAL INFORMATION

The following additional information is provided to facilitate DEQ's review of this application.

- Areas crossed by the Project and subject to a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument is included as Figure B-1.
- Tables of stream and wetland impacts in Virginia are included as Table B-1 and Table B-2, respectively. All proposed impacts to state waters, including temporary impacts associated with trenchless crossing methods, are included in this table.

[16] Va. Code § 62.1-44.15:20.D.
[17] 40 C.F.R. § 121.5. Mountain Valley submitted a pre-filing meeting request on January 26, 2021.

- Tables summarizing stream and wetland impacts by type and by Cowardin Class in Virginia are included as Table B-3 and Table B-4, respectively.

- An executed Virginia Water Protection Permit Program Property-Access Agreement is included as Attachment B-4 hereto. Please note that Mountain Valley made a minor modification to the form agreement to reflect its status as an easement holder for the Project areas.

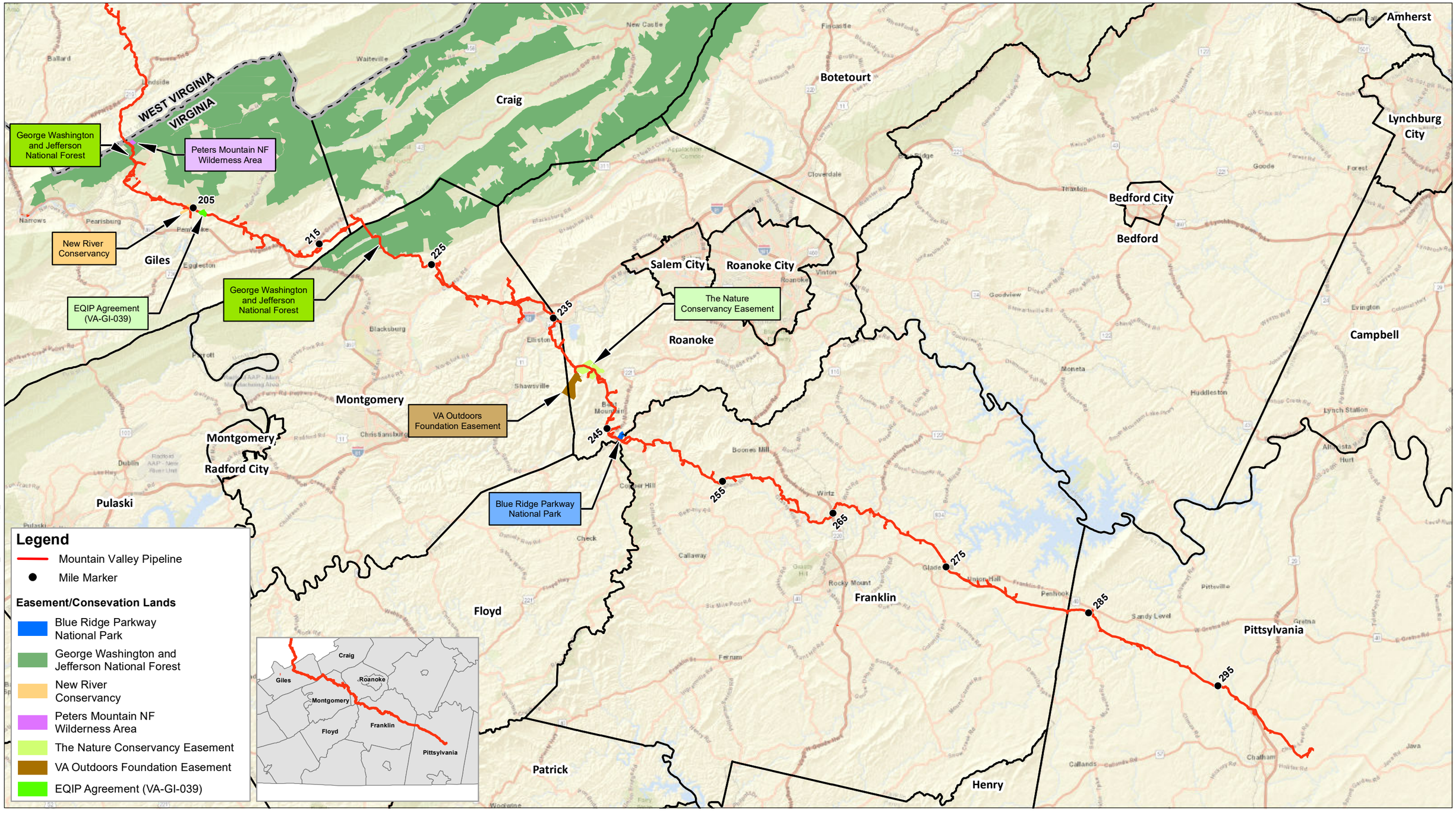
- Riparian Property Owner Information is included as Attachment B-5.

FIGURES

Figures

MVP Pipeline Project

Easement/Conservation Lands



C:\WSSI-L\22000s\22800\22865.06\GIS\ConservationEasementMap\MVP_EasementMap_20210127.mxd

NORTH

Basemap Source: ESRI ArcGIS Online. World Street Map.
Centerline Source: MVP. January 27, 2021
Easement/Conservation Lands Data: VA-DCR, Natural Heritage (10/26/20)
https://www.dcr.virginia.gov/natural-heritage/cldownload

0 5 10 Miles

Mountain Valley PIPELINE

TABLES

Tables

Table B-1. Virginia Stream Impacts
Individual Permit Application
Mountain Valley Pipeline Project

Stream ID	NHD Stream Name[1]	County	Latitude[2]	Longitude[2]	Flow Regime	Water Type[3]	Stream Designation[4]	HUC 8	Impact Type	Temporary Impact (linear ft)	Permanent Impact (linear ft)	Temporary Impact Area (square feet)[5]	Permanent Impact Area (square feet)[5]	Temporary Fill (cubic yard)[6]	Permanent Fill (cubic yard)[7]	Figure
S-Q12	UNT to Kimballton Branch	Giles	37.375311	-80.680878	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	86	-	344	-	127	-	4-531
S-Q13	Kimballton Branch	Giles	37.374377	-80.682038	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	90	-	1350	-	500	-	4-532
S-P6	UNT to Stony Creek	Giles	37.362202	-80.688092	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	78	-	466	-	173	-	4-535
S-S5-Braid-2	Stony Creek	Giles	37.360325	-80.684214	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	122	-	13	-	4-536
S-S5-Braid-1	Stony Creek	Giles	37.360276	-80.684193	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	139	-	16	-	4-536
S-S5	Stony Creek	Giles	37.360071	-80.683960	Perennial	RPW	Candy darter, Green floater, pistol grip, Natural Trout, Coldwater Fishery, Stockable Trout	05050002	Timber Mat Crossing	40	-	802	-	178	-	4-536
S-G29	UNT to Dry Branch	Giles	37.350430	-80.658259	Ephemeral	NRPW	-	05050002	Pipeline ROW	30	-	122	-	13	-	4-541
S-G30	UNT to Dry Branch	Giles	37.350373	-80.658230	Ephemeral	NRPW	-	05050002	Pipeline ROW	85	-	680	-	252	-	4-541
S-G32	Dry Branch	Giles	37.349095	-80.652040	Intermittent	RPW	-	05050002	Pipeline ROW	110	-	662	-	244	-	4-542
S-G33	UNT to Dry Branch	Giles	37.348641	-80.647225	Perennial	RPW	-	05050002	Pipeline ROW	99	-	793	-	293	-	4-542
S-G35	UNT to Little Stony Creek	Giles	37.344876	-80.633426	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	25	-	501	-	69	-	4-544
S-SS4	UNT to Little Stony Creek	Giles	37.344859	-80.631295	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	61	-	7	-	4-544
S-G35	UNT to Little Stony Creek	Giles	37.344779	-80.633379	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	25	-	501	-	69	-	4-544
S-Z7	UNT to Little Stony Creek	Giles	37.344278	-80.626185	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	61	-	7	-	4-545
S-Z7-Braid-1	UNT to Little Stony Creek	Giles	37.344277	-80.626113	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	61	-	7	-	4-545
S-Z9	UNT to Little Stony Creek	Giles	37.344163	-80.628400	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	78	-	9	-	4-544
S-Z10	UNT to Little Stony Creek	Giles	37.342351	-80.620823	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	240	-	27	-	4-545
S-Z11	UNT to Little Stony Creek	Giles	37.342236	-80.620542	Perennial	RPW	Natural Trout, Coldwater Fishery, Stockable Trout	05050002	Timber Mat Crossing	20	-	100	-	11	-	4-545
S-Z12-EPH	UNT to Little Stony Creek	Giles	37.342214	-80.620312	Ephemeral	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	122	-	13	-	4-545
S-Z13	Little Stony Creek	Giles	37.342172	-80.620090	Perennial	RPW	Natural Trout, Coldwater Fishery, Stockable Trout	05050002	Timber Mat Crossing	25	-	501	-	69	-	4-545
S-Z14	UNT to Little Stony Creek	Giles	37.340977	-80.618031	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	78	-	9	-	4-545
S-YZ1	Doe Creek	Giles	37.338952	-80.614618	Intermittent	RPW	-	05050002	Temporary Access Road	102	-	1019	-	113	-	4-546
S-A34	UNT to Doe Creek	Giles	37.337763	-80.606008	Ephemeral	NRPW	-	05050002	Pipeline ROW	86	-	601	-	223	-	4-548
S-A33	UNT to Doe Creek	Giles	37.337639	-80.605571	Ephemeral	NRPW	-	05050002	Pipeline ROW	111	-	775	-	288	-	4-548
S-YZ1	Doe Creek	Giles	37.337562	-80.614711	Intermittent	RPW	-	05050002	Temporary Access Road	92	-	919	-	102	-	4-546
S-YZ1	Doe Creek	Giles	37.337048	-80.614625	Intermittent	RPW	-	05050002	Temporary Access Road	121	-	1211	-	134	-	4-546
S-A32	UNT to Doe Creek	Giles	37.335094	-80.596868	Perennial	RPW	-	05050002	Pipeline ROW	78	-	1250	-	462	-	4-549
S-QQ2	Sinking Creek	Craig	37.333152	-80.429438	Perennial	RPW	Natural Trout, Coldwater Fishery, Stockable Trout	05050002	Temporary Access Road	40	-	1398	-	156	-	4-581
S-MN11-Upstream	UNT to Sinking Creek	Giles	37.332869	-80.559168	Ephemeral	NRPW	-	05050002	Temporary Access Road	15	-	61	-	7	-	4-554
S-MN11-Upstream	UNT to Sinking Creek	Giles	37.332191	-80.559979	Ephemeral	NRPW	-	05050002	Temporary Access Road	30	-	122	-	13	-	4-554
S-MN11-Downstream	UNT to Sinking Creek	Giles	37.332146	-80.560079	Ephemeral	NRPW	-	05050002	Temporary Access Road	37	-	183	-	21	-	4-554
S-Y3	UNT to Doe Creek	Giles	37.331748	-80.583355	Ephemeral	NRPW	-	05050002	Timber Mat Crossing	20	-	200	-	22	-	4-551
S-Y2	Doe Creek	Giles	37.331332	-80.583047	Perennial	RPW	-	05050002	Timber Mat Crossing	25	-	501	-	69	-	4-551
S-PP4	UNT to Sinking Creek	Craig	37.328329	-80.422810	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	84	-	170	-	62	-	4-579
S-PP3	UNT to Sinking Creek	Craig	37.326705	-80.425803	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	82	-	244	-	91	-	4-579
S-RR4	UNT to Sinking Creek	Giles	37.326015	-80.556831	Perennial	RPW	-	05050002	Temporary Access Road	85	-	257	-	28	-	4-556
S-E24	UNT to Sinking Creek	Giles	37.325728	-80.565082	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	81	-	1620	-	600	-	4-553
S-E25-Downstream	UNT to Sinking Creek	Giles	37.325638	-80.564680	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	161	-	18	-	4-553
S-E25-Upstream	UNT to Sinking Creek	Giles	37.325607	-80.564373	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	15	-	148	-	17	-	4-553
S-E25-Downstream	UNT to Sinking Creek	Giles	37.325566	-80.564634	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	161	-	18	-	4-553
S-PP1	UNT to Sinking Creek	Craig	37.324781	-80.431446	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	86	-	257	-	96	-	4-578
S-RR5	UNT to Sinking Creek	Giles	37.323702	-80.555627	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	83	-	832	-	307	-	4-555
S-PA07	UNT to Sinking Creek	Giles	37.323533	-80.555257	Intermittent	RPW	-	05050002	Pipeline ROW	115	-	231	-	85	-	4-555
S-IJ18-EPH	UNT to Sinking Creek	Giles	37.322737	-80.552396	Ephemeral	NRPW	-	05050002	Pipeline ROW	74	-	444	-	164	-	4-555
S-IJ19	UNT to Sinking Creek	Giles	37.322194	-80.553058	Ephemeral	NRPW	-	05050002	Temporary Access Road	43	-	170	-	19	-	4-555
S-IJ19	UNT to Sinking Creek	Giles	37.321823	-80.55311	Ephemeral	NRPW	-	05050002	Temporary Access Road	9	-	35	-	4	-	4-555
S-IJ18-INT	UNT to Sinking Creek	Giles	37.321756	-80.553011	Intermittent	RPW	-	05050002	Temporary Access Road	44	-	174	-	20	-	4-555
S-PP22	UNT to Craig Creek	Montgomery	37.321090	-80.412831	Intermittent	RPW	Atlantic Pigtoe, Coldwater Fishery	02080201	Timber Mat Crossing	44	-	174	-	20	-	4-584
S-OO12	UNT to Sinking Creek	Giles	37.318956	-80.440648	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	25	-	48	-	6	-	4-577
S-OO13	UNT to Sinking Creek	Giles	37.318930	-80.440930	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	77	-	1542	-	570	-	4-577
S-OO14	UNT to Sinking Creek	Giles	37.318647	-80.441619	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	86	-	344	-	127	-	4-577
S-IJ17	UNT to Sinking Creek	Giles	37.318324	-80.547720	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	31	-	248	-	28	-	4-558
S-IJ16-b	UNT to Sinking Creek	Giles	37.318246	-80.547711	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	78	-	780	-	289	-	4-558
S-PP21	UNT to Craig Creek	Montgomery	37.317187	-80.409235	Perennial	RPW	Atlantic Pigtoe, Coldwater Fishery	02080201	Timber Mat Crossing	20	-	78	-	9	-	4-584

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Individual Permit Application
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Stream ID	NHD Stream Name[1]	County	Latitude[2]	Longitude[2]	Flow Regime	Water Type[3]	Stream Designation[4]	HUC 8	Impact Type	Temporary Impact (linear ft)	Permanent Impact (linear ft)	Temporary Impact Area (square feet)[5]	Permanent Impact Area (square feet)[5]	Temporary Fill (cubic yard)[6]	Permanent Fill (cubic yard)[7]	Figure
S-PP20	UNT to Craig Creek	Montgomery	37.316523	-80.408646	Perennial	RPW	Atlantic Pigtoe, Coldwater Fishery	02080201	Timber Mat Crossing	20	-	122	-	13	-	4-584
S-RR13	Craig Creek	Montgomery	37.314504	-80.402613	Perennial	RPW	Atlantic Pigtoe, Stockable Trout, Coldwater Fishery	02080201	Temporary Access Road	41	-	1433	-	159	-	4-585
S-HH18	UNT to Craig Creek	Montgomery	37.313910	-80.398683	Perennial	RPW	Atlatnic pigtoe, orangefin madtom Coldwater Fishery	02080201	Timber Mat Crossing	20	-	122	-	13	-	4-586
S-RR14	UNT to Craig Creek	Montgomery	37.313615	-80.402521	Ephemeral	NRPW	Atlantic Pigtoe, Coldwater Fishery	02080201	Timber Mat Crossing	20	-	139	-	16	-	4-585
S-OO6	Craig Creek	Montgomery	37.313511	-80.404606	Perennial	RPW	Atlantic Pigtoe, Stockable Trout, Coldwater Fishery	02080201	Timber Mat Crossing	35	-	701	-	136	-	4-585
S-QQ3	UNT to Sinking Creek	Giles	37.311869	-80.532365	Ephemeral	NRPW	-	05050002	Temporary Access Road	15	-	30	-	3	-	4-560
S-IJ16-a	UNT to Sinking Creek	Giles	37.311730	-80.544091	Ephemeral	NRPW	-	05050002	Permanent Access Road	6	-	44	-	5	-	4-559
S-IJ16-a	UNT to Sinking Creek	Giles	37.311730	-80.544091	Ephemeral	NRPW	-	05050002	Permanent Access Road	-	45	-	314.0000	-	35	4-559
S-NN17	Sinking Creek	Giles	37.311616	-80.515786	Perennial	RPW	Green floater, Non-listed mussels, Natural Trout, Coldwater Fishery, Stockable Trout	05050002	Timber Mat Crossing	55	-	1102	-	336	-	4-564
S-KL43	UNT to Sinking Creek	Giles	37.307524	-80.466665	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	75	-	749	-	278	-	4-573
S-NN11	UNT to Sinking Creek	Giles	37.305508	-80.467231	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	84	-	418	-	156	-	4-573
S-NN12	UNT to Sinking Creek	Giles	37.300454	-80.472911	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	88	-	174	-	65	-	4-571
S-MN21	UNT to Mill Creek	Montgomery	37.299397	-80.391243	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	80	-	562	-	207	-	4-588
S-MM17	UNT to Sinking Creek	Giles	37.298226	-80.480624	Perennial	RPW	-	05050002	Temporary Access Road	49	-	96	-	11	-	4-569
S-MN22	UNT to Mill Creek	Montgomery	37.297166	-80.386612	Ephemeral	NRPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	96	-	192	-	71	-	4-589
S-RR2	Greenbriar Branch	Giles	37.296666	-80.494174	Perennial	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	161	-	18	-	4-567
S-YZ6	UNT to Greenbriar Branch	Giles	37.296612	-80.494165	Intermittent	RPW	Natural Trout, Coldwater Fishery	05050002	Timber Mat Crossing	20	-	122	-	13	-	4-567
S-EF62	UNT to Mill Creek	Montgomery	37.296356	-80.375118	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	76	-	836	-	310	-	4-590
S-MM18	UNT to Sinking Creek	Giles	37.296226	-80.481455	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	05050002	Pipeline ROW	88	-	440	-	163	-	4-569
S-IJ52	UNT to Mill Creek	Montgomery	37.296153	-80.367510	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	84	-	1346	-	498	-	4-591
S-EF65	Mill Creek	Montgomery	37.295743	-80.375921	Intermittent	RPW	Orangefin madtom, Non-listed mussels, Natural Trout, Coldwater Fishery, Stockable Trout	03010101	Pipeline ROW	152	-	910	-	338	-	4-590
S-G36	North Fork Roanoke River	Montgomery	37.268586	-80.313161	Perennial	RPW	Roanoke logperch, Orangefin madtom, Non-listed mussels, Natural Trout, Coldwater Fishery	03010101	Temporary Access Road	26	-	518	-	58	-	4-602
S-G38	UNT to North Fork Roanoke River	Montgomery	37.267002	-80.312898	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-603
S-G40	UNT to North Fork Roanoke River	Montgomery	37.264882	-80.307302	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-603
S-PP23	UNT to North Fork Roanoke River	Montgomery	37.264858	-80.307151	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	48	-	6	-	4-604
S-G39	UNT to North Fork Roanoke River	Montgomery	37.264817	-80.308486	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	82	-	492	-	182	-	4-604
S-MM14	UNT to Flatwoods Branch	Montgomery	37.258717	-80.293210	Ephemeral	NRPW	-	03010101	Pipeline ROW	105	-	736	-	272	-	4-608
S-MM15	UNT to Flatwoods Branch	Montgomery	37.258673	-80.296446	Intermittent	RPW	-	03010101	Pipeline ROW	82	-	492	-	182	-	4-608
S-MM11	UNT to Flatwoods Branch	Montgomery	37.258403	-80.288186	Ephemeral	NRPW	-	03010101	Pipeline ROW	80	-	640	-	237	-	4-609
S-F15	UNT to Flatwoods Branch	Montgomery	37.258198	-80.286029	Intermittent	RPW	-	03010101	Pipeline ROW	129	-	775	-	287	-	4-609
S-MM13	UNT to Flatwoods Branch	Montgomery	37.258176	-80.289222	Ephemeral	NRPW	-	03010101	Pipeline ROW	85	-	427	-	157	-	4-608
S-F16a/F16b	UNT to Flatwoods Branch	Montgomery	37.257998	-80.284735	Ephemeral	NRPW	-	03010101	Pipeline ROW	81	-	244	-	90	-	4-609
S-C36	UNT to Flatwoods Branch	Montgomery	37.257260	-80.281611	Intermittent	RPW	-	03010101	Pipeline ROW	96	-	287	-	107	-	4-609
S-C36	UNT to Flatwoods Branch	Montgomery	37.257133	-80.281475	Intermittent	RPW	-	03010101	Pipeline ROW	36	-	109	-	40	-	4-609
S-MM31	UNT to Flatwoods Branch	Montgomery	37.256959	-80.280329	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-609
S-C29	Flatwoods Branch	Montgomery	37.256387	-80.278021	Ephemeral	NRPW	-	03010101	Pipeline ROW	46	-	57	-	20	-	4-610
S-C25	UNT to Bradshaw Creek	Montgomery	37.254342	-80.267895	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	115	-	344	-	128	-	4-611
S-C24	UNT to Bradshaw Creek	Montgomery	37.254135	-80.266743	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	108	-	322	-	120	-	4-611
S-C21	Bradshaw Creek	Montgomery	37.251791	-80.258990	Perennial	RPW	Roanoke logperch, Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	25	-	501	-	69	-	4-613
S-NN19	UNT to Roanoke River	Montgomery	37.244319	-80.206995	Intermittent	RPW	-	03010101	Pipeline ROW	76	-	266	-	99	-	4-627
S-AB16	UNT to Roanoke River	Montgomery	37.231693	-80.198778	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	100	-	11	-	4-631
S-I1	UNT to Roanoke River	Montgomery	37.231179	-80.198460	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	279	-	31	-	4-631
S-CD12b	UNT to South Fork Roanoke River	Montgomery	37.229764	-80.201144	Perennial	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	122	-	13	-	4-631
S-EF19	UNT to Indian Run	Montgomery	37.216102	-80.197390	Ephemeral	NRPW	Warmwater Fishery, Tier 2	03010101	Pipeline ROW	79	-	396	-	146	-	4-634
S-EF20a	UNT to Roanoke River	Montgomery	37.210922	-80.193318	Perennial	RPW	Orangefin madtom, Non-listed mussels	03010101	Pipeline ROW	80	-	479	-	178	-	4-635
S-MM22	UNT to Roanoke River	Montgomery	37.205284	-80.187282	Perennial	RPW	Orangefin madtom, Non-listed mussels	03010101	Pipeline ROW	175	-	2627	-	972	-	4-637
S-IJ50	UNT to Roanoke River	Roanoke	37.194064	-80.167933	Perennial	RPW	Orangefin madtom, Non-listed mussels	03010101	Pipeline ROW	77	-	1925	-	713	-	4-641
S-Y13	UNT to Bottom Creek	Roanoke	37.187687	-80.151146	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	85	-	680	-	252	-	4-644
S-Y14	UNT to Bottom Creek	Roanoke	37.187568	-80.151049	Perennial	RPW	Orangefin madtom, Non-listed mussels, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	77	-	1076	-	399	-	4-644
S-EF57	UNT to Bottom Creek	Roanoke	37.181736	-80.148948	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Temporary Access Road	42	-	335	-	37	-	4-645
S-EF55	UNT to Bottom Creek	Roanoke	37.181506	-80.149497	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	33	-	266	-	98	-	4-645
S-EF34b	UNT to Bottom Creek	Roanoke	37.181385	-80.149140	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	81	-	810	-	300	-	4-645
S-EF33	UNT to Bottom Creek	Roanoke	37.179186	-80.141000	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	148	-	1333	-	493	-	4-647
S-IJ82	UNT to Bottom Creek	Roanoke	37.170458	-80.138216	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-648

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S-IJ85	UNT to Bottom Creek	Roanoke	37.169474	-80.130356	Perennial	RPW	Natural Trout, Coldwater Fishery	03010101	Permanent Access Road	-	50	-	401.0000	-	44	4-650
S-IJ83	UNT to Bottom Creek	Roanoke	37.169211	-80.138258	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	148	-	741	-	82	-	4-649
S-IJ88	Bottom Creek	Roanoke	37.168395	-80.138295	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	30	-	1960	-	726	-	4-649
S-IJ84	UNT to Bottom Creek	Roanoke	37.168361	-80.138381	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	35	-	527	-	58	-	4-649
S-IJ89	UNT to Bottom Creek	Roanoke	37.165862	-80.139317	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-649
S-IJ90	UNT to Bottom Creek	Roanoke	37.165685	-80.139378	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	100	-	11	-	4-649
S-KL25	UNT to Mill Creek	Roanoke	37.160173	-80.134799	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	82	-	409	-	152	-	4-651
S-ST9b	UNT to Mill Creek	Roanoke	37.154424	-80.129179	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	20	-	301	-	33	-	4-652
S-ST9b	UNT to Mill Creek	Roanoke	37.154424	-80.129179	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-652
S-KL55	UNT to Mill Creek	Roanoke	37.150009	-80.13246	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-653
S-IJ12	UNT to Mill Creek	Roanoke	37.148333	-80.133919	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	261	-	29	-	4-653
S-EF44	UNT to Bottom Creek	Roanoke	37.143003	-80.138399	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-654
S-IJ43	Mill Creek	Roanoke	37.138636	-80.139715	Perennial	RPW	Orangefin madtom, Stockable Trout, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	362	-	40	-	4-655
S-Y9	UNT to Mill Creek	Roanoke	37.134576	-80.137649	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	44	-	174	-	20	-	4-656
S-Y7	UNT to Mill Creek	Roanoke	37.134481	-80.137622	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	32	-	126	-	14	-	4-656
S-Y8	UNT to Mill Creek	Roanoke	37.134176	-80.137484	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-656
S-B22	UNT to Mill Creek	Roanoke	37.128922	-80.133769	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-659
S-B23	UNT to Mill Creek	Roanoke	37.128853	-80.133910	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	14	-	26	-	3	-	4-659
S-B25	UNT to Mill Creek	Roanoke	37.128490	-80.132601	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	76	-	379	-	42	-	4-659
S-B21	UNT to Mill Creek	Roanoke	37.128484	-80.130943	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	92	-	366	-	136	-	4-659
S-H1	Green Creek	Franklin	37.127733	-80.116787	Perennial	RPW	Orangefin madtom, Natural Trout, Coldwater Fishery	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-661
S-G26	UNT to Green Creek	Franklin	37.127077	-80.111387	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-662
S-G27	UNT to Green Creek	Franklin	37.126962	-80.111052	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-662
S-G24	UNT to Green Creek	Franklin	37.126412	-80.121398	Intermittent	RPW	-	03010101	Pipeline ROW	75	-	449	-	167	-	4-661
S-G25	UNT to Green Creek	Franklin	37.125398	-80.121401	Intermittent	RPW	-	03010101	Pipeline ROW	42	-	292	-	33	-	4-661
S-RR18	UNT to Green Creek	Franklin	37.125055	-80.113578	Intermittent	RPW	-	03010101	Permanent Access Road	8	-	17	-	2	-	4-662
S-D11	UNT to North Fork Blackwater River	Franklin	37.124137	-80.086182	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-666
S-D8	North Fork Blackwater River	Franklin	37.123098	-80.074673	Perennial	RPW	Natural Trout, Coldwater Fishery	03010101	Pipeline ROW	78	-	941	-	349	-	4-667
S-D12	UNT to North Fork Blackwater River	Franklin	37.121558	-80.085642	Intermittent	RPW	-	03010101	Pipeline ROW	54	-	322	-	120	-	4-666
S-D13	UNT to North Fork Blackwater River	Franklin	37.121513	-80.085680	Intermittent	RPW	-	03010101	Pipeline ROW	117	-	466	-	173	-	4-666
S-D14	UNT to North Fork Blackwater River	Franklin	37.121473	-80.088457	Intermittent	RPW	-	03010101	Pipeline ROW	234	-	701	-	260	-	4-666
S-II4	UNT to North Fork Blackwater River	Franklin	37.115679	-80.060300	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-670
S-GH7	UNT to North Fork Blackwater River	Franklin	37.106614	-80.054219	Perennial	RPW	-	03010101	Timber Mat Crossing	20	-	179	-	20	-	4-672
S-GH15	UNT to North Fork Blackwater River	Franklin	37.106177	-80.050105	Intermittent	RPW	-	03010101	Pipeline ROW	75	-	301	-	111	-	4-674
S-GH14	UNT to North Fork Blackwater River	Franklin	37.105883	-80.048861	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	76	-	305	-	113	-	4-674
S-GH11	UNT to North Fork Blackwater River	Franklin	37.104707	-80.046220	Intermittent	RPW	-	03010101	Pipeline ROW	77	-	231	-	86	-	4-674
S-GH9	UNT to North Fork Blackwater River	Franklin	37.104329	-80.045343	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	78	-	314	-	116	-	4-674
S-RR08	UNT to North Fork Blackwater River	Franklin	37.103290	-80.041868	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-674
S-RR09	UNT to North Fork Blackwater River	Franklin	37.102491	-80.041046	Ephemeral	NRPW	-	03010101	Pipeline ROW	77	-	693	-	257	-	4-675
S-RR11	UNT to North Fork Blackwater River	Franklin	37.101127	-80.039653	Ephemeral	NRPW	-	03010101	Pipeline ROW	77	-	540	-	200	-	4-675
S-IJ1	UNT to North Fork Blackwater River	Franklin	37.093062	-80.027724	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	107	-	1285	-	476	-	4-677
S-IJ2	UNT to North Fork Blackwater River	Franklin	37.092891	-80.027593	Intermittent	RPW	-	03010101	Pipeline ROW	40	-	100	-	37	-	4-677
S-II6	UNT to Little Creek	Franklin	37.092697	-79.978402	Intermittent	NRPW	-	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-685
S-IJ3	UNT to North Fork Blackwater River	Franklin	37.092600	-80.027231	Intermittent	RPW	-	03010101	Pipeline ROW	77	-	383	-	143	-	4-677
S-GH6	UNT to Little Creek	Franklin	37.092397	-79.983227	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-684
S-II12	UNT to Little Creek	Franklin	37.091608	-79.987839	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	39	-	4	-	4-684
S-II11	UNT to Little Creek	Franklin	37.091564	-79.988051	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-684
S-II8	UNT to Little Creek	Franklin	37.091413	-79.993944	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	39	-	4	-	4-683
S-II9	UNT to Little Creek	Franklin	37.091382	-79.990620	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	401	-	44	-	4-683
S-II7	UNT to Little Creek	Franklin	37.091354	-79.992013	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-683
S-IJ4	UNT to North Fork Blackwater River	Franklin	37.091189	-80.024366	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-677
S-KL2	UNT to Little Creek	Franklin	37.090361	-79.996354	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	74	-	8	-	4-682
S-GH2	UNT to Teels Creek	Franklin	37.090153	-79.953936	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	39	-	4	-	4-689
S-GH4	UNT to Teels Creek	Franklin	37.089812	-79.956077	Perennial	RPW	-	03010101	Timber Mat Crossing	20	-	100	-	11	-	4-688

Table B-1. Virginia Stream Impacts
Individual Permit Application
Mountain Valley Pipeline Project

Stream ID	NHD Stream Name[1]	County	Latitude[2]	Longitude[2]	Flow Regime	Water Type[3]	Stream Designation[4]	HUC 8	Impact Type	Temporary Impact (linear ft)	Permanent Impact (linear ft)	Temporary Impact Area (square feet)[5]	Permanent Impact Area (square feet)[5]	Temporary Fill (cubic yard)[6]	Permanent Fill (cubic yard)[7]	Figure
S-GH3	UNT to Teels Creek	Franklin	37.089745	-79.956042	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	122	-	13	-	4-688
S-IJ10	Little Creek	Franklin	37.089179	-80.005026	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-681
S-E29	UNT to Teels Creek	Franklin	37.089178	-79.950110	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	80	-	640	-	237	-	4-689
S-E28	Teels Creek	Franklin	37.089047	-79.9613	Perennial	RPW	-	03010101	Pipeline ROW	82	-	984	-	364	-	4-687
S-E28	Teels Creek	Franklin	37.085247	-79.948057	Perennial	RPW	-	03010101	Pipeline ROW	76	-	910	-	338	-	4-687
S-E28	Teels Creek	Franklin	37.082875	-79.945556	Perennial	RPW	-	03010101	Timber Mat Crossing	101	-	1211	-	449	-	4-687
S-EF4	UNT to Teels Creek	Franklin	37.078963	-79.941911	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	80	-	880	-	326	-	4-691
S-EF7	UNT to Teels Creek	Franklin	37.074664	-79.941123	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	39	-	4	-	4-692
S-EF7	UNT to Teels Creek	Franklin	37.074636	-79.941336	Ephemeral	NRPW	-	03010101	ATWS	22	-	44	-	5	-	4-692
S-EF12	Teels Creek	Franklin	37.073367	-79.939865	Perennial	RPW	-	03010101	Pipeline ROW	79	-	1581	-	585	-	4-692
S-MM42	UNT to Teels Creek	Franklin	37.070703	-79.937069	Ephemeral	NRPW	-	03010101	Pipeline ROW	81	-	161	-	60	-	4-693
S-D23	Teels Creek	Franklin	37.070322	-79.931039	Perennial	RPW	-	03010101	Pipeline ROW	92	-	2087	-	772	-	4-694
S-D22	UNT to Teels Creek	Franklin	37.070101	-79.929732	Intermittent	RPW	-	03010101	Pipeline ROW	83	-	662	-	246	-	4-694
S-D18	UNT to Teels Creek	Franklin	37.069560	-79.926213	Ephemeral	NRPW	-	03010101	Pipeline ROW	30	-	61	-	7	-	4-694
S-RR15	UNT to Teels Creek	Franklin	37.069542	-79.933892	Perennial	RPW	-	03010101	Timber Mat Crossing	20	-	26	-	31	-	4-694
S-D20	UNT to Teels Creek	Franklin	37.069485	-79.926230	Intermittent	RPW	-	03010101	Pipeline ROW	76	-	610	-	225	-	4-694
S-EF48	UNT to Blackwater River	Franklin	37.064748	-79.874420	Intermittent	RPW	-	03010101	Pipeline ROW	86	-	170	-	64	-	4-705
S-YZ4	UNT to Blackwater River	Franklin	37.064723	-79.878190	Ephemeral	NRPW	-	03010101	Pipeline ROW	84	-	253	-	93	-	4-704
S-C14	Teels Creek	Franklin	37.063956	-79.921985	Perennial	RPW	-	03010101	Pipeline ROW	90	-	3655	-	1,353	-	4-696
S-YZ5	UNT to Blackwater River	Franklin	37.063464	-79.878281	Ephemeral	NRPW	-	03010101	Pipeline ROW	86	-	344	-	127	-	4-704
S-KL41	UNT to Blackwater River	Franklin	37.062262	-79.862639	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	75	-	902	-	333	-	4-706
S-KL39	UNT to Blackwater River	Franklin	37.061193	-79.880018	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	121	-	788	-	291	-	4-704
S-C16	UNT to Teels Creek	Franklin	37.060610	-79.921179	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-696
S-KL54	UNT to Maggodee Creek	Franklin	37.059535	-79.840624	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	76	-	758	-	281	-	4-710
S-C8	UNT to Blackwater River	Franklin	37.059098	-79.853595	Intermittent	RPW	-	03010101	Pipeline ROW	86	-	431	-	159	-	4-708
S-F4	UNT to Blackwater River	Franklin	37.059060	-79.853379	Ephemeral	NRPW	-	03010101	Pipeline ROW	82	-	819	-	91	-	4-708
S-C17	Teels Creek	Franklin	37.058390	-79.918015	Perennial	RPW	-	03010101	Timber Mat Crossing	30	-	601	-	100	-	4-696
S-KL52	UNT to Maggodee Creek	Franklin	37.058165	-79.844877	Ephemeral	NRPW	-	03010101	Pipeline ROW	105	-	105	-	39	-	4-709
S-S11	UNT to Maggodee Creek	Franklin	37.057776	-79.838583	Perennial	RPW	-	03010101	Temporary Access Road	41	-	453	-	50	-	4-710
S-F8	UNT to Maggodee Creek	Franklin	37.057724	-79.836406	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	83	-	2492	-	922	-	4-710
S-CD6	Little Creek	Franklin	37.057584	-79.913921	Perennial	RPW	-	03010101	Pipeline ROW	77	-	4426	-	1,639	-	4-698
S-HH4	UNT to Maggodee Creek	Franklin	37.056594	-79.835785	Intermittent	RPW	-	03010101	Pipeline ROW	97	-	871	-	323	-	4-711
S-KL51	UNT to Blackwater River	Franklin	37.056084	-79.850384	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	67	-	370	-	136	-	4-708
S-KL38	UNT to Blackwater River	Franklin	37.055912	-79.883177	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	78	-	545	-	202	-	4-702
S-C20	UNT to Maggodee Creek	Franklin	37.055193	-79.833881	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-711
S-C19	Maggodee Creek	Franklin	37.055147	-79.830098	Perennial	RPW	-	03010101	Pipeline ROW	75	-	3006	-	1,113	-	4-711
S-KL36	UNT to Blackwater River	Franklin	37.053336	-79.884604	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	148	-	17	-	4-702
S-F11	Blackwater River	Franklin	37.052843	-79.825711	Perennial	TNW	Non-listed mussels	03010101	Pipeline ROW	91	-	6765	-	2,506	-	4-712
S-KL35	UNT to Blackwater River	Franklin	37.052125	-79.886182	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	35	-	87	-	10	-	4-702
S-F9b	UNT to Blackwater River	Franklin	37.049238	-79.817223	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	76	-	1141	-	422	-	4-713
S-II2	Little Creek	Franklin	37.049219	-79.908513	Perennial	RPW	-	03010101	Pipeline ROW	76	-	3245	-	1,203	-	4-699
S-F10	UNT to Blackwater River	Franklin	37.048037	-79.813934	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	179	-	20	-	4-713
S-CD1	UNT to Blackwater River	Franklin	37.047765	-79.897636	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	104	-	366	-	135	-	4-701
S-F9a	UNT to Blackwater River	Franklin	37.047172	-79.813000	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-713
S-MM29	UNT to Maple Branch	Franklin	37.043871	-79.822898	Perennial	RPW	-	03010101	Temporary Access Road	42	-	632	-	70	-	4-714
S-MM23	Maple Branch	Franklin	37.043854	-79.822974	Perennial	RPW	-	03010101	Temporary Access Road	78	-	1559	-	173	-	4-714
S-GG4	UNT to Blackwater River	Franklin	37.042742	-79.809015	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-716
S-A36	UNT to Foul Ground Creek	Franklin	37.037916	-79.804237	Ephemeral	NRPW	-	03010101	Pipeline ROW	77	-	309	-	114	-	4-717
S-A38	UNT to Foul Ground Creek	Franklin	37.036271	-79.799442	Intermittent	RPW	-	03010101	Timber Mat Crossing	30	-	270	-	30	-	4-718
S-A40	UNT to Foul Ground Creek	Franklin	37.036173	-79.799240	Intermittent	RPW	-	03010101	Timber Mat Crossing	13	-	74	-	8	-	4-718
S-A41	Foul Ground Creek	Franklin	37.031714	-79.788213	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	76	-	910	-	338	-	4-720
S-GH36	UNT to Foul Ground Creek	Franklin	37.031063	-79.778588	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-721
S-KL17	UNT to Foul Ground Creek	Franklin	37.031011	-79.778435	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	100	-	11	-	4-721
S-GH37	UNT to Foul Ground Creek	Franklin	37.030974	-79.778190	Intermittent	RPW	-	03010101	Pipeline ROW	46	-	139	-	15	-	4-721

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S-GH38	UNT to Foul Ground Creek	Franklin	37.030972	-79.778083	Intermittent	RPW	-	03010101	Pipeline ROW	7	-	22	-	2	-	4-721
S-GH39	UNT to Foul Ground Creek	Franklin	37.030861	-79.778069	Intermittent	RPW	-	03010101	Pipeline ROW	103	-	414	-	153	-	4-721
S-GH40	UNT to Foul Ground Creek	Franklin	37.028893	-79.774785	Ephemeral	NRPW	-	03010101	Pipeline ROW	89	-	266	-	99	-	4-721
S-GH44	UNT to Foul Ground Creek	Franklin	37.028392	-79.773359	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	103	-	619	-	69	-	4-721
S-G22	UNT to Poplar Camp Creek	Franklin	37.019612	-79.761958	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	80	-	958	-	356	-	4-723
S-G23	UNT to Poplar Camp Creek	Franklin	37.019526	-79.762002	Intermittent	RPW	-	03010101	Pipeline ROW	42	-	126	-	14	-	4-723
S-G21	UNT to Poplar Camp Creek	Franklin	37.019359	-79.761643	Intermittent	RPW	-	03010101	Pipeline ROW	54	-	161	-	18	-	4-723
S-G20	Poplar Camp Creek	Franklin	37.017364	-79.760000	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-724
S-G18	UNT to Blackwater River	Franklin	37.009236	-79.754238	Intermittent	RPW	-	03010101	Pipeline ROW	81	-	161	-	60	-	4-725
S-G17	UNT to Blackwater River	Franklin	37.005496	-79.752655	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	100	-	11	-	4-726
S-E18	UNT to Blackwater River	Franklin	37.001271	-79.747749	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	94	-	658	-	244	-	4-727
S-E17	UNT to Blackwater River	Franklin	37.000529	-79.742760	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	95	-	758	-	281	-	4-727
S-E14	UNT to Blackwater River	Franklin	36.995814	-79.735144	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	82	-	1638	-	607	-	4-728
S-H38	UNT to Jacks Creek	Franklin	36.989430	-79.722366	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	240	-	27	-	4-730
S-H32	UNT to Jacks Creek	Franklin	36.988273	-79.708199	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-732
S-H37	UNT to Jacks Creek	Franklin	36.988031	-79.717450	Ephemeral	NRPW	-	03010101	Pipeline ROW	82	-	492	-	182	-	4-731
S-H34	UNT to Jacks Creek	Franklin	36.988009	-79.711881	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-732
S-H36	UNT to Jacks Creek	Franklin	36.988008	-79.714922	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	61	-	7	-	4-731
S-H30	UNT to Jacks Creek	Franklin	36.987961	-79.702711	Intermittent	RPW	-	03010101	Pipeline ROW	4	-	4	-	1	-	4-734
S-A18	UNT to Jacks Creek	Franklin	36.987818	-79.700634	Intermittent	RPW	-	03010101	Pipeline ROW	87	-	227	-	84	-	4-734
S-A19/H26	UNT to Jacks Creek	Franklin	36.987719	-79.698901	Intermittent	RPW	-	03010101	Pipeline ROW	212	-	1485	-	550	-	4-734
S-A20	UNT to Jacks Creek	Franklin	36.987715	-79.698555	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-734
S-H28	UNT to Jacks Creek	Franklin	36.985174	-79.692272	Ephemeral	NRPW	-	03010101	Pipeline ROW	16	-	96	-	11	-	4-735
S-H27	UNT to Jacks Creek	Franklin	36.985124	-79.692272	Ephemeral	NRPW	-	03010101	Pipeline ROW	36	-	362	-	40	-	4-735
S-A22	UNT to Jacks Creek	Franklin	36.984846	-79.691870	Intermittent	RPW	-	03010101	Timber Mat Crossing	20	-	161	-	18	-	4-735
S-MM44	UNT to Little Jacks Creek	Franklin	36.982507	-79.687818	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	78	-	9	-	4-735
S-MM46	UNT to Little Jacks Creek	Franklin	36.982240	-79.687500	Intermittent	RPW	-	03010101	Timber Mat Crossing	9	-	26	-	3	-	4-735
S-MM45	UNT to Little Jacks Creek	Franklin	36.981971	-79.686901	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	33	-	131	-	15	-	4-735
S-MM48	UNT to Little Jacks Creek	Franklin	36.979223	-79.684192	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	25	-	174	-	19	-	4-736
S-H25	Little Jacks Creek	Franklin	36.978529	-79.682186	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-736
S-H24	UNT to Little Jacks Creek	Franklin	36.978025	-79.680682	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-736
S-H23	UNT to Turkey Creek	Franklin	36.976421	-79.677525	Ephemeral	NRPW	-	03010101	Pipeline ROW	92	-	462	-	170	-	4-738
S-HH1	UNT to Turkey Creek	Franklin	36.974647	-79.674453	Ephemeral	NRPW	-	03010101	Pipeline ROW	18	-	91	-	10	-	4-738
S-A13	Turkey Creek	Franklin	36.973282	-79.673075	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	161	-	18	-	4-738
S-A11	UNT to Turkey Creek	Franklin	36.973237	-79.669898	Ephemeral	NRPW	-	03010101	Pipeline ROW	55	-	166	-	18	-	4-740
S-H17	Dinner Creek	Franklin	36.972125	-79.662987	Intermittent	RPW	-	03010101	Pipeline ROW	101	-	806	-	299	-	4-741
S-A7	UNT to Dinner Creek	Franklin	36.972032	-79.662504	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	122	-	13	-	4-741
S-SS8	Polecat Creek	Franklin	36.970904	-79.657370	Perennial	RPW	Orangefin madtom,	03010101	Timber Mat Crossing	20	-	161	-	18	-	4-741
S-CD8	UNT to Owens Creek	Franklin	36.970522	-79.653726	Intermittent	RPW	-	03010101	Pipeline ROW	78	-	353	-	130	-	4-742
S-AB8	UNT to Owens Creek	Franklin	36.970133	-79.651328	Intermittent	RPW	-	03010101	Pipeline ROW	84	-	335	-	124	-	4-742
S-DD3	Owens Creek	Franklin	36.969118	-79.645042	Intermittent	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	301	-	33	-	4-743
S-G16	Strawfield Creek	Franklin	36.968640	-79.642174	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	30	-	601	-	100	-	4-743
S-G15	UNT to Parrot Branch	Franklin	36.967711	-79.636590	Intermittent	RPW	-	03010101	Pipeline ROW	88	-	793	-	293	-	4-744
S-G13	Parrot Branch	Franklin	36.967025	-79.630747	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	161	-	18	-	4-744
S-D3	UNT to Jonnikin Creek	Pittsylvania	36.965631	-79.605542	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	200	-	22	-	4-747
S-D4	UNT to Jonnikin Creek	Pittsylvania	36.965600	-79.604894	Intermittent	RPW	-	03010101	Pipeline ROW	105	-	632	-	233	-	4-747
S-D2	Jonnikin Creek	Pittsylvania	36.965405	-79.599130	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	362	-	40	-	4-748
S-D7	UNT to Jonnikin Creek	Franklin	36.964763	-79.617043	Intermittent	RPW	-	03010101	Pipeline ROW	80	-	640	-	237	-	4-746
S-D1-EPH	UNT to Jonnikin Creek	Pittsylvania	36.964430	-79.595691	Ephemeral	NRPW	-	03010101	Pipeline ROW	61	-	610	-	226	-	4-748
S-D1-INT	UNT to Jonnikin Creek	Pittsylvania	36.964407	-79.595841	Intermittent	RPW	-	03010101	Pipeline ROW	29	-	292	-	32	-	4-748
S-G11	UNT to Jonnikin Creek	Pittsylvania	36.962420	-79.590500	Intermittent	RPW	-	03010101	Pipeline ROW	77	-	462	-	171	-	4-749
S-G9	UNT to Jonnikin Creek	Pittsylvania	36.959361	-79.586437	Intermittent	RPW	-	03010101	Pipeline ROW	79	-	318	-	117	-	4-751
S-G8	UNT to Jonnikin Creek	Pittsylvania	36.957805	-79.583545	Intermittent	RPW	-	03010101	Pipeline ROW	90	-	362	-	133	-	4-751
S-Q15	UNT to Jonnikin Creek	Pittsylvania	36.957580	-79.583492	Ephemeral	NRPW	-	03010101	Pipeline ROW	103	-	514	-	191	-	4-751

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S-A6	UNT to Rocky Creek	Pittsylvania	36.952275	-79.580460	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	100	-	11	-	4-750
S-H11-Braid	UNT to Rocky Creek	Pittsylvania	36.949615	-79.579553	Ephemeral	NRPW	-	03010101	Pipeline ROW	85	-	170	-	19	-	4-750
S-F2	UNT to Rocky Creek	Pittsylvania	36.944049	-79.571442	Ephemeral	NRPW	-	03010101	Timber Mat Crossing	20	-	139	-	16	-	4-753
S-C7	UNT to Rocky Creek	Pittsylvania	36.944016	-79.571517	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	401	-	44	-	4-753
S-C3	Harpen Creek	Pittsylvania	36.929762	-79.526109	Perennial	RPW	Roanoke logperch, Orangefin madtom	03010101	Timber Mat Crossing	20	-	362	-	40	-	4-758
S-C4	UNT to Harpen Creek	Pittsylvania	36.929745	-79.526290	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	58	-	231	-	26	-	4-758
S-H13	Harpen Creek	Pittsylvania	36.925105	-79.517350	Perennial	RPW	Orangefin madtom	03010101	Pipeline ROW	77	-	1542	-	570	-	4-759
S-G6	UNT to Harpen Creek	Pittsylvania	36.920737	-79.505898	Intermittent	RPW	-	03010101	Pipeline ROW	80	-	479	-	178	-	4-761
S-G5	UNT to Harpen Creek	Pittsylvania	36.917694	-79.496604	Ephemeral	NRPW	-	03010101	Pipeline ROW	77	-	462	-	171	-	4-762
S-G4	Harpen Creek	Pittsylvania	36.916463	-79.492669	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	30	-	601	-	100	-	4-762
S-G3	UNT to Harpen Creek	Pittsylvania	36.915658	-79.490029	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	179	-	20	-	4-762
S-CC16	UNT to Harpen Creek	Pittsylvania	36.913003	-79.487838	Perennial	RPW	Orangefin madtom	03010101	Timber Mat Crossing	20	-	222	-	24	-	4-763
S-CC14	UNT to Cherrystone Creek	Pittsylvania	36.905329	-79.471492	Intermittent	RPW	-	03010105	Timber Mat Crossing	20	-	161	-	18	-	4-765
S-CC13	UNT to Cherrystone Creek	Pittsylvania	36.905307	-79.471574	Intermittent	RPW	-	03010105	Timber Mat Crossing	20	-	139	-	16	-	4-765
S-MM8	UNT to Cherrystone Creek	Pittsylvania	36.902991	-79.468220	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	122	-	13	-	4-766
S-CC15	UNT to Cherrystone Creek	Pittsylvania	36.901941	-79.466535	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	122	-	13	-	4-766
S-CC8	UNT to Cherrystone Creek	Pittsylvania	36.899437	-79.462685	Intermittent	RPW	-	03010105	Timber Mat Crossing	20	-	161	-	18	-	4-766
S-CC5	UNT to Cherrystone Creek	Pittsylvania	36.899411	-79.462483	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	240	-	27	-	4-766
S-CC5	UNT to Cherrystone Creek	Pittsylvania	36.899248	-79.462396	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	54	-	649	-	240	-	4-766
S-CC9	UNT to Cherrystone Creek	Pittsylvania	36.897740	-79.458046	Ephemeral	NRPW	-	03010105	Pipeline ROW	81	-	444	-	165	-	4-767
S-CC10	UNT to Cherrystone Creek	Pittsylvania	36.897315	-79.456119	Intermittent	RPW	-	03010105	Pipeline ROW	78	-	701	-	260	-	4-767
S-MM10	UNT to Cherrystone Creek	Pittsylvania	36.895915	-79.452960	Intermittent	RPW	-	03010105	Pipeline ROW	9	-	61	-	7	-	4-768
S-CC11	UNT to Cherrystone Creek	Pittsylvania	36.895808	-79.452920	Perennial	RPW	Orangefin madtom	03010105	Pipeline ROW	87	-	697	-	258	-	4-768
S-CC1	Cherrystone Creek	Pittsylvania	36.894043	-79.445744	Perennial	RPW	Orangefin madtom	03010105	Pipeline ROW	82	-	1228	-	456	-	4-769
S-CC3	UNT to Cherrystone Creek	Pittsylvania	36.893727	-79.444763	Ephemeral	NRPW	-	03010105	Pipeline ROW	91	-	727	-	270	-	4-769
S-P5	UNT to Cherrystone Creek	Pittsylvania	36.892751	-79.440053	Ephemeral	NRPW	-	03010105	Timber Mat Crossing	20	-	100	-	11	-	4-769
S-IJ35-EPH	UNT to Pole Bridge Branch	Pittsylvania	36.891451	-79.433781	Ephemeral	NRPW	-	03010105	Pipeline ROW	171	-	684	-	253	-	4-770
S-Q4	UNT to Pole Bridge Branch	Pittsylvania	36.886114	-79.430914	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	100	-	11	-	4-771
S-Q3	Pole Bridge Branch	Pittsylvania	36.884444	-79.428220	Perennial	RPW	Orangefin madtom	03010105	Pipeline ROW	75	-	1873	-	694	-	4-771
S-Q2	UNT to Pole Bridge Branch	Pittsylvania	36.884284	-79.427914	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	139	-	16	-	4-771
S-B6	UNT to Pole Bridge Branch	Pittsylvania	36.879063	-79.420189	Ephemeral	NRPW	-	03010105	Pipeline ROW	84	-	841	-	311	-	4-772
S-B8	UNT to Pole Bridge Branch	Pittsylvania	36.877937	-79.417992	Intermittent	RPW	-	03010105	Pipeline ROW	82	-	327	-	121	-	4-773
S-B9	UNT to Pole Bridge Branch	Pittsylvania	36.877416	-79.416255	Perennial	RPW	Orangefin madtom	03010105	Pipeline ROW	78	-	545	-	202	-	4-773
S-DD4-Braid-1	UNT to Mill Creek	Pittsylvania	36.871651	-79.404061	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010105	Pipeline ROW	67	-	401	-	149	-	4-775
S-DD4	UNT to Mill Creek	Pittsylvania	36.871478	-79.403907	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010105	Pipeline ROW	147	-	880	-	327	-	4-775
S-KL27	UNT to Mill Creek	Pittsylvania	36.866534	-79.400511	Ephemeral	NRPW	Natural Trout, Coldwater Fishery	03010105	Pipeline ROW	84	-	83	-	31	-	4-776
S-C1	Mill Creek	Pittsylvania	36.863513	-79.397914	Intermittent	RPW	Natural Trout, Coldwater Fishery	03010105	Pipeline ROW	92	-	553	-	204	-	4-777
S-G2	Little Cherrystone Creek	Pittsylvania	36.851931	-79.386051	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	139	-	16	-	4-779
S-B2	UNT to Little Cherrystone Creek	Pittsylvania	36.849394	-79.377780	Ephemeral	NRPW	-	03010105	Timber Mat Crossing	20	-	100	-	11	-	4-780
S-H55	UNT to Little Cherrystone Creek	Pittsylvania	36.843486	-79.369222	Ephemeral	NRPW	-	03010105	Timber Mat Crossing	20	-	61	-	7	-	4-781
S-H54	UNT to Little Cherrystone Creek	Pittsylvania	36.841112	-79.366848	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	240	-	27	-	4-781
S-GG11	UNT to Little Cherrystone Creek	Pittsylvania	36.841093	-79.366942	Perennial	RPW	-	03010105	Timber Mat Crossing	46	-	366	-	41	-	4-781
S-H3	UNT to Little Cherrystone Creek	Pittsylvania	36.834501	-79.360244	Intermittent	RPW	-	03010105	Pipeline ROW	18	-	109	-	12	-	4-783
S-H5	UNT to Little Cherrystone Creek	Pittsylvania	36.833412	-79.359823	Perennial	RPW	Orangefin madtom	03010105	Pipeline ROW	83	-	662	-	246	-	4-783
S-OO1	UNT to Little Cherrystone Creek	Pittsylvania	36.830285	-79.356618	Intermittent	RPW	-	03010105	Pipeline ROW	84	-	418	-	156	-	4-783
S-H44	UNT to Little Cherrystone Creek	Pittsylvania	36.829823	-79.346016	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	33	-	266	-	29	-	4-785
S-H42	UNT to Little Cherrystone Creek	Pittsylvania	36.828993	-79.344442	Perennial	RPW	Orangefin madtom	03010105	Permanent Access Road	-	15	-	74.0000	-	11	4-785
S-H42	UNT to Little Cherrystone Creek	Pittsylvania	36.828958	-79.344315	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	139	-	16	-	4-785

Table B-1. Virginia Stream Impacts
Individual Permit Application
Mountain Valley Pipeline Project

Stream ID	NHD Stream Name[1]	County	Latitude[2]	Longitude[2]	Flow Regime	Water Type[3]	Stream Designation[4]	HUC 8	Impact Type	Temporary Impact (linear ft)	Permanent Impact (linear ft)	Temporary Impact Area (square feet)[5]	Permanent Impact Area (square feet)[5]	Temporary Fill (cubic yard)[6]	Permanent Fill (cubic yard)[7]	Figure
S-OO2	UNT to Little Cherrystone Creek	Pittsylvania	36.828831	-79.353849	Intermittent	RPW	-	03010105	Pipeline ROW	78	-	392	-	144	-	4-784
S-EF26	Little Cherrystone Creek	Pittsylvania	36.828207	-79.349814	Perennial	RPW	Orangefin madtom	03010105	Timber Mat Crossing	20	-	401	-	44	-	4-784

Notes:

1 - For identified streams without a NHD (National Hydrography Dataset) name, the identified stream was given the name, "Unidentified Tributary (UNT)", of the first named receiving waterbody

2 - In decimal degrees

3 - RPW = Relatively Permanent Waters
- NRPW = Non-Relatively Permanent Waters
- TNW = Traditional Navigable Waters

4 - See Section 1.9.2 and Section 4.2 for more information

5 - Impact square feet are rounded to the nearest whole number.

6 - Temporary fill discharge into waters of the U.S. Cubic yards rounded to the nerest whole number.

7 - Permanent fill associated with the construction of Permanent access road and facilities. Cubic yards rounded to the nerest whole number.

Table B-2. Virginia Wetland Impacts
Individual Permit Application
Mountain Valley Pipeline Project

Wetland ID*	County	USACE District	Latitude[1]	Longitude[1]	Cowardin Class[2]	USACE Water Type[3]	HUC 8	Impact Type	Temporary Impacts (square feet)[4]	Permanent Conversion Impacts (square feet)[4]	Permanent Fill Impacts (square feet)[4]	Temporary Fill (cubic yards)[5]	Permanent Fill (cubic yards)[6]	Figure
W-Z11	Giles	Norfolk	37.346591	-80.641713	PEM	NRPWW	05050002	Pipeline ROW	1141	-	-	423	-	4-543
W-Z3	Giles	Norfolk	37.342244	-80.620612	PSS	RPWWD	05050002	Timber Mat Crossing	-	592	-	66	-	4-545
W-CD12	Giles	Norfolk	37.318644	-80.441717	PEM	RPWWD	05050002	Pipeline ROW	906	-	-	335	-	4-577
W-MM10	Giles	Norfolk	37.298219	-80.480617	PEM	RPWWD	05050002	Temporary Access Road	1106	-	-	123	-	4-569
W-RR1b	Giles	Norfolk	37.296670	-80.494042	PEM	RPWWD	05050002	Timber Mat Crossing	244	-	-	27	-	4-567
W-IJ46-PEM	Montgomery	Norfolk	37.296153	-80.367508	PEM	RPWWD	03010101	Pipeline ROW	1281	-	-	474	-	4-591
W-AD4	Montgomery	Norfolk	37.286984	-80.330124	PEM	RPWWD	03010101	Temporary Access Road	301	-	-	33	-	4-596
W-NN6	Montgomery	Norfolk	37.268174	-80.316468	PEM	RPWWN	03010101	Timber Mat Crossing	362	-	-	40	-	4-603
W-F9-PFO	Montgomery	Norfolk	37.258109	-80.285892	PFO	RPWWD	03010101	Pipeline ROW	-	736	-	82	-	4-609
W-C12-PEM	Montgomery	Norfolk	37.257265	-80.281667	PEM	RPWWD	03010101	Pipeline ROW	8999	-	-	3,333	-	4-609
W-C12	Montgomery	Norfolk	37.257192	-80.281649	PFO	RPWWD	03010101	Pipeline ROW	-	2278	-	253	-	4-609
W-C11	Montgomery	Norfolk	37.257107	-80.281351	PSS	RPWWD	03010101	Pipeline ROW	-	2008	-	223	-	4-609
W-C6	Montgomery	Norfolk	37.255860	-80.275715	PEM	NRPWW	03010101	Timber Mat Crossing	605	-	-	67	-	4-610
W-C5	Montgomery	Norfolk	37.255606	-80.274237	PEM	NRPWW	03010101	Pipeline ROW	1978	-	-	732	-	4-610
W-AB7	Montgomery	Norfolk	37.231426	-80.198615	PEM	RPWWD	03010101	Timber Mat Crossing	174	-	-	19	-	4-631
W-KL58	Montgomery	Norfolk	37.229183	-80.203106	PEM	RPWWD	03010101	Permanent Access Road	-	-	1707	-	190	4-631
W-EF5-PFO	Montgomery	Norfolk	37.210948	-80.193359	PFO	RPWWD	03010101	Pipeline ROW	-	3711	-	1,374	-	4-635
W-EF18	Roanoke	Norfolk	37.179449	-80.140665	PSS	RPWWD	03010101	Temporary Access Road	-	227	-	25	-	4-647
W-EF17	Roanoke	Norfolk	37.179402	-80.140600	PFO	RPWWD	03010101	Temporary Access Road	-	976	-	108	-	4-647
W-IJ94-PEM	Roanoke	Norfolk	37.170092	-80.138294	PEM	RPWWD	03010101	Timber Mat Crossing	880	-	-	98	-	4-649
W-IJ96-PEM	Roanoke	Norfolk	37.169461	-80.130376	PEM	RPWWD	03010101	Permanent Access Road	-	-	579	-	63	4-650
W-IJ96-PEM	Roanoke	Norfolk	37.169461	-80.130376	PEM	RPWWD	03010101	Permanent Access Road	122	-	-	14	-	4-650
W-IJ97	Roanoke	Norfolk	37.169197	-80.129448	PEM	RPWWD	03010101	Permanent Access Road	-	-	22	-	2	4-650
W-IJ95-PSS	Roanoke	Norfolk	37.169068	-80.138278	PSS	RPWWD	03010101	Timber Mat Crossing	-	1106	-	123	-	4-649
W-IJ102	Roanoke	Norfolk	37.168289	-80.138375	PFO	RPWWD	03010101	Timber Mat Crossing	-	436	-	48	-	4-649
W-KL17	Roanoke	Norfolk	37.160152	-80.134774	PSS	RPWWD	03010101	Pipeline ROW	-	1895	-	702	-	4-651
W-EF42	Roanoke	Norfolk	37.157611	-80.133722	PEM	RPWWD	03010101	Pipeline ROW	362	-	-	40	-	4-652
W-HS02	Roanoke	Norfolk	37.157427	-80.133413	PEM	RPWWD	03010101	Pipeline ROW	12602	-	-	4,668	-	4-652
W-AB6-PEM-2	Roanoke	Norfolk	37.156825	-80.131998	PEM	RPWWD	03010101	Pipeline ROW	14248	-	-	5,277	-	4-652
W-AB6-PFO-1	Roanoke	Norfolk	37.156713	-80.131681	PFO	RPWWD	03010101	Pipeline ROW	-	2692	-	997	-	4-652
W-AB6-PEM-1	Roanoke	Norfolk	37.156170	-80.130794	PEM	RPWWD	03010101	Pipeline ROW	2818	-	-	1,044	-	4-652
W-AB6-PSS	Roanoke	Norfolk	37.156034	-80.130603	PSS	RPWWD	03010101	Pipeline ROW	-	266	-	30	-	4-652
W-AB5	Roanoke	Norfolk	37.155840	-80.130227	PFO	RPWWN	03010101	Pipeline ROW	-	183	-	20	-	4-652
W-AB3-PEM-2	Roanoke	Norfolk	37.155664	-80.129569	PEM	RPWWD	03010101	Pipeline ROW	6739	-	-	2,495	-	4-652
W-EF46	Roanoke	Norfolk	37.154575	-80.129122	PSS	RPWWD	03010101	Timber Mat Crossing	-	2971	-	330	-	4-652
W-KL48-PSS-1	Roanoke	Norfolk	37.152292	-80.130022	PSS	RPWWD	03010101	Pipeline ROW	-	1978	-	733	-	4-653
W-KL48-PEM	Roanoke	Norfolk	37.151965	-80.130049	PEM	RPWWD	03010101	Pipeline ROW	274	-	-	31	-	4-653
W-KL48-PSS-2	Roanoke	Norfolk	37.150926	-80.131271	PSS	RPWWD	03010101	Pipeline ROW	-	1150	-	128	-	4-653
W-KL50	Roanoke	Norfolk	37.150728	-80.131537	PEM	RPWWN	03010101	Pipeline ROW	1777	-	-	658	-	4-653
W-KL49	Roanoke	Norfolk	37.150297	-80.132193	PEM	RPWWN	03010101	Timber Mat Crossing	662	-	-	74	-	4-653
W-KL51-PEM	Roanoke	Norfolk	37.150006	-80.132403	PEM	RPWWD	03010101	Timber Mat Crossing	274	-	-	30	-	4-653
W-KL51-PSS	Roanoke	Norfolk	37.149975	-80.132476	PSS	RPWWD	03010101	Timber Mat Crossing	-	348	-	39	-	4-653
W-MN7-PEM	Roanoke	Norfolk	37.148328	-80.133901	PEM	RPWWD	03010101	Timber Mat Crossing	505	-	-	56	-	4-653
W-EF44	Roanoke	Norfolk	37.142977	-80.138322	PEM	RPWWD	03010101	Timber Mat Crossing	370	-	-	41	-	4-654
W-IJ36	Roanoke	Norfolk	37.138922	-80.139845	PSS	RPWWD	03010101	Timber Mat Crossing	-	5388	-	599	-	4-655
W-Z7	Roanoke	Norfolk	37.136601	-80.128216	PSS	RPWWD	03010101	Temporary Access Road	-	13	-	1	-	4-657
W-Z6	Roanoke	Norfolk	37.136466	-80.128238	PFO	RPWWD	03010101	Temporary Access Road	-	122	-	14	-	4-657
W-IJ62	Roanoke	Norfolk	37.135529	-80.134044	PEM	RPWWD	03010101	Temporary Access Road	4	-	-	1	-	4-656
W-Y2	Roanoke	Norfolk	37.134284	-80.137448	PEM	RPWWD	03010101	Timber Mat Crossing	823	-	-	91	-	4-656
W-IJ10	Roanoke	Norfolk	37.132561	-80.131744	PEM	RPWWD	03010101	Permanent Access Road	87	-	-	10	-	4-656
W-Q11	Roanoke	Norfolk	37.132470	-80.131638	PEM	RPWWD	03010101	Permanent Access Road	566	-	-	63	-	4-656
W-KL1	Roanoke	Norfolk	37.132456	-80.131463	PEM	RPWWN	03010101	Permanent Access Road	78	-	-	9	-	4-656
W-B25-PEM-4	Roanoke	Norfolk	37.128942	-80.133774	PEM	RPWWD	03010101	Timber Mat Crossing	405	-	-	45	-	4-659
W-B25-PEM-1	Roanoke	Norfolk	37.128645	-80.133283	PEM	RPWWD	03010101	Pipeline ROW	8425	-	-	3,120	-	4-659
W-B24-PSS	Roanoke	Norfolk	37.128540	-80.130794	PSS	RPWWD	03010101	Pipeline ROW	-	7131	-	2,641	-	4-659
W-B24-PEM	Roanoke	Norfolk	37.128530	-80.131060	PEM	RPWWD	03010101	Pipeline ROW	4491	-	-	1,663	-	4-659
W-B25-PSS-2	Roanoke	Norfolk	37.128527	-80.132335	PSS	RPWWD	03010101	Timber Mat Crossing	-	3615	-	402	-	4-659
W-B25-PEM-1	Roanoke	Norfolk	37.128449	-80.132802	PEM	RPWWD	03010101	Timber Mat Crossing	610	-	-	68	-	4-659
W-B25-PEM-2	Roanoke	Norfolk	37.128436	-80.132646	PEM	RPWWD	03010101	Timber Mat Crossing	209	-	-	78	-	4-659
W-ST2-PEM	Franklin	Norfolk	37.125329	-80.121460	PEM	RPWWD	03010101	Pipeline ROW	4975	-	-	1,842	-	4-661
W-RR4	Franklin	Norfolk	37.125117	-80.113530	PEM	RPWWD	03010101	Permanent Access Road	941	-	-	105	-	4-662
W-RR3	Franklin	Norfolk	37.124214	-80.114746	PEM	RPWWD	03010101	Permanent Access Road	83	-	-	9	-	4-662
W-KL41	Franklin	Norfolk	37.123851	-80.115802	PEM	RPWWD	03010101	Permanent Access Road	998	-	-	111	-	4-661

Table B-2. Virginia Wetland Impacts
Individual Permit Application
Mountain Valley Pipeline Project

Wetland ID*	County	USACE District	Latitude[1]	Longitude[1]	Cowardin Class[2]	USACE Water Type[3]	HUC 8	Impact Type	Temporary Impacts (square feet)[4]	Permanent Conversion Impacts (square feet)[4]	Permanent Fill Impacts (square feet)[4]	Temporary Fill (cubic yards)[5]	Permanent Fill (cubic yards)[6]	Figure
W-D4	Franklin	Norfolk	37.122629	-80.076102	PEM	RPWWN	03010101	Permanent Access Road	135	-	-	15	-	4-667
W-D4	Franklin	Norfolk	37.122625	-80.076071	PEM	RPWWN	03010101	Permanent Access Road	-	-	39	-	4	4-667
W-D7-PEM	Franklin	Norfolk	37.121559	-80.085750	PEM	RPWWD	03010101	Pipeline ROW	693	-	-	77	-	4-666
W-EF3	Franklin	Norfolk	37.117734	-80.095992	PEM	RPWWD	03010101	Permanent Access Road	1154	-	-	128	-	4-665
W-IJ1	Franklin	Norfolk	37.092927	-80.027568	PEM	RPWWD	03010101	Pipeline ROW	1812	-	-	671	-	4-677
W-IJ2-PSS	Franklin	Norfolk	37.092645	-80.027176	PSS	RPWWD	03010101	Pipeline ROW	-	348	-	129	-	4-677
W-IJ2-PEM	Franklin	Norfolk	37.092596	-80.027214	PEM	RPWWD	03010101	Pipeline ROW	732	-	-	271	-	4-677
W-GH2	Franklin	Norfolk	37.092404	-79.983182	PSS	RPWWD	03010101	Timber Mat Crossing	-	566	-	63	-	4-684
W-II8	Franklin	Norfolk	37.091357	-79.992006	PEM	RPWWD	03010101	Timber Mat Crossing	383	-	-	43	-	4-683
W-IJ6	Franklin	Norfolk	37.089156	-80.005036	PEM	RPWWD	03010101	Timber Mat Crossing	200	-	-	22	-	4-681
W-E7	Franklin	Norfolk	37.084557	-79.947595	PEM	RPWWD	03010101	Pipeline ROW	10986	-	-	4,068	-	4-690
W-E8	Franklin	Norfolk	37.082843	-79.946100	PEM	RPWWD	03010101	Pipeline ROW	3010	-	-	1,114	-	4-690
W-EF51	Franklin	Norfolk	37.064781	-79.874460	PEM	RPWWD	03010101	Pipeline ROW	579	-	-	64	-	4-705
W-KL43b	Franklin	Norfolk	37.059608	-79.840707	PEM	RPWWD	03010101	Pipeline ROW	17	-	-	2	-	4-710
W-CD6	Franklin	Norfolk	37.057586	-79.915232	PEM	RPWWN	03010101	Timber Mat Crossing	4069	-	-	452	-	4-698
W-CD5	Franklin	Norfolk	37.055438	-79.910624	PFO	RPWWN	03010101	Pipeline ROW	-	4948	-	1,833	-	4-698
W-EF48	Franklin	Norfolk	37.052142	-79.886197	PEM	RPWWD	03010101	Timber Mat Crossing	348	-	-	39	-	4-702
W-CD1	Franklin	Norfolk	37.047767	-79.897568	PFO	RPWWD	03010101	Pipeline ROW	-	4818	-	1,785	-	4-701
W-DD1	Franklin	Norfolk	37.031961	-79.788589	PEM	RPWWN	03010101	Pipeline ROW	3541	-	-	1,312	-	4-720
W-A12-PFO	Franklin	Norfolk	37.031754	-79.788099	PFO	RPWWD	03010101	Pipeline ROW	-	174	-	19	-	4-720
W-A12-PEM	Franklin	Norfolk	37.031643	-79.788111	PEM	RPWWD	03010101	Pipeline ROW	2836	-	-	1,050	-	4-720
W-GH16	Franklin	Norfolk	37.028394	-79.773243	PFO	RPWWD	03010101	Timber Mat Crossing	-	2862	-	318	-	4-722
W-H17	Franklin	Norfolk	36.989390	-79.722090	PFO	RPWWD	03010101	Timber Mat Crossing	-	1607	-	179	-	4-730
W-H11	Franklin	Norfolk	36.988077	-79.702803	PEM	RPWWD	03010101	Pipeline ROW	2039	-	-	755	-	4-734
W-H16	Franklin	Norfolk	36.988073	-79.714967	PEM	RPWWD	03010101	Timber Mat Crossing	1011	-	-	112	-	4-731
W-H14	Franklin	Norfolk	36.988069	-79.711841	PEM	RPWWD	03010101	Timber Mat Crossing	266	-	-	30	-	4-732
W-A8	Franklin	Norfolk	36.987947	-79.700844	PEM	RPWWD	03010101	Pipeline ROW	671	-	-	75	-	4-734
W-H15	Franklin	Norfolk	36.987938	-79.714829	PSS	RPWWD	03010101	Timber Mat Crossing	-	309	-	35	-	4-731
W-H9	Franklin	Norfolk	36.978536	-79.682057	PEM	RPWWN	03010101	Timber Mat Crossing	370	-	-	41	-	4-736
W-H6	Franklin	Norfolk	36.972189	-79.663042	PEM	RPWWD	03010101	Pipeline ROW	248	-	-	28	-	4-741
W-D3	Pittsylvania	Norfolk	36.965318	-79.598760	PFO	RPWWN	03010101	Timber Mat Crossing	-	1241	-	138	-	4-748
W-MM17	Franklin	Norfolk	36.964731	-79.617067	PEM	RPWWD	03010101	Pipeline ROW	296	-	-	110	-	4-746
W-B5	Pittsylvania	Norfolk	36.959293	-79.586201	PEM	RPWWN	03010101	Pipeline ROW	209	-	-	23	-	4-751
W-B4-PSS	Pittsylvania	Norfolk	36.957884	-79.583666	PSS	RPWWD	03010101	Pipeline ROW	-	205	-	23	-	4-751
W-C1	Pittsylvania	Norfolk	36.929954	-79.526831	PEM	RPWWN	03010101	Timber Mat Crossing	793	-	-	88	-	4-758
W-H5	Pittsylvania	Norfolk	36.924983	-79.517159	PEM	RPWWD	03010101	Pipeline ROW	9004	-	-	3,335	-	4-759
W-B3	Pittsylvania	Norfolk	36.916508	-79.492360	PEM	RPWWN	03010101	Timber Mat Crossing	57	-	-	6	-	4-762
W-CC2-PEM	Pittsylvania	Norfolk	36.905418	-79.471566	PEM	RPWWD	03010105	Timber Mat Crossing	1185	-	-	132	-	4-765
W-MM5	Pittsylvania	Norfolk	36.903012	-79.468192	PSS	RPWWD	03010105	Timber Mat Crossing	-	1699	-	189	-	4-766
W-MM9	Pittsylvania	Norfolk	36.894087	-79.446110	PEM	RPWWN	03010105	Timber Mat Crossing	470	-	-	52	-	4-769
W-MM8-PEM	Pittsylvania	Norfolk	36.894034	-79.445486	PEM	RPWWN	03010105	Pipeline ROW	2409	-	-	893	-	4-769
W-MM8-PFO	Pittsylvania	Norfolk	36.893930	-79.445461	PFO	RPWWN	03010105	Pipeline ROW	-	1834	-	679	-	4-769
W-Q2	Pittsylvania	Norfolk	36.884674	-79.428607	PFO	RPWWD	03010105	Pipeline ROW	-	16422	-	6,082	-	4-771
W-Q1	Pittsylvania	Norfolk	36.883985	-79.427305	PEM	RPWWD	03010105	Pipeline ROW	636	-	-	236	-	4-771
W-G2	Pittsylvania	Norfolk	36.851816	-79.385930	PEM	RPWWD	03010105	Timber Mat Crossing	1507	-	-	167	-	4-779
W-H1	Pittsylvania	Norfolk	36.836097	-79.360895	PEM	RPWWN	03010105	Pipeline ROW	479	-	-	53	-	4-782
W-EF6	Pittsylvania	Norfolk	36.835004	-79.339128	PFO	RPWWD	03010105	Pipeline ROW	-	2905	-	323	-	4-786
W-H2	Pittsylvania	Norfolk	36.834817	-79.360479	PEM	RPWWD	03010105	Pipeline ROW	34791	-	-	12,886	-	4-782
W-IJ21	Pittsylvania	Norfolk	36.834623	-79.338527	PFO	RPWWN	03010105	Timber Mat Crossing	-	462	-	51	-	4-786
W-H3	Pittsylvania	Norfolk	36.833741	-79.360081	PEM	RPWWN	03010105	Pipeline ROW	2217	-	-	821	-	4-783

Table B-2. Virginia Wetland Impacts
Individual Permit Application
Mountain Valley Pipeline Project

Wetland ID*	County	USACE District	Latitude[1]	Longitude[1]	Cowardin Class[2]	USACE Water Type[3]	HUC 8	Impact Type	Temporary Impacts (square feet)[4]	Permanent Conversion Impacts (square feet)[4]	Permanent Fill Impacts (square feet)[4]	Temporary Fill (cubic yards)[5]	Permanent Fill (cubic yards)[6]	Figure
W-MM3	Pittsylvania	Norfolk	36.830361	-79.356631	PSS	RPWWD	03010105	Pipeline ROW	-	1481	-	548	-	4-783
W-IJ22-PEM	Pittsylvania	Norfolk	36.827780	-79.350264	PEM	RPWWD	03010105	Timber Mat Crossing	1699	-	-	189	-	4-784
W-IJ22-PFO	Pittsylvania	Norfolk	36.827748	-79.350295	PFO	RPWWD	03010105	Timber Mat Crossing	-	3419	-	380	-	4-784

Notes:

1 - In decimal degrees.

2 - PEM = Palustrine Emergent
- PSS = Palustrine Scrub-Shrub
- PFO = Palustrine Forested

3 - RPWWD = Wetlands directly abutting Relatively Permanent Waters (RPWs) that flow directly or indirectly into Traditional Navigable Waterways (TNWs)
- RPWWN = Wetlands adjacent but not directly abutting RPWs that flow directly or indirectly into TNWs
- NRPWW = Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

4 Construction of access roads will not result in impacts to tidal wetlands or wetlands adjacent to tidal waters. Construction, maintenance, or expansion of substation facilities will not result in discharges to non-tidal wetlands adjacent to tidal waters of the United States.

5 - Temporary fill discharge into waters of the U.S.

6 - Permanent fill associated with the construction of permanent access road and facilities

Table B-3. Virginia Stream Impacts Summary
Individual Permit Application
Mountain Valley Pipeline Project

Cowardin Class	Temporary Impact (linear ft)	Permanent Impact (linear ft)	Temporary Fill (cubic yards)	Permanent Fill (cubic yards)
Ephemeral	3,966	45	6,274	35
Intermittent	6,383	0	10,478	0
Perennial	6,941	65	30,327	55
Norfolk District Total	**17,290**	**110**	**47,079**	**90**

Table B-4. Virginia Wetland Impacts Summary
Individual Permit Application
Mountain Valley Pipeline Project

Cowardin Class	Temporary Impacts (acres)	Permanent Conversion Impacts (acres)	Permanent Fill Impacts (acres)	Temporary Fill (cubic yards)	Permanent Fill (cubic yards)
PEM	172,277	0	2,347	56,707	259
PSS	0	33,296	0	7,029	0
PFO	0	51,826	0	14,683	0
Norfolk District Total	**172,277**	**85,122**	**2,347**	**78,419**	**259**

ATTACHMENT B-1
VWP Regulatory Checklist

MOUNTAIN VALLEY PIPELINE		
EXHIBIT B-1		
REGULATORY SUBMISSION CHECKLIST		
		Material Location / Notes
1	Previous actions related to the proposed work (e.g. pre-application meetings, site visits, previous permits or applications)	IP Application, Section 1.2
2	The applicant's legal name, contact person (and title), mailing address, telephone number, fax number, email address and SCC ID	Attachment F, JPA Form
3	The authorized agent's name, contact person, mailing address, telephone number, fax number, email address and SCC ID	Attachment F, JPA Form
4	Project name and proposed project schedule	IP Application, Sections 1.0 and 1.10
5	The following information for the project site location:	-
	(A) The physical street address, nearest street, or nearest route number; city or county; zip code; and if applicable, parcel number of the site or sites.	IP Application, Sections 1.6 & 1.8
	(B) Name of the impacted water body or water bodies, or receiving waters, as applicable, at the site or sites.	Attachment B, Tables B-1 and B-2
	(C) Latitude and longitude to the nearest second at the center of the site or sites.	IP Application, Section 1.8; Table 2; Table 3
	(D) The fourth order subbasin for the site or sites.	Table 2, Table 3, Table 7
	(E) A detailed map depicting the location of the site or sites, including the project boundary and existing preservation areas on the site or sites.	Figures 5 and B-1
6	(A) Narrative description of project purpose, and a description of the proposed activity in surface waters	IP Application, Section 2 & Section 1.3
	(B) Narrative describing utility crossing construction method.	IP Application, Section 1.3.1 and Section 5.1.1
	(C) Narrative describing road crossing construction method.	IP Application, Section 1.3.2
7	An alternatives analysis for the proposed project employing measures taken during project design and development to first avoid and then minimize impacts.	IP Application, Sections 3.0 & 5.0
8	(A) A narrative description of all impacts proposed to surface waters, including the type of activity to be conducted in surface waters and any physical alteration to surface waters.	IP Application, Section 4.1
	(B) Tabular summary of impacts to waters of the U.S.	Attachment B, Tables B-1 and B-2
9	Copy of the jurisdictional determination from the U.S. Army Corps of Engineers (USACE) and State Waters determination (including any IWOMEV waivers)	IP Application, Section 1.1 and Attachment B, IWOMEV Waiver
10	A delineation map that depicts the geographic area or areas of all surface water boundaries delineated in accordance with USACE and DEQ regulations.	IP Application, Figure 4 and Figure 5
11	(A) Overall drawing showing all impact locations.	IP Application, Figures 2 & 5
	(B) Plan view drawing or drawings of the project site sufficient to assess the project.	IP Application, Figure 4
	(C) Cross-sectional and profile drawings of each proposed impact are.	Attachment H
12	A longitudinal profile of the pipe or culvert position and stream bed thalweg, or spot elevations of the stream thalweg at the beginning and end of the pipe or culvert, extending to a minimum of 10 feet beyond the limits of the proposed impact.	Attachment H

13	(A) An assessment of potential impacts to federal and state listed threatened or endangered species, including any correspondence or documentation from federal or state resource agencies addressing potential impacts to listed species.	IP Application, Section 4.3.7
14	A compensatory mitigation plan to achieve no net loss of wetland acreage and functions or stream functions and water quality benefits. Any compensatory mitigation plan proposing the purchase of mitigation bank or in-lieu fee program credits shall include the number and type of credits proposed to be purchased and documentation from the approved bank or in-lieu fee program sponsor of the availability of credits at the time of application.	IP Application, Section 5.3 and Attachment M
15	A written description and a graphical depiction identifying all upland areas including buffers, wetlands, open water, other surface waters, and compensatory mitigation areas located within the proposed project boundary, that are under a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument (i.e., protected areas).	Figure B-1
16	Include signed signature page from the Joint Permit Application document.	Attachment F, JPA Form
17	Pay permit application fee once notified (due prior to issuance of draft permit)	--
18	Include project cost information	Attachment F, JPA Form
19	Property owner information (name, address, contact information) for public notice.	Attachment B-5
20	Adjacent property owner and riparian property owner information (name, address, contact information).	Attachment B-5
21	An assessment of potential impacts to historical resources, including any correspondence or documentation from federal or state resource agencies addressing potential impacts to listed	IP Application, Section 1.9.3
22	A "frac-out" contingency plan must be provided for any crossings utilizing the directional drill method to address potential frac-outs or related spills assocaited with any directional drilling activities.	N/A
	Nationwide Permit General Conditions	
	Conditions 1-32 Listed Below:	
1	**Navigation** - no activity may cause more than minimal adverse effects	IP Application, Section 4.4.10
2	**Aquatic Life Movements -** no activity may substantially disrupt life cycle movements. All crossings should allow low flows.	IP Application, Section 4.2.7
3	**Spawning Areas** - Activities that result in the physical destruction of an important spawning area are not authorized	IP Application, Section 4.2.8
4	**Migratory Bird Breeding Areas** - Must be avoided to the maximum extent practicable	IP Application, Section 4.3.9
5	**Shellfish Beds -** No activity may occur in areas of concentrated shellfish populations	IP Application, Section 4.3.8
6	**Suitable Material** - Material used for construction or discharged must be free from toxic pollutants in toxic amounts	IP Application, Section 4.3.22
7	**Water Supply Intakes:** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.	IP Application, Section 4.1.4
8	**Adverse Effects From Impoundments** - Must be minimized to the maximum extent practicable	IP Application, Section 4.4.24
9	**Management of Water Flows** - Activities must be constructed to withstand expected high flows, and to the maximum extent practicable, maintain the preconstruction course, condition, capacity and location of open waters	IP Application, Section 4.3.4
10	**Fills within 100-year floodplains** - Activity must comply with applicable FEMA requirements	IP Application, Section 4.4.8
11	**Equipment** - Heavy equipment in wetlands or mudflats must be placed on mats, must minimize soil disturbance	IP Application, Sections 5.2.2 & 5.2.7
12	**Soil Erosion and Sediment controls** - Must be used and maintained in effective operating condition, work within WOTUS during periods of low or no-flow whenever possible	IP Application, Section 4.4.13

13	**Removal of Temporary Fills** - Must return to pre-construction elevations and revegetated as appropriate	IP Application, Section 4.3.1
14	**Proper Maintenance** - Of any authorized structure or fill	IP Application, Section 5.2.10
15	**Single and Complete Project** - The same NWP cannot be used more than once for the same single and complete project	N/A
16	**Wild and Scenic Rivers** - The appropriate federal agency with direct management responsibility for such a river must provide in writing that the proposed activity will not adversely affect the designation or study status	IP Application, Section 4.2.1
17	**Tribal Rights** - NWP activity cannot cause more than minimal adverse effects	No tribal lands crossed by Project
18	**Endangered Species** - No activity is authorized that is likely to directly or indirectly jeopardize the coexistence of a T&E species (see regs for full condition)	IP Application, Section 4.3.7
19	**Migratory birds and Bald and Golden Eagles** - Must ensure the project complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act	IP Application, Section 4.3.9
20	**Historic Properties** - If the DE determines the activity may have potential to cause effects to properties listed or eligible for listing in the NRHP the activity is not authorized until the requirement of Section 106 has been satisfied.	IP Application, Section 1.9.3
21	**Discovery of Previously Unknown Remains and Artifacts** - If discovered you must immediately notify the DE	IP Application, Section 1.9.3
22	**Designated Critical Resource Waters** - Discharges of dredged or fill material are not authorized by NWP #12 for any activity within or directly affecting, critical resource waters, including wetlands adjacent to such waters	IP Application, Section 4.2.11
23	**Mitigation:** to ensure that adverse effects on the aquatic environment are minimal:	--
a	The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).	IP Application, Section 5.3 and Attachment M
b	Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.	IP Application, Section 5.3 and Attachment M
c	Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.	IP Application, Section 5.3 and Attachment M
d	For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.	IP Application, Section 5.3 and Attachment M

e	Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.	IP Application, Section 5.3 and Attachment M
f	Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.	--
f (1)	The Applicant is responsible for proposing an appropriate compensatory mitigation option, if necessary. For the NWPs, the preferred compensatory mitigation mechanism is mitigation bank credits or in-lieu fee program credits. However, if these aren't available, the district engineer may approve permittee responsible mitigation.	IP Application, Section 5.3 and Attachment M
f (2)	The amount of compensatory mitigation must be sufficient to ensure the authorized activity results in no more than minimal individual and cumulative adverse environmental effects.	IP Application, Section 5.3 and Attachment M
f (3)	Aquatic resource restoration should be the first permittee-responsible mitigation considered.	N/A
f (4)	If permittee-responsible mitigation is the proposed option, a mitigation plan must be submitted to address the applicable requirements of 33 CFR 332.4(c)(2) through (14). The plan must be approved by the district engineer before work begins in WOTUS.	N/A
f (5)	If mitigation bank credits or in-lieu fee credits are proposed, the mitigation plan only needs to address the baseline conditions at the impact site and number of credits to be provided.	IP Application, Section 5.3 and Attachment M
f (6)	Compensatory mitigation requirements (e.g. resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.	IP Application, Section 5.3 and Attachment M
g	Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.	IP Application, Section 5.3 and Attachment M
h	Applicants may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.	IP Application, Section 5.3 and Attachment M
i	Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.	IP Application, Section 5.3 and Attachment M
24	**Safety of Impoundment Structures** - The DE may require that the design be independently reviewed by qualified persons to ensure safety	IP Application, Section 4.4.24

25	**Water Quality** - The DE or state may require additional water quality management measures	IP Application, Section 4.4.13
26	**Coastal Zone Management** - The DE or state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements	IP Application, Section 4.4.21
27	**Regional and Case by Case Conditions** - The activity must comply with any regional conditions, and any case specific conditions	See below.
28	**Use of Multiple NWPs** - The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss authorized by the NWPs does not exceed the acreage limit of the NWP	N/A
29	**Transfer of NWP Verifications** - Must send signed letter to Corps district office (see condition for signature language)	N/A
30	**Compliance Certification** - The Permittee must sign and send to the Corps the Certificate of Completion within 30-days of completion of the activity	N/A
31	**Activities Affecting Structures or Works Built by the U.S.** - The Corps must issue 408 permission before the NWP will be authorized	IP Application, Section 1.9.5
32	**Pre-Construction Notification** - See full list of conditions in Federal Register	N/A
	2017 & Proposed 2020 NWP Regional Conditions Applicable to Multiple NWPs	
1	**Conditions for Waters Containing Submerged Aquatic Vegetation (SAV) Beds:** A pre-construction notification (PCN) is required if work will occur in areas that contain submerged aquatic vegetation (SAVs).	IP Application, Section 4.2.9
2	**Conditions for Anadromous Fish Use Areas:** A check for anadromous fish areas must be conducted.	IP Application, Section 4.2.6
3	**Conditions for Designated Critical Resource Waters, which include National Estuarine Research Reserves:** NWP 12 cannot be used to authorize the discharge of dredged or fill material in the Chesapeake Bay National Estuarine Research Reserve in Virginia.	IP Application, Section 4.2.11
4	**Conditions for Federally Listed Species and Designated Critical Habitat:** Notification for ALL NWPs will be required for any project that "may affect" a federally listed threatened or endangered species or designated critical habitat - the USFWS IPaC system can be used to identify these species/critical habitat. **Conditions for Waters with Federally Listed Endangered or Threatened Species, Waters Federally Designated as Critical Habitat, and One-mile Upstream (including tributaries) of Any Such Waters: Any work proposed in critical habitat requires a PCN**	IP Application, Section 4.3.7
5	**Conditions for Designated Trout Waters:** Notification and prior written approval is required for work in Class V and VI waters. A TOYR is recommended for any in-stream work for Classes I-IV.	IP Application, Section 4.2.4
6	**Conditions Regarding Invasive Species:** Invasive/Alien plants cannot be used for re-vegetation.	Refer to Sec 2.18.2 of Annual Stds & Specs
7	**Conditions Pertaining to Countersinking of Pipes and Culverts in Nontidal Waters:** All pipes and culverts placed in streams will be countersunk at both inlet and outlet ends - see regional conditions for specific requirements.	IP Application, Section 4.2.7
8	**Conditions for the Repair of Pipes:** A PCN is required if the existing pipe is not countersunk.	Noted
9	**Condition for Impacts Required a Mitigation Plan:** A mitigation plan is required when the permanent loss of wetlands exceeds 1/10 acre and/or 300 linear feet of waters of the U.S.	IP Application, Section 5.3 and Attachment M
10	**Condition for Temporary Impacts:** All temporary impacts must be restored to their pre-construction contours within 12 months of commencing construction. Impacts that will not be restored within 12 months will be considered permanent, unless otherwise approved by the COE and may require mitigation. **This applies to streams and wetlands**	IP Application, Section 5.2.7
11	**Condition for Transportation Projects Funded in Part or in Total by State or Federal Funds:** When a PCN is required, compensatory mitigation is required for all wetland impacts.	N/A

12	**Condition for Projects Requiring Coordination Under Section 408:** The Secretary of the Army must determine whether to grant permission to alter a U.S. Army Corps of Engineers civil works project.	IP Application, Section 1.9.5
	2017 and Proposed 2020 NWP Norfolk District Regional Conditions Specific to NWP 1	
1	**Access roads may not result in more than 1/3 acre of impacts to waters of the United States.**	IP Application Tables 2 & 3
2	A PCN is required for discharges associated with the construction of utility line substations that result in the permanent loss of greater than 5,000 square feet of waters of the United States.	IP Application Tables 2 & 3
3	For utility activities requiring a PCN the prospective permittee shall provide the following information:	
a	A map of the entire utility corridor including a delineation of all wetlands and waters of the United States within the corridor. Aquatic resource information shall be submitted using the Cowardin Classification System mapping conventions (e.g. PFO, PEM, POW, etc.).	Figure 2, Figure 5
b	An alternatives analysis, which specifically addresses the following:	IP Application, Section 3
i	Avoids and minimize impacts to the maximum extent practicable. Directional drilling should be reviewed as an option - however, the use of directional drilling in karst areas may not be recommended.	IP Application, Sections 3 & 5
ii	Avoid fragmenting large tracts of forested wetlands by routing utility lines outside of forested tracts or on the edges of forested tracts.	IP Application, Sections 3 & 5
iii	Minimizing clearing of wetlands - grubbing shall be limited to the permanent easement for underground utility lines. Outside of the permanent easement, wetland vegetation shall be removed at or above the ground surface unless written justification is provided and the impacts are reviewed and approved by the Corps.	IP Application, Sections 3 & 5
iv	Overhead utility lines - allow natural succession to restore and maintain the corridor in scrub-shrub wetlands except for a minimum corridor needed for access, to the maximum extent practicable.	N/A
v	Buried utility lines - allow natural succession to restore the area to tree and scrub/shrub except for a 20-foot wide access corridor, to the maximum extent practicable.	IP Application, Section 5
c	Compensatory mitigation may be required for permanent conversion of wetlands within the utility line corridor.	IP Application, Section 5.3 and Attachment M
4	For all submerged utility lines across navigable waters of the United States, a location map and cross-sectional view showing the utility line crossing from bank to bank is required. In addition, the location and depth of any Federal Navigation Channels shall be shown in relation to the proposed utility line. In general, all utility lines shall be buried at least six (6) feet below the authorized bottom depth of Federal Navigation Channel and at least three (3) feet below the bottom depth in all subaqueous areas. When circumstances prevent the placement of at least three feet of cover over the line (outside of the Federal Navigation Channel), then written justification and an alternative method must be provided with the notification and the deviation must be reviewed and approved by the Corps. Section 408 permission may be required. See #10 under Regional Conditions that are applicable to multiple NWPs.	Attachment H
5	Excavated material shall be placed on an approved upland site. However, when this is not feasible, temporary stockpiling is hereby authorized provided that:	Refer to Sec 4.1 of Annual Stds & Specs
a	All excavated material stockpiled in a vegetated wetland area is placed on filter cloth or some semi-permeable surface. The material will be stabilized to prevent reentry into the waterway.	Refer to Sec 4.1 of Annual Stds & Specs
b	Excavated material must be put back into the trench to the original contour and all excess excavated material must be completely removed from the wetlands within 30 days. Permission must be granted by the District Commander (or authorized representatives) if the material will be stockpiled longer than 30 days.	Refer to Sec 4.1 of Annual Stds & Specs

6	When open-cut trenching in designated anadromous fish use areas or hydrostatic testing of a pipeline involving water withdrawals from tidal waters are proposed, the Corps will coordinate with the NOAA Fisheries Service and/or the Virginia Department of Game and Inland Fisheries. Written verification from this office must be received before performing the proposed work.	IP Application, Sections 4.2.6 & 4.4.13
7	Aerial Transmission Lines Crossing Navigable Waters:	N/A
a	See the Regional Conditions for the minimum clearance required table - confirm these minimum clearances will be adhered to.	N/A
b	Clearances for communication lines, stream gaging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless otherwise specifically authorized by the District Engineer.	N/A
c	Corps of Engineer regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both this regional condition and ER 1110-2-4401 apply, the greater minimum clearance is required.	N/A
8	For utility lines landing in Virginia, from the Outer Continental Coast (OCS), the applicant shall submit documentation that verifies consultation and a determination that there is no objection, or no objection with specific conditions to the proposed cable corridor, from the beach mean high tide line, out to the limit of OCS.	N/A
9	For utility line projects completed by horizontal directional drilling or other boring methods, a plan to address the prevention, containment, and cleanup of sediment or other materials caused by inadvertent returns of drilling fluids to waters of the U.S. through sub-soil fissures or fractures needs to be included with the PCN (if a PCN is required). If an inadvertent return of drilling fluids to waters of the U.S. occurs, and the remediation requires work within waters of the U.S., then the applicant must notify the Corps immediately and submit a remediation plan as soon as possible, regardless of whether a PCN was required.	Attachment H
10	When an intake is proposed in designated anadromous fish waters, the following design parameters will be incorporated as permit conditions to protect the sensitive life stages of anadromous fish: a. Screening over the mouth of the intake with mesh size that does not exceed 1mm; b. Intake velocities that do not exceed 0.25 feet per second; c. Intake must be positioned such that an unimpeded flow of water parallel to the screen surface occurs along the entire surface of the screen to take advantage of sweeping velocity.	N/A; see IP Application Section 4.2.6
	2017 Section 401 Water Quality Certification for NWP #12 - Conditional Provided that:	--
1	Confirm the activities are not associated with a surface water withdrawal or the transport of non-potable raw surface water, except for the purpose of hydrostatic testing and when the associated discharges are authorized by a VPDES permit, if required.	IP Application, Section 4.1.4
2	Compensatory mitigation - must meet the requirements in the Code of Virginia, Section 62.1-44.15:23 A through C	IP Application, Section 5.3 and Attachment M
3	Temporary diversions of surface water associated with "pump arounds" during the construction of utility crossings are specifically allowed.	Noted
	Proposed 2020 General Section 401 Water Quality Certification for NWP #12	--
1	For activities that are proposed to occur only in state waters, as defined in § 62.1-44.3 of the Code of Virginia, application shall be made to DEQ in accordance with State Water Control Law and Virginia Administrative Code 9VAC25-210 et seq. for a permit(s) need determination. If this situation applies to the project, the determination will be based on cumulative impacts in all state surface waters, except where the activities are excluded from permitting in accordance with 9VAC25-31-40, 9VAC25-210-60, 9VAC25-210-310, and Chapter 3 of Title 62.1 of the Code of Virginia.	No activities proposed to impact state waters not subject to USACE jurisdiction or previously issued IWOMEV waiver

2	For activities in mitigation sites that are perpetually protected (e.g., under a deed restriction, conservation easement, restrictive covenant, or other land use protective instrument), application shall be made to DEQ in accordance with State Water Control Law and Virginia Administrative Code 9VAC25-210 et seq. for a permit(s) need determination. If this situation applies to the project, the determination will be based on cumulative impacts in all state surface waters, except where the activities are excluded from permitting in accordance with 9VAC25-31-40, 9VAC25-210-60, 9VAC25-210-310, and Chapter 3 of Title 62.1 of the Code of Virginia.	Figure 2, Figure 5
3	Activities shall not violate Virginia water quality standards.	Attachment B
4	Activities conducted in state surface waters shall not cause or contribute to a significant impairment of state fish and wildlife resources, including but not limited to: 1) documented spawning habitat or a migratory pathways for anadromous fish; 2) trout waters in specified locations of Virginia, as provided by the Virginia State Water Control Board's Water Quality Standards 9VAC25-260-370 et seq. and 9VAC25-260-390 et seq.; 3) state-listed threatened or endangered species or designated critical habitat; and 4) areas that contain submerged aquatic vegetation (SAV). Time-of-year restrictions (TOYRs) may be required, as recommended by the Virginia Department of Wildlife Resources, Virginia Department of Conservation and Recreation, the Virginia Marine Resources Commission, or other interested and affected agencies. Screening or agency coordination by the applicant must be conducted using the Virginia Department of Wildlife Resources (VDWR) Information System at https://vafwis.dgif.virginia.gov/fwis/, and the Virginia Institute of Marine Science's SAV website at http://mobjack.vims.edu/sav/savwabmap/, or by contacting all applicable resource agencies directly. No activities shall result in a taking of threatened or endangered species, unless otherwise authorized by the laws and regulations of the Commonwealth of Virginia. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species that normally migrate through the area.	IP Application, Section 4.2
5	Plant species listed in the most current Virginia Department of Conservation and Recreation's (DCR) Virginia Invasive Plant Species List shall not be used for re-vegetation. The list of invasive plants in Virginia is found at: http://www.dcr.virginia.gov/natural-heritage/invsppdflist. DCR recommends the use of regional native species for re-vegetation as identified in the DCR Native Plants for Conservation, Restoration and Landscaping brochures for the coastal, piedmont and mountain regions http://www.dcr.virginia.gov/natural-heritage/nativeplants#brochure. See also DCR's native plant finder at https://www.dcr.virginia.gov/natural-heritage/native-plants-finder.	Refer to Sec 2.18.2 of Annual Stds & Specs
6	Stormwater management facilities, as defined in 9VAC25-870-10, shall not be placed in a perennial stream bed or perennial stream channel or in a wetland, as defined in 9VAC25-210-10.	N/A
7	Compensatory mitigation for unavoidable permanent impacts, including the conversion of forested wetlands, that are greater than one-tenth of an acre of wetlands or greater than 300 linear feet of stream bed or stream channel as defined by 9VAC25-210-10 shall be provided in accordance with Section 62.1-44.15:23 A through C of the Code of Virginia, as applicable to the project activities and Virginia Water Protection Permit Program regulations.	IP Application, Section 5.3 and Attachment M
a	Stream bed impacts shall be determined by utilizing a stream impact assessment methodology acceptable to the Department of Environmental Quality.	N/A
b	The mitigation shall be sufficient to achieve no net loss of existing wetland acreage and functions or stream functions and water quality benefits. In the absence of same river watershed alternatives in Hydrologic Unit Codes (HUC) 02040303 and 02040304, single-family dwellings or locality projects may use compensatory mitigation in HUC 02080102, 02080108, 02080110, or 02080111 in Virginia.	IP Application, Section 5.3 and Attachment M
c	All nonimpacted surface waters and compensatory mitigation areas within 50 feet of authorized activities and within the project or right-of-way limits shall be clearly flagged or marked for the life of the construction activity at that location to preclude unauthorized disturbances to these surface waters and compensatory mitigation areas during construction. The permittee shall notify contractors that no activities are to occur in these marked surface waters.	IP Application, Section 5.2.4
8	The following information, as applicable, shall be submitted to the DEQ office having responsibility over the project location:	--

a	When required, any pre-construction notification (PCN) materials or information.	USACE application provided to DEQ
b	All jurisdictional determination information provided to the Corps and issued from the Corps, such as maps, forms, photos, correspondence, confirmations, etc. Delineation of state surface waters on the entire project site is strongly encouraged prior to submitting an application to expedite state permit processing, if required.	IP Application, Section 1.1 and Attachment B, IWOMEV Waiver
c	Proof of coverage under one or more NATIONWIDE PERMITS, unless the activities are excluded from permitting under the Virginia Water Protection Permit Program.	N/A
9	Activities shall include measures to prevent spills of fuels or lubricants into state waters. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery. 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 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. If unauthorized impacts have occurred, the permittee shall notify DEQ within 24 hours of discovery.	Refer to Secs 2.9 & 4.1 of Annual Stds & Specs
10	Activities shall be executed in a manner so as to minimize adverse impacts on instream beneficial uses as defined in § 62.1-10 (b) of the Code of Virginia.	IP Application, Section 5
11	All fill material shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.	IP Application, Section 4.3.20
12	Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or for mining activities, the standards issued by the Virginia Department of Mines, Minerals and Energy that are effective as those in the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.	Refer to Sec 1.0 of Annual Stds & Specs
a	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 shall then be removed.	Refer to Sec 2.13 of Annual Stds & Specs
b	Exposed slopes and streambanks shall be stabilized immediately upon completion of work in each permitted impact area. All denuded areas shall be properly stabilized.	IP Application, Section 1.3.1
13	Temporary disturbances to surface waters during construction shall be avoided and minimized to the maximum extent practicable.	IP Application, Section 5
a	All temporarily disturbed wetland areas shall be restored to preexisting conditions within 30 days of completing work at each respective temporary impact area, which shall include reestablishing preconstruction elevations and contours with topsoil from the impact area where practicable and planting or seeding with appropriate wetland vegetation according to cover type (i.e., emergent, scrub shrub, or forested). The permittee shall take all appropriate measures to promote and maintain revegetation of temporarily disturbed wetland areas with wetland vegetation through the second year post-disturbance. All temporarily impacted stream beds and streambanks shall be restored to their preconstruction elevations and contours with topsoil from the impact area where practicable within 30 days following the construction at that stream segment. Streambanks shall be seeded or planted with the same vegetation cover type originally present, including any necessary supplemental erosion control grasses. Invasive species identified on the Department of Conservation and Recreation's Virginia Invasive Plant Species List shall not be used without prior approval from the Department of Environmental Quality.	IP Application, Section 5.2.8

b	Materials (including fill, construction debris, and excavated and woody materials) temporarily stockpiled in wetlands, and heavy equipment in temporarily impacted wetland areas shall be placed on mats, geotextile fabric, or other suitable material; shall be immediately stabilized to prevent entry into state waters; shall be managed such that leachate does not enter state waters; and shall be completely removed within 30 days following completion of that construction activity. Disturbed areas shall be returned to preconstruction elevations and contours with topsoil from the impact area where practicable; restored within 30 days following removal of the stockpile; and restored with the same vegetation cover type originally present, including any necessary supplemental erosion control grasses. Invasive species identified on the Department of Conservation and Recreation's Virginia Invasive Plant Species List shall not be used to the maximum extent practicable or without prior approval from the Department of Environmental Quality.	IP Application, Section 5.2.8
c	All construction, construction access (e.g., cofferdams, sheet piling, and causeways) and demolition activities associated with the project shall be accomplished in a manner that minimizes construction or waste materials from entering surface waters to the maximum extent practicable.	IP Application, Section 5.1.1.1.2
14	If stream channelization or relocation is required, all work in surface waters shall be done in the dry, unless otherwise authorized by the Department of Environmental Quality, and all flows shall be diverted aroudnthe channelization or relocationa rea until the new channel is stabilized. This work shall be accomplished by leaving a plug at the inlet and outlet ends of the new channel during excavation. Once the new channel has been stabilized, flow shall be routed into the new channel by first removing the downstream plug and then the upstream plug. The rerouted stream flow must be fully established before construction activities in the old stream bed can begin.	N/A
	Proposed 2020 Section 401 Water Quality Certification Specific to NWP #12	
1	For activities involving certain natural gas transmission pipelines, as detailed in § 62.1-44.15:20 and Article 2.6 of Title 62.1 of the Code of Virginia, application shall be made to DEQ in accordance with State Water Control Law and Virginia Administrative Code 9VAC25-210 et seq. for a permit(s) need determination. If this situation applies to the project, the determination will be based on cumulative impacts in all state surface waters, except where the activities are excluded from permitting in accordance with 9VAC25-31-40, 9VAC25-210-60, 9VAC25-210-310, and Chapter 3 of Title 62.1 of the Code of Virginia.	Application submitted
2	Activities conducted under NATIONWIDE PERMIT 12 shall comply with the conditions of any Virginia Pollutant Discharge Elimination System (VPDES) permit issued for the facility.	Refer to Sec I.B of DEQ-approved Stormwater Pollution Prevention Plans
3	Regional conditions applicable to NATIONWIDE PERMIT 12 shall also include pipelines, pipeline activities, pipeline rights-of-way, pipeline corridors, easements for pipelines, buried pipelines, submerged pipelines, pipeline crossings, and pipeline projects, except in the following situations:	Referenced conditions apply to all Project activities in VA
a	Natural succession to restore tree and scrub/shrub vegetation above a buried pipeline or within a 20-foot wide access corridor straddling a buried pipeline.	IP Application, Section 5.2.10
b	Specific requirements for pipelines that would differ from utility lines buried in Federal Navigation Channels.	IP Application, Section 1.9.5
	2017 Approved NWP 12 (NAO-2017-0898/#2016-0305) Special Conditions	
1	The Permittee shall submit to the Corps all compensatory mitigation credit purchase bills of sale prior to any wetland impacts. Please submit documentation to todd.m.miller@usace.army.mil	IP Application, Section 5.3
2	The Permittee shall ensure that all waters and wetalnds are flagged in the field prior to any construction to prevent accidental impact to resources not necessary for construction.	IP Application, Section 5.2.4
3	The Permittee shall remove all temporary Stream construction entrances immediately upon project completion.	Noted
4	The Permittee shall replace to pre-project contours, stabilized, and re-seeded all stream banks, riparian areas, and wetlands disturbed as a result of this project immediately upon project completion at each crossing.	IP Application, Section 5.2.9

5	The Permittee shall ensure that any properties unavailable for wetland survey prior to application submittal shall be reviewed and submitted to the Corps for incorporation in to our records for the delineation.	Completed
6	The Permittee shall submit to the Corps for additional permit consideration, any adjustments to impacts based on information gained from updated wetland delineations or construction/plan alteration.	Included in this application
7	Upon completion of the project the Permittee shall submit to the Corps As built plans.	Noted
8	The construction limit of disturbance within Waters of the US shall be limited to 75 feet. This limitation shall be carried out 50 feet on either side of the Waters of the US to limit impacts to the aquatic resource.	IP Application, Section 5.1.3
9	One month after the authorized work is completed, and again at the end of the first full growing season (no later than October 31) after the authorized work has been completed the Permittee shall inspect all authorized stream and wetland crossings sites that have been temporarily impacted in order to verify that excess fill material has been removed and that the site has been restored to pre-existing contidtions and contours. These monitoing events shall be summarised in a single report containing: a. A statement of whether all excess fill has been removed. b. A description of the status of vegetative growth in the impacted wetlands/stream	Noted

ATTACHMENT B-2
DEQ Staff Presentation at Aug. 21, 2018 SWCB Meeting

Report to the State Water Control Board

Additional Public Comments
Sufficiency of Nationwide Permit 12

Melanie D. Davenport, Director
Water Permitting Division
August 21, 2018

State Water Control Board Directive

- Interested persons may submit crossing-specific technical information on:
  - Sufficiency of NWP12 permit for MVP and ACP
  - Sufficiency of NWP12 general and regional conditions
  - Sufficiency of §401 water quality certification of NWP12 for specific stream crossings for MVP and ACP
- DEQ will evaluate the comments and submit a summary to the Board

State Water Control Board Directive

- No further action by the Board is required

- After review of the summary, the Board may consider further actions, consistent with its regulatory authority, at its discretion without additional public comment on whether further action is warranted

General Overview

- Public Comment Period: April 30, 2018 to June 15, 2018 at 11:59 pm
- Public Comments Received during comment period – Electronic mail, Letters, Postcards:
  - Atlantic Coast Pipeline (ACP): 10,218
  - Mountain Valley Pipeline (MVP): 2,543
- Comments made available to the Board and posted to DEQ's public web site on July 25, 2018

Comments on Atlantic Coast Pipeline

- NWP12 Inadequate: 2,079
  - Most-mentioned topics:
    - trout / fish / mussels / aquatic species
    - water quality standards / Tier III waters
    - water supply
    - recreational use / business use
    - erosion / sedimentation / land slides / steep slopes
- NWP 12 Sufficient: 8,069
  - Most-mentioned topics:
    - NWP12 is protective
    - Operational safety/leak detection system
    - Jobs/economy
    - need

Comments on Mountain Valley Pipeline

- NWP 12 Inadequate: 2,503
  - Most-mentioned topics:
    - trout / fish / mussels / aquatic species
    - water quality standards / Tier III waters
    - water supply
    - recreational use / business use
    - erosion / sedimentation / land slides / steep slopes
- NWP 12 Sufficient: 17
  - Most-mentioned topic: NWP12 is protective

Comments Within Scope of Board Directive

- Number of comments within scope of Board directive (i.e., crossing specific technical information)
  - ACP: 32
  - MVP: 327 (304 of these from 1 commenter)

- Majority of these comments focused on erosion and sediment control issues

Comments Out of Scope of Board Directive

- Majority of comments reiterated topics from the upland 401 water quality certification process:
  - Private property rights / eminent domain / negative impact to property values
  - Hydraulic fracking vs. other energy generation sources
  - Preference for renewable energy
  - Impacts to rural and forest view sheds
  - No demonstrated need for project and no demonstrated demand for natural gas
  - Threat of explosions once in operation
  - Greenhouse gas emissions
  - Permanent impacts to aquatic species and water quality
  - No consideration of cumulative impacts
  - Increased economic development and job creation
  - Safety of pipeline transportation vs. other methods of transporting natural gas
  - Thoroughness of FERC and Corps evaluations

Example of comments

- Majority of comments made general statements – did not provide technical information for a specific crossing

  "open trenching will cause release of sediments to streams"

  "using open trench methods will not permanently impact streams"

Example of comments

- Horizontal directional drilling (HDD) under streams lacks geotechnical studies supporting this method as the best choice
- Inadvertent return of water and/or spoils management measures are inadequate

Example of comments

- Questions/comments about federal/state approval processes, roles, and responsibilities regarding regulated project activities

  Examples:

  - Definition of wetland, delineation of wetlands, how wetland resources are regulated by the Corps and DEQ

  - Not all surface water crossings were identified

  - State law requirements for minimum design criteria re: erosion & sediment / stormwater controls, and roles of various programs regulating these controls

Example of comments

- Expectations of no impacts to the environment

  Examples:

  - Measures should prevent all releases of soil/material, withstand all weather events, completely avoid any ground disturbance in specific geographic areas

  - Sedimentation is a permanent impact, not temporary

Example of comments

- Comments regarding aquatic species protection

  Examples:

  - No time-of-year restrictions were applied at certain crossings, (i.e., trout waters)
  - Other agencies may have already considered need for restrictions

Example of comments

- Disagreement with federal & state law and regulations regarding regulation of natural gas projects

  Examples:

  - NWP12 does not adequately consider cumulative impacts

  - There are more impacts occurring than should be allowed by the single and complete crossing structure

Example of comments

- Inclusion of topics not regulated by Section 404 or VWP permitting

  Examples:

  - Social justice (impacts on economically-disadvantaged communities)
  - Economic drivers (creation of jobs)
  - Legal issues (eminent domain)

Additional Presentations by Staff

Comparison of VWP Permit and NWP12:

- Of 46 regional and general conditions in the Corps' NWP12, only 2 differ from the VWP Permit Program
- Both MVP and ACP voluntarily offered to address these 2 provisions
- The Corps incorporated these 2 provisions as conditions to the NWP12 permits.
- For linear projects (all roads and all types of utility projects), both DEQ and the Corps have substantially identical permitting requirements.
- State Law Section 62.1-44.15:21.D.2 – No Board action on an individual or general permit for facilities and activities of utilities and public service companies regulated by FERC shall alter the siting determination made through FERC approval

Additional Presentations by Staff

- Overview of Erosion & Sediment Control Requirements for Wetland and Stream Crossing
- Construction related crossings
- Pipe installation within streambed

Additional Presentations by Staff

- Examples of existing pipeline rights of way and stream crossing.

Conclusions

- Majority of comments did not provide any specific, technical information on why Nationwide Permit 12 is not sufficiently protective at crossing-specific locations
- No new, crossing-specific information supports conclusion that NWP12 is not protective of any specific wetland and/or stream
- Majority of comments reiterated issues brought up in the upland 401water quality certification process

June 15, 2018

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

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

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

Dear Ms. Regn:

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

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

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

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

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

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

MVP's Total Stream and Wetland Impacts

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

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

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

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

Projects Utilizing NWPs in Virginia (2013–2017)

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

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

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

Projects Utilizing VWP General Permits (2013–May 2018)

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

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

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

705 (wetland impacts)
142 (stream impacts)

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

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

[2] 9 VAC 25-210-130(J).
[3] The data received from the Corps did not allow MVP to identify the total and individual stream and wetland impacts.

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

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

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

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

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

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

[4] 82 Fed. Reg. 1860, 1986 (NWP 12 Note 2), 1999 (NWP General Condition 15) (Jan. 6, 2017).
[5] *Id*. at 2004–05.

A. District Engineer's Decision

The Corps' NWPs prescribe the determinations made as part of verifying that the Project is authorized under NWP 12.[6] Having made these determinations, the Corps issued a verification letter issued to MVP on December 26, 2017. Congress committed this determination to the Corps of Engineers[7] and the District Engineer's judgment is entitled to deference.

1. Corps' Determination that Adverse Impacts Are Minimal

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

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

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

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

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

B. NWP General Conditions (GC)

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

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

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

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[6] 82 Fed. Reg. at 2004.
[7] 33 U.S.C. § 1344(e).
[8] 82 Fed. Reg. at 2004.
[9] *Id*.
[10] *Id*. at 2005.
[11] 82 Fed. Reg. at 2004–05.
[12] *Id*.
[13] *Id*. (emphasis added).
[14] *Id*. at 1998–2004.
[15] *Id*. at 1998.

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

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

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

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

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

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

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

5. GC 9: Water Flows Must Be Properly Managed

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

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

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

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

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

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[16] *Id*.
[17] *Id*. at 1998–99.
[18] *Id*. at 1999.
[19] *Id*. at 1949.
[20] *Id*. at 1999.
[21] *Id*.
[22] *Id*.

as placing equipment on mats.

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

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

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

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

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

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

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

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

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

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

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

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

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[23] *Id*.
[24] *Id*.
[25] Corps, Decision Document, Nationwide Permit 12, at 7-8 (Dec. 21, 2016).
[26] 82 Fed. Reg. at 1999; *see also* 33 C.F.R. § 330.2(i).
[27] 82 Fed. Reg. at 1999.
[28] *Id*.; *see also* Regional General Conditions 4 and 5.

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

14. GC 22: Critical Resource Waters Must Be Avoided

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

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

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

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

Under GC 25 (and 33 U.S.C. § 1341(a)), the Corps may not issue an NWP authorization unless the State has issued or waived CWA § 401 certification.[34] The Board issued a conditional certification for NWP 12 on April 7, 2017.[35]

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

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

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

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

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[29] 82 Fed. Reg. at 1999.
[30] Waters subject to these restrictions are identified in the Appendix.
[31] *Id*. at 2001.
[32] *Id*.; *see also* Regional General Condition 10.
[33] 82 Fed. Reg. at 2001.
[34] *Id*. at 2002.
[35] A State may not unilaterally withdraw or modify a certification after it has been issued. 33 C.F.R. § 330.4(c)(7); *see also* Corps Reg. Guid. Ltr. 87-03.
[36] *Id*.
[37] *Id*.

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

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

C. NWP 12 Permit Conditions

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

1. Wetland Loss Cannot Exceed 0.5 Acre

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

2. Pre-Construction Contours in Waters Must Be Restored

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

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

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

4. Wetland Topsoil Should Be Replaced During Trench Backfilling

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

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[38] *Id*. at 2003. The Norfolk District's Regional Conditions and the Joint Permit Application require additional information beyond what GC 32 requires.
[39] *Id*. at 1985.
[40] Refer to "Field Wetland Impacts Jurisdictional" and "Wetland Impacts" tables in DEQ's Public Notice.
[41] 82 Fed. Reg. at 1985.
[42] *Id*.; *see also* NWP 12 Regional Condition 3.b.ii and MVP's approved Project Specific Standards and Specifications (PSS&S).
[43] 82 Fed. Reg. at 1985. MVP's procedures for segregating and replacing topsoil in wetlands and other sensitive areas are outlined in Section 2.4.1 of the PSS&S.

5. Trench May Not Create a French Drain Effect

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

6. Stream Banks and Exposed Slopes Must Be Stabilized

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

7. Access Road Widths Must Be Minimized

Any access roads that cross streams or wetlands must be no larger than the "minimum width necessary."[46]

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

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

9. Temporary Access Roads Must Be Removed and Restored

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

D. Norfolk District Regional Conditions (RGC)

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

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[44] 82 Fed. Reg. at 1985. MVP's use of trench plugs and other measures to prevent this effect is addressed in Section 5.1 of the PSS&S.
[45] 82 Fed. Reg. at 1985. Stream bank and slope stabilization are further addressed in Section 5.1 of the PSS&S.
[46] 82 Fed. Reg. at 1986.
[47] *Id*.
[48] *Id*. (NWP 12 Note 4).
[49] *See* Norfolk District Regional Conditions for the 2017 Nationwide Permits (NWPs) Applicable in Virginia (Including Northern Virginia Military Installations within Baltimore District's Area of Responsibility).

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

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

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

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

3. RGC 8: Culverts in Streams Must Be Countersunk

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

4. RGC 10: Mitigation Plan Must Be Submitted

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

5. RGC 11: Temporary Impacts Must Be Restored

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

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

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

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

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

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

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

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

2. Delineation and Classification of all Waters Within the Corridor

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

3. Alternatives Analysis Required for All Crossings

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

4. Crossings Must Be Direct or Perpendicular to Streams

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

5. Wetland Grading and Grubbing Must Be Minimized

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

6. Compensatory Mitigation for Permanent Wetland Conversions

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

7. Minimum Pipeline Burial Depths Under Waterbodies

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

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

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

any excess material must be removed from the wetland.

9. Required Measures to Protect Anadromous Fish

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

10. Inadvertent Return Plan Required for Horizontal Directional Drills

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

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

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

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

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

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

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

3. Compensatory Mitigation Must Be Consistent with the Virginia Code

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

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

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

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

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

2. SC 2: Waterbodies Must Be Flagged in Field

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

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

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

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

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

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

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

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

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

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

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

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

8. Compliance with Virginia Marine Resources Commission Permit Requirement

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

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

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

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

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

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

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

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

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

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

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

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

4. Crossings to Be Made During Low Flow Conditions

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

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

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

6. Crossings to Be Completed as Quickly as Possible

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

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

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

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[53] PSS&S §§ 5.1, 5.2
[54] *Id.* § 5.1
[55] *Id.*
[56] *Id.*
[57] *Id.*
[58] *Id.*

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

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

9. Streambed Substrate and Wetland Topsoil to Be Replaced

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

10. Staging Areas Will Be Located Outside of Buffer Areas

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

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

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

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

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

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

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

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[59] *Id*.
[60] *Id*.
[61] *Id.*
[62] *Id*.
[63] *Id*.
[64] *Id*.

14. Enhanced Measures to Be Employed in TMDL Waters

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

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

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

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

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

III. PROJECT IMPACTS WERE SUBJECTED TO MULTIPLE CUMULATIVE IMPACTS REVIEWS

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

A. Corps Conducted a Cumulative Impact Review for NWP 12

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

[65] *Id*. §§ 2.0, 4.5, 5.1.
[66] Subsequent to the approval of the PSS&S, MVP elected to utilize the BMP inspection frequency for TMDL waters for all parts of the Project.
[67] PSS&S § 5.1
[68] *Id*. § 5.2.1
[69] Corps, Decision Document, Nationwide Permit 12 at 7-8 (Dec. 21, 2016).

individual and cumulative adverse effects on the aquatic environment."[70]

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

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

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

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

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

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

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[70] *Id*. at 79.
[71] FERC, Mountain Valley Project and Equitrans Expansion Project Final Environmental Impact Statement, at 5-16 (June 2017).
[72] *Id*. at 1-16.
[73] 40 C.F.R. § 1506.3.
[74] 82 Fed. Reg. at 2004 (emphasis added).
[75] *Id.* at 2004–05.

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

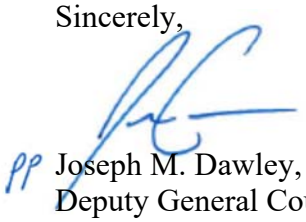
To summarize, there unquestionably is reasonable assurance that the Project's NWP 12 authorization is protective of water quality. First, the Corps verified that each stream and wetland crossing meets all of the applicable requirements—and this review was supplemented by the crossing-specific review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

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

[76] E.g., GC 2-3, GC 18, RGC 6.
[77] E.g., GC 12, PSS&S (applicable via GC 12)).
[78] E.g., GC 11, RC12.5, SC 2, PSS&S (applicable via GC 12).
[79] E.g., GC 23, NWP 12, RC12.3.b, SC 8.
[80] E.g., GC 2, NWP 12, PSS&S (applicable via GC 12).
[81] E.g., GC 9-10.
[82] E.g., GC 7, 401 Certification Condition 1.
[83] E.g., NWP 12, RGC 7, RGC 11, SC 4.
[84] E.g., GC 23, RGC 10, RC12.3.b.vi.
[85] E.g., GC 30, SC 1, SC 7.
[86] http://www.deq.virginia.gov/PipelineUpdates.aspx#PublicComment.

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

Sincerely,



pp Joseph M. Dawley, P.E.
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ATTACHMENT B-3
Transcript of Aug. 21, 2018 SWCB Meeting (Excerpt)

In The Matter Of:

In Re:

Moutain Valley Pipeline/Atlantic Coast Pipeline Reports

State Water Control Board Meeting

August 21, 2018

ZAHN
COURT REPORTING

208 E. Plume Street, Suite 214
Norfolk, Virginia 23510
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email: info@zahncourtreporting.com

Original File 082118.waterboard_1.txt

Min-U-Script® with Word Index

VIRGINIA:

STATE WATER CONTROL BOARD

In re:

MOUTAIN VALLEY PIPELINE/ATLANTIC COAST PIPELINE REPORTS)

STATE WATER CONTROL BOARD MEETING

RICHMOND, VIRGINIA

TUESDAY, AUGUST 21, 2018

Appearances:

Robert Dunn, Chair
G. Nissa Dean
Timothy G. Hayes
Roberta Kellam
Lou Ann Wallace
Robert H. Wayland, III
Heather Wood, Vice-Chair

David C. Grandis, Assistant Attorney General
David K. Paylor, Director of DEQ
Cindy Berndt, DEQ, Director of Regulatory Affairs

The proceedings were taken by Deanna A. Arend, Registered Professional Reporter, a Notary Public for the Commonwealth of Virginia at large, commencing at 12:32 p.m., on August 21, 2018, at the House Committee Room, First Floor, Pocahontas Building, 900 East Main Street, Richmond, Virginia.

P-R-O-C-E-E-D-I-N-G-S

MR. DUNN: I know there were some people who were not allowed to talk earlier --

(Interruption)

MR. DUNN: As I started to say, I know there were some people who were upset that we did not allow people to talk before we adjourned for lunch, but if you look at the agenda, it clearly states that none of the items related to the pipeline would start before 12:30. Assuming that there were going to be people coming for that part of the agenda, we did not want to have things go on and they would miss it, so we are sticking to what was printed out in the agenda and sent out and so this will now start after 12:30.

I want to remind you that this is a -- this is a meeting of the Board. Conduct that interferes with the orderly and effective public meeting or interference with the right of other members

of the public to speak to the Board is prohibited. I would like to ask you to not shout out, not snap your fingers and other things that have been done in previous meetings, because we'd like to hear all of the speakers and not be disruptive. I have asked the State Police to escort those who continue to disrupt this meeting out of the building.

Okay. We're ready for the first item on the agenda.

MS. DAVENPORT: Mr. Chairman and Members of the Board -- I need my presentation, sorry.

MR. DUNN: While she's looking for her presentation, I want to remind the Board members our next future meetings are on September 20th and December 13th.

MS. DAVENPORT: Different technology. I apologize. Mr. Chairman and Members of the Board, I have two reports to make to you this afternoon. And in the first report, which is DEQ's report to you on the additional public comments that we received in regard to sufficiency of Nationwide Permit 12, I have several parts of that report that will be delivered by staff, so I'm kind of the overview.

So I would like to start out reminding you what your directive was at the April 21st, 2018 meeting. You directed that interested persons may submit crossing-specific technical information on three items. The sufficiency of Nationwide Permit 12 related to both Mountain Valley Pipeline and Atlantic Coast Pipeline. Two, the sufficiency of Nationwide Permit 12 and the general and regional conditions contained in it. And, three, the sufficiency of the Section 401 water quality certification that the Board issued regarding Nationwide Permit 12 for specific stream crossings for both Mountain Valley Pipeline and Atlantic Coast Pipeline.

You also directed that DEQ evaluate the comments and submit a summary to the Board.

In your directive back in April, you also noted that no further action by the Board is required, and that after review of the summary, the Board may consider further actions, consistent with its regulatory authority, at its discretion without additional public comment on whether future action is warranted.

So, general overview, the public comment period ran from April 30th, 2018 through June 15th of 2018, and it closed at midnight on the evening of

June 15th. We received public comments via electronic mail, letters and postcards. And we received comments on the Atlantic Coast Pipeline, slightly over 10,000 comments, 10,218. And on the Mountain Valley Pipeline we received a little over 2500, 2,543. The comments were made available to the Board and posted to our public Website on July 25th of this year.

So I'm going to spend a minute talking about some of the numbers in terms of the comments that we received on Atlantic Coast Pipeline. We received 2,079 comments indicating that Nationwide Permit 12 is inadequate for the activities involving stream and wetland crossings.

The most-mentioned topics included impacts and concerns regarding trout, fish, mussels and other aquatic species; the concern regarding water quality standards and potential impact to Tier III waters; water supply in terms of potential impacts; recreational use and business use of state waters, and other comments regarding erosion, sedimentation, landslides, slips and steep slopes.

We also received just over 8,000 comments -- 8,069 -- noting that Nationwide Permit 12 is sufficient and is protective. And the most-mentioned comments were that Nationwide Permit 12 is protective;

that there are operational safety and leak detection systems in place. Comments on the impact on jobs and the economy, and then comments on the need for the pipeline.

When it came to Mountain Valley, we received just over 2500 comments that Nationwide Permit 12 was not adequate. And the topics most-mentioned were very similar, if not identical to what we heard on Atlantic Coast Pipeline, in that there were concerns regarding the impacts to trout, fish, mussels and other aquatic species; water quality standards and potential impact to Tier III waters; potential impacts to water supply; recreational and business use of surface waters; and then, again, concerns regarding erosion, sedimentation, landslides, slopes and steep slope construction.

The most-mentioned topic that was included in the comments that noted Nationwide 12 is sufficient was that it is protective.

So we took a look at the comments that were within the scope of the Board directive, and that goes back to that initial slide I opened with in terms of they provided crossing-specific technical information. We received 32 comments regarding the Atlantic Coast Pipeline that fell into that, and we

received 327 on Mountain Valley, but note that 304 of those were from one commenter, so it was a series of comments where it was kind of the same format but the stream crossing identification and some of the information and calculations were different.

The vast majority of these projects -- I'm sorry, of these comments that were within the scope of your directive in that they were crossing-specific technical information focused on issues related to erosion and sedimentation control and potential sediment impacts to state waters and wetlands.

For a number of the comments that were not within the scope of your directive, they were not targeted to specific technical information on specific crossings, those comments were very similar to the comments that we all received back in December when we looked at the upland 401 water quality certification. This is a list in summary. I'll run through them. Concerns about private property rights, eminent domain, negative impact to property values; the use of hydraulic fracking versus other energy generation sources; a preference for renewable energy; impacts to rural and forest view sheds; that there is no demonstrated need for the project and no demonstrated demand for natural gas; the threat of explosions once

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in operation; increase in greenhouse gas emissions; permanent impacts to aquatic species and water quality; no consideration of cumulative impacts; increased economic development and job creation; safety of pipeline transportation versus other methods of transporting natural gas; and then comments on the thoroughness of both the evaluations conducted by the U.S. Army Corps of Engineers and the Federal Energy Regulatory Commission, FERC.

I have a couple of examples and just was going to run through them quickly. A lot of the comments -- the majority of the comments really were general information and not technical information related to a specific crossing. Just as a couple of examples: Open trenching will cause release of sediments to streams. Using open trench methods will not permanently impact streams.

There were comments that we received about horizontal directional drilling in terms of lacking geotechnical studies that support the use of it, and that inadvertent return of water and/or spoils management measures are inadequate.

There were a number of questions about the federal/state approval process, and the host of roles and responsibilities regarding the regulated

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project activities. For example, there were concerns about the definition of wetland, what's the delineation of wetlands, how wetland resources are co-regulated by the Corps and DEQ. There were comments that not all surface water crossings were identified. And then there were comments talking about minimum design criteria that we utilized in erosion and sediment control and stormwater controls and basically the various roles of those programs and how they interact.

We had comments that talked about an expectation of no impact to the environment. For example, that sedimentation is a permanent impact, not temporary; measures should prevent all releases of soil and material, and they should withstand all weather events and completely avoid any ground disturbance in specific geographic areas.

And then there were comments regarding aquatic species protection. No time-of-year restrictions were applied at certain crossings. And then comments on how other agencies played a role in considering the need of protecting aquatic species.

There were some comments that expressed disagreement with federal and state law and regulations regarding the regulation of natural gas projects. For example, Nationwide Permit 12 does not adequately

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consider cumulative impacts, and that there are more impacts occurring than should be allowed by the single and complete crossing structure.

And then there were topics that are not regulated either by Section 404 or the Virginia Water Protection permitting program. And those included comments regarding social justice and impacts on economically and disadvantaged communities, economic drivers, creation of jobs, and then legal issues most often highlighted, the validity of the exercise of eminent domain by the pipeline developers.

So general overview of the comments, we did provide you the Excel tables that identify the comments and summarize them. I know it was an awful lot of material, but we really wanted you to take a look at it and not edit it down for you.

Right now I am ready to tee up three different presentations by staff. The first thing we're going to run through is a comparison of the conditions and requirements of Nationwide Permit 12 as compared to what is authorized under Virginia's Virginia Water Protection program regulation in summary, and then Dave Davis is going to come up here and we'll go through the requirements side-by-side.

But in summary, of the 46 regional and

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general conditions in the Corps' Nationwide Permit 12, only two differ from the Virginia Water Protection permit program. And both the Atlantic Coast Pipeline and Mountain Valley Pipeline have offered to address those two provisions. And the Corps incorporated those two provisions as conditions to their coverage under Nationwide 12, and they are about mitigation. They're not about the nuts and bolts of actually doing the stream crossing.

And for linear projects -- we see an awful lot of road construction, and so for linear projects, whether it's a road, a pipeline, a natural gas pipeline, a sewer pipeline expansion, both DEQ and the Corps have substantially identical permitting requirements.

I did want to make note of one provision that's in the state law where there is no corollary at the federal level. And it is language in the State Water Control Board. I have provided you the citation, 62.1-44.15:21.D.2, and I have summarized what that language says. But essentially the General Assembly has put in state law that no Board action on an individual or general permit for facilities and activities of utilities and public service companies regulated by FERC shall alter the siting determination

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made through FERC approval. That goes to some of the issues of avoidance and -- or possible avoidance and minimization, and that once the FERC alignment has been approved by FERC, we don't have the authority to make determinations that alter the site. And the General Assembly put that in the State Code some time ago.

So with that, I am going to ask Dave Davis to come up here and go through the side-by-side comparison of Nationwide 12 permit conditions and the requirements in the Virginia Water Protection permit program. And just -- if I could just take a minute, Mr. Chairman.

MR. DUNN: Yes.

MS. DAVENPORT: If extra copies -- extra paper copies of these presentations will be in the back, and our intent is to get them uploaded to the website end of business day today.

MR. DUNN: Thank you.

MR. DAVIS: Good afternoon, Mr. Dunn and Members of the Board. Good to see you again. I'm going to take a minute and just do a side-by-side comparison for your information of the VWP permit requirements and the Nationwide 12 Permit requirements. You will see on the slides that there's a lot of words on some of them, because I have provided direct

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quotations out of the regulation, but I've tried to highlight keywords that focus your eyes so that you can see that in many cases there's actually a direct verbatim wording in both statutes.

The first thing -- the first thing is that both the VWP permit and the Corps Nationwide 12 Section 404 permit apply to the same activities: Dredging or filling of surface waters and wetland.

And then linear transportation and linear utility projects have substantially identical permitting requirements.

VWP regulation states that coverage under a general, regional or Nationwide permit promulgated by the Corps of Engineers and certified by the Water Control Board shall be deemed coverage under a VWP general permit regulation.

And then you saw this is on Melanie's presentation, but the state law says that no Board action can alter the siting determination once FERC has made a determination on the location.

This is just a summary slide to summarize the next 25 or so slides. But this is to show you that both the federal and the state permit have requirements on how to delineate wetlands, avoidance and minimization, compensation, definition of single and

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complete project and so forth.

As we go through the side-by-side comparison, I'm not going to read the details of each slide for you, but, again, you will see the highlighting, as I've tried to point out the similarities.

So both programs use the same joint permit, the same forms, the same information submitted. Both programs have the same or substantially the same definition of what constitutes a single and complete project.

Both programs have the same threshold for when compensation is required. Over a tenth of an acre of wetlands and/or over 300 linear feet of stream. Both permits require compensation for permanent impact. And there is one difference -- one of the two differences here is that the VWP permit program does have a requirement for conversion impacts. Conversion being currently forested wetlands that will be converted to emergent wetlands to the project. And as the asterisks show, both pipeline companies have voluntarily offered that they would compensate for those conversion impacts, and the Corps of Engineers incorporated that in their Nationwide 12.

Both programs have requirements for

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erosion and E&S control.

Both programs use the same technical criteria for identifying surface waters and streams. Those are programatic similarities.

Next, we're going to go line-by-line through the VWP regulation and compare that with the Nationwide 12. The biggest chunk will be the standard project conditions, and then towards the end there will be some special conditions.

So both programs discuss impacts to beneficial uses and the need to avoid minimizes to the practicable extent possible. They both talk about activities which cannot disrupt the movement of aquatic life or aquatic species.

Both programs require that flows downstream be maintained to protect those aquatic species. And they both -- they both state that there should only be a minimal adverse effect on navigation.

Both programs require that activities should not impede the passage of normal or expected high flows. And they also address the continuous flows of perennial streams.

Both programs state that the excavation, dredging and filling shall be accomplished in a manner that minimizes the disturbance and turbidity of the

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water.

Again, maintaining normal and low-flows. And, also, the construction activities are to minimize the construction materials from entering surface waters.

Both programs require that all fill material be clean and free of contaminants, and have a requirement for the prevention and containment of spills of lubricants and other pollutants.

Both programs require that any machinery or heavy equipment be placed on mats or geotechnical (sic) fabric, and that any restoration activities are conducted in the dry or during low-flow periods or conditions.

Both programs require that temporary disturbances are avoided and minimized to the extent practicable. And both require that all temporarily disturbed wetlands are restored to preconstruction conditions within 30 days of completing work in that area.

The next slide. This is the second of the two areas where there's a difference between the programs. This is the -- this is a requirement that any wetland or surface water that is not proposed for impact by the project to be flagged in the field so

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that contractors can identify those areas and stay out of them. There's no companion requirement for that in the Nationwide 12, but the two pipeline companies voluntarily offered to do that, and that was accepted by the Corps and incorporated in the Nationwide 12 program.

The next couple of slides are special conditions, and in many cases they're a reiteration of the standard conditions, but these are special conditions for utility projects. And, again, this says that any temporary disturbances or impact shall be restored to preconstruction conditions.

Any materials that are stockpiled, whether excavated or so forth, will be temporarily sidecast, not to exceed 30 calendar days -- I'm sorry, 90 calendar days. Again, the language is similar in the Nationwide 12 program.

As with the special con -- I'm sorry, as with the standard condition, there's a special condition requiring compensation for conversion impacts. And, again, that's when there's currently a forested wetland that would be permanently converted to an emergent wetland. And, as I said before, both pipeline companies have voluntarily offered that.

The first one here that's dealing with

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pipes and culverts, it must be countersunk at -- that's pertaining to access roads for construction of the project. And there's almost the same language across both programs. And then both programs require time-of-year restrictions as recommended by Game and Inland Fisheries.

And then just in summary, of the 46 regional and general conditions of the Corps' Nationwide 12 program, only two of those differ from the VWP permit. And both of those two differing conditions have been voluntarily accepted by the two pipeline companies and incorporated in the Corps of Engineers Nationwide 12 permit for those.

Again, as you see in the side-by-side comparison, both programs have similar, or identical in some cases, conditions. And that's across all linear projects. They are not just natural gas pipelines, but any utility project and any road.

Thank you.

MS. DAVENPORT: As I mentioned, a number of the comments that we received that were crossing specific crossed into issues of erosion and sedimentation control, and what kind of protections will there be for this construction activity.

I think I have one -- can you go back

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to mine for just a second, please? I also wanted to mention that we have heard from a number of folks for a substantial period of time that one of the major flaws in utilizing Nationwide Permit 12 is that it is a blanket permit that does not provide any crossing-specific review or information. That is what happens when we look at our erosion and sediment control plans. So I have asked staff from our E&S and stormwater program -- Jaime Robb is going to do the primary presentation, and then Ben Leach is here if we have questions or need to get into more details. Ben has been the point person for actually reviewing the E&S and stormwater plans for both of these projects.

So I'm going to turn the podium over to Jaime, but I just wanted to point out a couple of things. I've actually been in the field several times since construction started, and one of the things that wasn't always clear to me in terms of some of these E&S controls and kind of the big picture is that we talk about E&S requirements for activity in wetlands and streams, but there's really two kinds of activity. There are instances where these streams and wetlands need to be crossed by trucks, by machinery, by the equipment that's actually involved in the construction of the project. And there's a set of requirements that

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sets out in our E&S -- and Jaime will talk about this -- that protects those resources from the trucks and equipment going across. There's a very prescribed way that you protect both those wetlands and streams.

And then the second kind of activity is actually when pipe needs to be installed either through the wetland or in the streambed. So I kind of mixed those two up in my mind, so sometimes when I was looking at the plans or hearing about things, it didn't necessarily make all that much sense to me. So I just wanted to alert you that we're really talking about construction activity that crosses these resources, and then pipe installation that occurs within those resources. So with that, I'm going to turn it over to Jaime.

MS. ROBB: Good afternoon, Chairman Dunn, Members of the Board. I am Jaime Robb, and I manage the Office of Stormwater Management for DEQ. Our office is responsible for erosion and sediment control review and stormwater management plans. Not just for the pipeline, but for other projects that are regulated land-disturbing projects across the Commonwealth.

So what Melanie's asked me to do today is put together a little bit of information regarding our erosion and sediment control review regarding

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specifically stream crossings, but I just want to emphasize again, you know, this particular presentation is specific to the stream crossing portion. We are reviewing the E&S requirements for the entire project itself.

So under our Erosion and Sediment Control Plan review every stream crossing is reviewed. As a matter of fact, every portion of the land-disturbing activity is reviewed. This includes the route that it's going through, the type of land cover that's being disturbed, ensuring that the proper controls are being put in place. Looking at the erosion and sediment controls as a systemwide set of controls.

So, for example, what happens in the uplands, making sure those controls are adequate to protect the downstream portions of the project as well. Specifically, I think it's very important to note as well that here in Virginia we don't require any work in the streams while they are wet. So that requires some level of --

(Interruption)

MS. ROBB: Excuse me. That requires the companies to come up with some other alternative to make sure that they are working in the dry conditions, and we'll talk a little bit about that further.

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Specifically, under the erosion and sediment control regulations, we have 19 standards that speak to both upland and stream crossing erosion and sediment control, and, specifically, there are three that address the stream crossings.

And, additionally, I'll talk briefly about the overlap with our erosion and sediment program, as well as the Nationwide 12 program.

So just getting you started, I thought I'd highlight the three erosion and sediment control minimum standards related to stream crossings. And as you can see, we've got Minimum Standard 12 that states: When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during constructions. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for -- may be used for these structures if armored in a nonerodible cover material.

And then we've got Minimum Standard 13: When live watercourses must be crossed by construction vehicles more than twice in a six-month period, a temporary vehicular crossing shall be constructed of nonerodible materials.

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And then Minimum Standard 15: The bed and banks of watercourses shall be stabilized immediately after work in the watercourse is completed.

So as -- you just heard a presentation from Dave Davis that talked a little bit about the -- or gave you a comparison of the VWP permit requirements and Nationwide 12 permit requirements. And as he mentioned, each stream crossing is considered single and complete for linear projects. The crossing of a single waterbody multiple times is considered separate. And so we are looking -- when we're reviewing those erosion and sediment control plans -- at each one of those crossings, evaluating those erosion controls specifically at that crossing. We want to make sure that stream and wetland impacts are minimized or avoided when possible, minimizing the amount of soil disturbance associated with the land-disturbing activity, and then maintaining normal downstream flows. And all of that aligns very closely with those conditions of the Nationwide 12 that you just heard about.

So, again, the Nationwide 12 requires erosion and sediment controls to be maintained during construction. That's exactly what we're looking at. It requires excavated material be placed back into the

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trench to the original contour. So when we get these plan sheets in, we're looking at the preconstruction condition and the post construction condition and ensuring that those contours -- that the land cover, the contours, the streambeds, all of that is returned back for these particular projects.

And, in addition, as they do work in these streams, they are excavating those streambeds. They are separating out -- segregating out the materials, soil materials, and then replacing those back after they finish their work in the same level of order that it was removed that it's in the ground. And then, of course, stabilizing the river rocks or whatever natural stone was there to begin with. And this helps protect that in stream scour or sedimentation that could have occurred from that work on the stream.

Additionally, we require the preconstruction elevations and revegetation of the site. And that plant species that are native to Virginia -- that are not invasive -- be used for revegetation purposes.

I mentioned earlier that here in Virginia folks can't do work in the wet. They can only do work in dry streams. And that's unique to Virginia. Some

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of our neighboring states don't require that, as we understand it. So there's a variety of methods that they can use to do that work on stream crossings. And what we're going to look at is just some very elementary diagrams that we've come up with on some of those crossings.

Primarily, we're seeing dam and pump or pump around crossings. We've got flume crossings. At one point there was consideration of a coffer dam, but I believe that that's been taken off the table. And then, of course, there is some consideration of HDD, horizontal directional drilling.

So, again, excuse the very elementary photos, but what I wanted to do -- and we're going to have some photos of plans later on. But I wanted to show -- without all of the other fluff that comes on plans that we look at -- just the crossing itself. So you can see here that what we've got is a pump -- dam and pump around. And the upstream side of the stream is dammed off. And then that -- the pump is installed and piping such that that stream water is then literally pumped around to the other side of another dam so that they can do the work in the dry, as required by Virginia.

Another type of crossing is a flume

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crossing. And essentially very similar setup here, but instead of pumping around the site, a pipe is actually laid through the dry area of the crossing that allows the stream to continue flowing to just the other side of the dam. And it's important to recognize here, we also require the energy dissipation, a mechanism that measures to ensure once that water makes it to the other side of the dam that it's not creating an erosion or sedimentation problem as it's being released.

We have a coffer dam diagram here. Just essentially -- this is typically for your water streams and crossings. And they do a little bit of work -- dam-off a certain area along the stream banks and can do some work in the dry so they pump out that water. And then eventually make their cross to the other side.

And, lastly, as I mentioned, horizontal directional drilling is a crossing method that is proposed as part of these projects. And, essentially, they start on one side away from the stream banks, usually it's set back a little bit in the upland. And they drill a pilot hole in the direction that they want to drill and underneath the streambed. And through time it -- they replace -- they replace that equipment to drill out larger -- larger diameters until they get to that size that they need for the pipe installation.

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Usually they start on both sides of the stream and then meet somewhere in the middle.

So what we've got now is we're going to have a few pictures of the stream crossings. And I apologize, they're not very big, but we didn't want to lose some of the resolution here. But here we've got an example of a crossing in Augusta County. And just to note, these have not been approved yet. This is just for example purposes.

I'm going to ask Ben Leach, who is our lead technical reviewer on this project to walk you through some of the erosion and sediment control measures that are being evaluated and looked at through our review. Specifically, in the plans. Hopefully we don't get too technical, but this is what we -- this is what we do and what we look at.

MR. LEACH: Chairman Dunn, Members of the Board, my name is Ben Leach. I am the technical lead on these particular pipeline projects and overseeing the contract work by our third-party reviewers.

Just to note that our stream crossings typically -- almost all of them are pump arounds approach. A flume could be potentially used if we see a significant rain event coming in, but most streams are being crossed in a manner of within 72 hours, and

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then being restored to post construction conditions and stabilized. So rarely will we see a flume being utilized for this particular project at this time, and for both, actually, more than likely.

There are a handful -- roughly about seven HDDs that will be potentially used during this project. Not all of them are necessarily tied to stream crossings themselves. For example, the Blue Ridge Parkway for Atlantic Coast Pipeline going under the mountain for about a mile. That is an example of HDD, not being used for stream crossings.

In this particular example -- this is Augusta County -- the Middle River is part of the Shenandoah River network, you can see that it is a coffer dam system. And this is typically what we see on detail. And I will go into further detail and plan review further along in these slides.

Another example that I will be going through is in Bath County, and it demonstrates braided streams in which it shows how E&S measures are reviewed. And at the scale that we review them at, it is roughly one inch equals 50 feet, typically, for the majority of our reviews. Stream crossings are called out in both projects at a resolution for which one can discern what the stream crossing techniques are.

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And I would like to note that in the Atlantic Coast Pipeline plans their resolution was at a higher scale, so they were required to do far more stream crossing details for us to discern what was there. And that's why -- when -- you'll see the -- one day the group plans. That particular detail will have a significant amount of stream crossings shown.

Jaime changed the slide. Sorry. Jaime highlighted one of the key issues here. Stream crossings themselves and E&S measures work as a collective system. It's not one measure that holds back the erosion and sediment control, the sedimentation from leaving the site. It is a series of measures that are installed in a sequence that allow for maximum filtration that can occur and decrease of energy that will leave the site that cause further damage downstream.

Our key techniques for how we approach that is through utilization, first and foremost. Clean water diversions. Clean water diversions, which you can see on this particular image, are in that -- God forbid I say it -- North Carolina blue. And that particular element, along with the diversion dike, which is in magenta, guides the water -- clean water -- from offsite away from the site activity itself.

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Without these particular measures installed, the E&S measures within the confines of the limits of disturbance cannot be properly sized, engineered -- technically engineered sized for that slope extended in the drainage area contributing to that.

So these particular elements -- divert water away from the construction site so the only runoff that will occur as a result of potential sediment leak and runoff will be from the confines -- any raindrops that fall within the limits of the disturbance, which is typically 125 feet wide.

Another technique that we are using for this particular -- both projects are slope breakers, and they're also known as water bars. They break up an interval of water as they fall down the slope. They concentrate flow into a sump, and then into a triple stacked compost filter sock or a belted silt retention fence, which allows for the dampening of the energy of the water before it leaves the site.

And then these particular elements tie into the perimeter measures, which are usually compost filter socks and belted silt fences. We rarely, if ever, on this particular -- both of these projects see traditional silt fences, which are -- everyone sees are black silt fences on most construction sites. These

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particular measures that are utilized -- a super silt fence, which is literally a chain link silt fence with a belted silt fence attached to it, allows for these waters to pass through and not fail due to slope conditions and so forth.

And let me highlight one thing. Our E&S measures in Virginia are sized for the two-year, 24-hour storm event. That is what's outlined within the CGP through EPA, and that's a legacy that carried over into our E&S regs. And most of the rain events that we have seen to date are exceeding those 2-year, 24-hour storm events.

(Interruption)

MR. LEACH: The steep slopes are another concern when we're approaching any form of wetlands, water bodies. In this particular case is a steep slope condition. It's coming off the mountainside or hill down into the flatness of the Middle River, and then enters the flood plane on the opposite side.

Most slopes are in the western half of the state. We're looking at between 30 percent and 50 percent slopes. And that's not degrees, that's percentages. So when these E&S measures are installed, we typically will go out and inspect them after they've been installed and after rain events, and then, if need

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be, do adjustments in the field to make them more robust as the steep slopes may be headed in a certain way due to certain --

(Interruption)

MR. LEACH: -- soil types. And that's what we usually do.

(Interruption)

MR. LEACH: So one thing that's unique to --

(Interruption)

MR. DUNN: Please hold it down. No comments. We'd like to hear the presentation.

(Interruption)

MR. LEACH: One thing that's unique with these projects is the series and amounts of streams that they do cross. And we took that into consideration on how they approach the crossings.

The timber bridges are typically what you see as the transport crossing type, and you'll see that in each of these particular crossings. They could use something called a Bailey's bridge, which is a more robust standing bridge. We have yet to see one of those installed to date, but it could be shown in future crossings.

These particular pump arounds -- this is

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another example of one. What we end up doing here is allowing for the pipe to pass through using trench breakers sometimes -- trench plugs, sorry. Those trench plugs allow the water to pool behind the pipe, and then we bleed or drain them off periodically so -- in case of rain event. The key issue is you don't use the channel, the trench itself, as a conveyance system. You utilize it as a -- we transport it offsite or to the edge of the right-of-way and dissipate the energy within that.

This particular crossing is unique, along with -- there's a couple of others where you cross one stream, and then you'll have to cross another, and then you'll have to cross another. And it's because the majority of the time these -- in this particular case we're looking at the upland area of the mountains, and these streams are located typically at the head waters. And you'll have intermittent streams and braided streams constantly coming into play during our review process.

And that's a legend in case any of you want to review this at a later date. Keep in mind these are draft for Atlantic Coast Pipeline example.

The next is an actual stream crossing that occurred and is -- as of yesterday, this is a

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photo of the Roanoke River. I mean, the North Fork of the Roanoke River. This is the channel. It has been restored to a post construction condition. It will be monitored as it settles into the environment as the water flows. The slopes have been stabilized immediately with matting material. And the timber bridge, as you can see, is there to allow for crossing to continue. If you see on the upper half of the image, that is actually a super silt fence to add extra protection to that slope on this particular project, because there is a steep slope upstream up to the North Fork of the Roanoke River.

Another thing I would like to note is 25 feet on all streams and water body crossings is a water bar to add an extra feature of protection. Both -- the water bar is placed temporarily for the full stretch of 125 feet for the post construction. Sometimes it's in the neck down area, so it's 75 feet. And for post construction, you're looking at a 50-foot water bar that's required as well, to add that extra protection once the project is buttoned up and restored.

I did forget to mention every stream crossing is required to follow a neck down procedure. The neck down procedure is based off of going from

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125 feet -- sometimes you'll see an alternate work location or worksite, which is a bump-out, as we'll call it. And then it necks down to 75 feet. And the 75 feet is determined by 50 feet off the centerline of the water body crossing itself. And that's why sometimes you get abnormal neck down shapes and sizes during this project.

This is also another look closer up of the North Fork Roanoke River as of yesterday. The initial colloidal clays are layered back in. It's to allow for the rocks to adhere to the surface of the streambed over. Over time -- and by "time" I mean matter of weeks -- this particular channel will show less and less colloidal clay on the surface on the bed.

(Interruption)

MR. LEACH: This is another stream crossing near Chaos Mountain. You can see in this particular picture the steep slopes on either side. The bumps that you see are actual water bar measures that are installed. The first one shoots to the right. The next one shoots to the left, and it goes back and forth sometimes, or it goes all to one direction. The blue and the green items that you see in these photos are compost filter socks. Those particular socks two weeks ago when I was out there are twenty-four inch in

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diameter. They're to allow for stabilization of the slope. The matting material is the tan color, and then you can see also the grass coming in as well.

Currently, this particular stretch of the mountain is being restored to post construction's criteria, which will require returning it back to its original line and grade based off of the LiDAR topographic imagery that was created, and also restoring 75 feet of this right-of-way to brush, scrub, seed mixtures that have been vetted by DCR, along with a 50-foot centerline where the permanent right-of-way is pollinator species meadow seed mixes for this particular project.

That's the bridge crossing as well. You will see it right there. That is currently still there, but they will be removing that here probably in the next week or less.

This is the actual stream itself. As you can tell, they stabilized the banks, met the original line and grade of the post construction requirement. The stream is reflecting what the common characteristics of this particular stream are. The rocks are heavy, fragmented, cleaved off from rock faces many years, but this is how it will typically look on the streams once they restore it. And in some

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cases -- in some cases you will have streams require a live sapling or a live stake of willows, depending on which agency put forth that requirement to restore the 75 -- the 25 feet or up to whatever area that's not part of the permanent right-of-way as a restorative repairing area.

To give you some framework of unique conditions at the pipeline, this is one of the active trenches that was there two weeks ago when I was visiting. This particular trench is at Bent Mountain near the Blue Ridge Parkway. As you can tell, there is water standing in the trenches.

(Interruption)

MR. LEACH: Yes, with the pipe in it.

(Interruption)

MR. LEACH: Now, what I would like to highlight is you'll see periodically a small brown pipe that is there. There are three of them. Those are agricultural field drains utilized to drain the fields. That implies that the fields themselves have historic high groundwater tables. And this allows for the farmers to not create a muddy area for which their cattle work in. When the project is live and they're actively doing work, they utilize that black material off to the left to pump the water out. It's one of

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their dewatering facilities for pump water and --

(Interruption)

MR. LEACH: And it goes through a series of filtration devices that flows down into a swale that leads towards a native creek.

(Interruption)

MS. WOOD: Ladies and gentlemen, staff doesn't interrupt you when you're speaking so I would ask that you please --

(Interruption)

MR. LEACH: So I would like to highlight this particular one, because it is a wetland on the left where you see the green. That was identified and flagged as a wetland. You see the bridge crossing that wetland, and there is also further down a cattle crossing area for which the owner can still access his lower fields with his cattle. At this time the cows were not there during my visit.

(Interruption)

MR. LEACH: This is the example of a clean water diversion that allows for water that's up-slope. This particular area drains about seven-and-a-half, six acres, give or take, that feeds into this clean water diversion. The upper slope is a clean water diversion dike that sends the water to this

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particular feature and prevents it from entering the right-of-way where it can mix with soils that have been sediment latent runoff. The area is isolated. It is surrounded by riprap to allow for energy dissipation to occur.

MR. DUNN: Thank you.

MS. DAVENPORT: So the last presentation that will be given to you by Steve Hardwick, who works in our stream and wetlands shop with Dave Davis.

I asked the question of staff, you know, we know that these -- that there's been a lot of projects that have been authorized under Nationwide 12. We know that there are numerous utility corridors underneath wetlands and streams. I asked him to figure out if he could get some pictures as to what these corridors look like post stabilization and post restoration. Believe it or not, it took Steve -- because of where a lot of these are located, he really had to work hard to get access, because we couldn't just go on folks' properties to take pictures.

(Interruption)

MS. DAVENPORT: So I just asked him to provide a sampling of what these larger corridors looked like sometime after construction is completed, stabilization is completed and restoration is

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completed.
MR. HARDWICK: Good afternoon. I'm Steve Hardwick, the VWP Coordinator --
(Interruption)
MR. HARDWICK: Steven Hardwick, VWP Coordinator. As Melanie said, I went out, and I just tried to get examples of existing pipelines and their crossings of major rivers or streams. I tried to spread it around the state to see if I could represent some mountain streams, as well as some of the streams that are, you know, along the Piedmont and out towards the Coastal Plain.
The locations that I chose were based predominantly on ease of access. Given the timeframe, that was the -- that was the strategy that I was using for getting these shots.
This first map or illustration is just a -- it's the existing pipeline network in Virginia. And I'd just draw your attention to the two intrastate pipelines are the ones I concentrated on. So the one you see towards the top which runs from south or just to the western portion of the state that's a light brown color and goes up towards Washington is the Columbia Pipeline. And it has another section that runs down from -- West Virginia down to the

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southeastern portion of Virginia. And I've got pictures along both of those spurs of those main lines.
And then the Transco Pipeline is the pink pipeline that you see there. The pink line. And I also got one picture along the Southside extension that you see there, the pink one. And then I got a couple of photos up along the extension from south of Virginia out towards Washington and the northeast.
Forgive me if you can't see these location maps very well. This first picture shows the -- excuse me, the -- it's three crossings here that are along the Columbia Pipeline, and all three are in the Jefferson National Forest. Couldn't illustrate the pipeline, but those -- you can see those locaters, and those are the three locations.
So moving from west to east, the first location that I got is Roaring Run. And I accessed this along the small state road that runs up that valley. And this picture shows in yellow the existing pipeline easement crossing the stream there. This is a picture with that illustration removed just -- illustration removed so you can see the -- you can actually see the easement there, the woods to the right of that picture. And then this is looking from the road up the easement, and you can see it going up the

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hill there. That's the pipeline marker. That's the floodplain of the stream you saw. And this is looking upstream and then downstream. And then this is a bit close-up, I know. This is looking right at the easement there at the edge, crossing the stream. I couldn't get the shot straight down because of the grade there.
Moving on. This is heading east along that same pipeline. This is at Gala, Virginia. This is the crossing of the James River. At this point -- this Gala is a compressor station, so there's actually another spur running south of the road from here, but I could not access that. So here is without the pipeline. There is the pipeline, and then forward without. And then go forward and there's the actual, you know, crossing right there.
Next, moving east out of the James River Valley back up in the mountains, this is Mill Creek, in the Jefferson National Forest. This is along the -- I think it's the Bluegrass Trail, and that runs between 220 and out to Lexington. So this illustration shows the pipeline easement road you see to the north of it here. And then the next picture provides the same shot without the pipeline illustrated. And then next, this is walking along the pipeline easement to the

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northeast, and that is a shot approaching the stream. And this is actually the crossing at Mill Creek. I put a fly out on this, and I looked at this when I was there. I wasn't sure what I was looking at at first. But there is a lot of ATV trails along this easement, and they streamed along pretty nicely with this little sort of cinderblock construction there that is out in the stream there.
MR. WAYLAND: Excuse me, could you indicate when this pipeline was constructed?
MR. HARDWICK: I -- unfortunately, I was not able to get a lot of background information. I didn't contact the pipeline companies directly, but what little research I did get from public resources indicates -- and I may have to be corrected on this. But indicates the Columbia Pipeline that we're looking at, this main line that runs three crossings, I believe was installed as long ago as 1930 to 1950 perhaps.
(Interruption)
MR. HARDWICK: So that's my understanding of this branch. The 1950 action was when they ran a stem south from Gala to Roanoke, and that enabled Roanoke to come up with another pipeline that they were using at that time. Any of this is subject to more detail perhaps.

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(Interruption)
MR. HARDWICK: So this is just -- excuse me, this is looking down on upstream, and the next photo should be downstream indicating -- you see the crossing there with the cinderblock note there.
So my next picture here is -- I switched over to the Transco Pipeline, and this is the spur that runs about a hundred miles along the Southside to the upland. And the picture -- it's hard to see, but there's -- South Boston is down in the lower left corner, and that's Route 360 going up. And so the location is right towards the top there off 360 and Banister. And there is an illustration of the easement of the pipeline shown. And next is a clear view of the easement cut through there. And then here's on the ground looking across the Banister southwest.
The next photo, Transco, and this is the Transco's main line that runs to the northeast through Virginia. So this one is down towards -- this is Brookneal, and I believe that's towards the Staunton River.
Next, please. There's the illustration with it shown and without. And I will note that -- this is labeled, but this is actually crossing three pipelines. This Transco line that runs that whole

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route, I believe, is -- for the most part is this configuration. But at this crossing you have three pipelines that run from either 30- to 36-inch diameter pipelines. I'm not sure what the exact breakdown is. But that is the crossing shown, and that pipeline is indicated in the next picture. That's the actual crossing looking up the easement. And that's a railroad bed you're looking at there across the river that's kind of pumped up like that.
Next. And here is -- following that same pipeline to the northeast is the Transco crossing of the James River. Same configuration. Next slide will show the crossing there. If you look closer, if you can actually get access to the photo and look at it, over on the side of the bank you see what I believe are -- they may be fitting stations, but it's where the pipeline infrastructure comes above ground on either side of the river at these crossings.
So next photo -- the next photo is -- that's across the James -- Transco crossing near Scottsville.
Next photo is -- this is the final crossing that I've got pictures of. This one is back to the Columbia Gas line, different spur. This was just northwest of Richmond in the Short Pump area. And

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the next slide will show that the pipeline runs -- it comes through the subdivision along the road there and crosses at the confluence of Broad Branch and Tuckahoe Creek, which in this location forms an area called Big Swamp, and the pipeline that's illustrated. And the next will show -- and you see the easement taking off here to the upper left corner of the picture.
And the final photograph is conditions on the ground now, which I think due to all of the rain -- actually, probably affect the conditions in all of these photographs. Tremendous amount of rain. And here it's quite lush. And the streams --
(Interruption)
MR. HARDWICK: -- near the bottom edge of the photograph, but it's predominately a swamp area.
(Interruption)
MR. DUNN: Any questions? Thank you.
MS. DAVENPORT: Mr. Chairman, Members of the Board, that concludes staff presentation.
MR. DUNN: Questions?
MS. KELLAM: I have a question.
MR. WAYLAND: Mr. Chairman --
MR. DUNN: Roberta's got a question.
MS. KELLAM: No, I don't have "a" question. But some of these are to other people.

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MS. DAVENPORT: That's fine.
MS. KELLAM: The discussion about the design storm being 2-year, 24-hour. How many times has that level of storm happened since the MVP started? Can you answer that definitively?
MR. LEACH: I can't answer that.
MS. DAVENPORT: So there is -- we collect and look at precipitation data, and a lot of times what we'll do is kind of go back and look after-the-fact to see what was that storm event, if it created a certain problem. I know that the newspapers at least were replete with information, the 14 inches we got in July or June?
MR. LEACH: June. June.
(Interruption)
MS. DAVENPORT: Were -- were just an extraordinary amount of rainfall.
MS. KELLAM: Well, that's not 24 hours. That was a month.
MS. DAVENPORT: That was over the course of a month.
MS. KELLAM: I think one of the -- one of the -- obviously, a lot of the pictures we've seen, et cetera -- and this bears upon the Nationwide 12, because of, you know, the DEQ's role in the E&S part of

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the Nationwide 12 -- part of the permit condition for the Nationwide 12 is compliance with DEQ's E&S. And I remember when we were dealing with the stormwater management for the NPDES -- VPDES permit for CAFO, for the CAFOs, and that design was a 25-year, 24-hour storm that they had to design for. And when I looked it up under the -- who the heck is that? NOAA or USGS? It actually statistically occurs every -- once every four years. So even though it says 25-year, it really happens more often than that. And I was trying to understand with the stormwater, you know, for the erosion and sediment control, if you're doing a 2-year, 24-hour storm, that would seem to happen more frequently, correct? Than every two years? It might happen several times in one year, statistically.

MS. DAVENPORT: I'm not -- I would think so, yes.

MS. KELLAM: I really wanted him to answer.

MS. DAVENPORT: That's fine. Well --

MS. KELLAM: So is that correct?

MR. LEACH: Yes, that is correct.

MS. KELLAM: So the stormwater management or the E&S program that you're using for this -- for any Nationwide 12 would only -- would -- you would

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approve a plan that protected rainfall that was -- protected the waterpower for rainfall that was happening within a 2-year, 24-hour framework, but nothing greater than that.

MS. DAVENPORT: So this 2-year, 24-hour storm event and the requirement that E&S measures be designed to meet that is an existing state regulation. That's what your reg says. Under E&S, that's what you design to. And, you know, there certainly have been conversations that -- given precipitation and climatic changes, that maybe there should be a different standard. But at this moment in time, what your regulation says is you design to a 24 -- a 24-hour, 2-year storm event.

Now, one of the things that I've heard Ben mention -- and he could probably provide more detail on this -- is because, as he mentioned, these E&S controls are a system, a lot of the things that we have in place are actually probably capturing more like a 10-year event. Is that what you said?

MR. LEACH: That's correct.

MS. ROBB: Yes.

(Interruption)

MS. DAVENPORT: But the regulatory standard is 2-year, 24-hour event.

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(Interruption)

MS. KELLAM: Well, you can go on -- someone else can go on.

MR. DUNN: Bob, do you have a question?

MR. WAYLAND: Yeah. First, I want to acknowledge that -- first I want to acknowledge that Chairman Dunn and I came up to DEQ last week and had about a three-hour session with -- with Ben and Jaime and Jim Golden and Melanie to talk about the ESC review process and the details of the standards, and I found it to be very helpful. It was a more in depth presentation than what we've had an opportunity to do today. But I want to acknowledge that all of the Board members have received a lot of input from concerned citizens, a lot of it accompanied by photographs of what appear to be failing control measures along the way. And I guess I would like to know --

(Interruption)

MR. WAYLAND: Just hold off, please. I'd like to show if you can -- and I think I provided you with some of the photos that we have received, which I sent earlier to DEQ. I'd like to know if you can give us some information on the conditions at those sites today, and what, if any, follow-up action DEQ has taken to address those. And I -- you know, we've received a

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lot of photographs. People are holding some of them up. We've got them all. We saw them. I sent you just three or four of them, and I think I -- I think they're loaded on the computer so that you can --

MS. ROBB: One second.

MS. DAVENPORT: I'm certainly willing to do that now, but my second report to the Board is that -- all of the things you asked us to report to you on back in April, and I have a whole wealth of information in terms of complaint investigations, compliance inspections, statistics, notice of violation, and they are two separate reports, but I can certainly answer your question now if that's the way --

MR. WAYLAND: I'm perfectly fine with doing that when you provide the other context for current conditions and response to concerns and complaints. So that's fine.

MR. DUNN: Anything else?

MS. DEAN: You might touch on this on your second presentation, too, so -- if so, just tell me, and that's fine. For me as I have been reviewing everything, one of my big questions has been trying to understand what we're doing about in-the-field verification of a -- or definition of a temporary versus a permanent impact. And then, obviously, if we

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feel there are permanent impacts, I guess the question is more about what's happening. Are we calling the Army Corps to come out and verify or doing any kind of collaboration between agencies in that regard to determine a path forward if it's a notice of violation or, you know, enforcement action of some sort? Again, that might be --

MS. DAVENPORT: That is addressed in the second one.

MR. DUNN: Okay. Why don't we just go to your second one.

MS. DAVENPORT: Well, I do have a conclusion to the first report.

MR. DUNN: Okay.

MS. DAVENPORT: And in conclusion, the staff has drawn, one, the majority of comments did not provide specific technical information on why Nationwide Permit 12 is not sufficiently protective at crossing-specific locations.

Secondly, that no new crossing-specific information supports the conclusion that Nationwide Permit 12 is not protective of any specific wetland and/or stream and that the majority of comments reiterated the issues that were brought up in our discussions regarding the upland 401 water quality

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certification process.

(Interruption)

MR. DUNN: Anything?

MR. HAYES: I would like to get the second one.

MR. DUNN: Go ahead.

MS. DAVENPORT: Ready for the second presentation?

(Interruption)

MS. DAVENPORT: So at your Board meeting on April 12th, you asked staff to report back on a number of items. You asked us to report back to you on guidance for stop work instructions, information on guide/con variances, both the process for evaluating and what variances have been approved. You asked us to discuss complaint response and coordination, and that's coordination with both the U.S. Army Corps and FERC, our communication and communication opportunities with citizens, our complaint procedures. And then in the parenthetical, I added myself our inspection framework and data and information on inspection activities, because I thought that really meshed. So really there is -- we spent time in the field both following up on complaint investigations and conducting our normal compliance inspection. So I've just merged those two

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together.

The first thing I wanted to talk about are pipeline stop work instructions. Legislation was passed during the 19 -- 19? The 2018 General Assembly session that added Code Section 62.1.44.15:37.1 and 62.1-44.15:58.1 that created this authority for the Department of Environmental Quality to issue stop work instructions.

There was an emergency enactment, which meant rather than waiting until the July 1st effective date, the legislation went into effect on the date that it was signed by the Governor, which was March 10th, and DEQ issued procedures for how to -- how you would engage in issuing stop work instructions by a memo dated June 18th.

There are four conditions in the statute that must be met before DEQ is authorized to issue a stop work instruction. First, it has to be construction related to a natural gas transmission pipeline where the interior diameter is greater than 36 inches. And both the Atlantic Coast Pipeline and the Mountain Valley Pipeline are greater than 36 inches. In fact, they are 42 inches.

Pipeline construction activities need to be covered by approved annual standards and

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specifications. And as we have told you before, both of those pipeline developers do have approved annual standards and specifications.

And then there has to be a substantial adverse impact to water quality or imminent and substantial adverse impact to water quality is likely to occur as a result of land-disturbing activities.

So in our June 18th guidance we broke it into two parts. The first are considerations for stop work instruction. And then the second part is a bit more of the nuts and bolts and the details of the process for actually issuing a stop work instruction.

In terms of what DEQ will consider in evaluating the appropriateness of a stop work instruction, it really is fact specific. And what the guidance tries to do is paint some broad categories that we will consider, but there is no magic one thing that may lead to it, and really the decision has to be made on a case-by-case basis. But in terms of what will be considered to meet the definition of a substantial adverse impact, the first is a discharge of sedimentation that results in significant damage to aquatic life or otherwise significantly degrades water quality. And then the companion to that are discharges containing pollutants, such as fuel, chemicals,

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drilling mud -- I'm sorry, there's a typo -- or construction waste, that result in significant damage to aquatic life or otherwise significantly degrade water quality. So that's that first bullet, which is when there is a substantial adverse impact.

The considerations of when we may see a situation that is appearing to provide imminent -- to demonstrate an imminent and substantial adverse impact is likely, we have listed five things that we will look at. And, again, case-by-case, it's fact specific. This just gives us some direction as to the kinds of things that will alert us to whether we should consider the use of the stop work instruction. The first is a failure to construct and maintain erosion and sediment control or pollution prevention measures according to approved plans. The second is that erosion and sediment controls are not functioning and corrective action has not been proposed. A third is a failure to conduct timely self-inspections. And that self-inspection requirement applies to the holders of annual standards and specifications. Another thing we look to is failure to timely provide and/or maintain temporary or permanent stabilization, and those are requirements of our erosion and sediment control law. And then, finally, if there is a failure to implement

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requested corrective action within the deadlines either spelled out in the E&S regulations or if our inspection folks have given them an alternative deadline.

So that's it for the considerations. So then you move on to process. And what we have said is that our stop work instruction has to identify four things. The land-disturbing activities that must stop; the geographical scope of the project that must stop; the nature of the substantial adverse impact to water quality that was observed, or we have to explain the imminent or substantial impact that is likely to occur. And then, finally, DEQ must provide corrective actions that we need to see completed and completed to approval by DEQ standards before the instruction can be lifted.

The last slide is a little about governmental administrative process. But upon the issuance of a stop work instruction, the company may request a review of that by DEQ, of the Director or his designee. And that review has to have happened within 48 hours of issuance of the instruction. And then within 10 days of the issuance of the instruction, DEQ must provide an opportunity for an informal fact-finding, and that's language in the Administrative Process Act, which lets somebody come in and ask for a review of the instruction. That IFF covers both the

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instruction and if there was immediate review by the Director. And then, finally, within 10 days of that informal fact-finding, DEQ must issue a case decision and either affirm, modify, amend or cancel the instruction. So that is our guidance for stop work instructions.

The next thing you asked us to discuss were erosion and sediment control variances, both the requirements and the requests that we have received or have granted.

The Erosion and Sediment Control Program regulation, as Jaime has mentioned, include 19 minimum standards that must be applied and must be addressed in the plans that are submitted to DEQ. So when Ben talked about all of these sheets and sheets of plans, those plans demonstrate compliance with the minimum standards.

There is a provision in your regulation that allows for variances from minimum standards to be granted that waive or modify any of the requirements that are deemed inappropriate or too restrictive for site conditions. And variances may be granted at the time of plan submittal or during construction if conditions have been uncovered during construction that would merit a request for a variance.

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So variance requests have to be in writing. They have to describe the nature of the request; an explanation of the design items for which a variance or exception is being requested. They have to provide the reasoning and/or evidence that the variation meets the regulatory requirements. And they also have to provide documentation to support the request.

The language in the regulation tells Virginia Erosion and Sediment Control Program authorities -- in this case DEQ is that authority since this project is being constructed under annual standards and specifications. But the regulation directs us to consider requests judiciously and to think about the need of the applicant to maximize cost effectiveness and the need to protect offsite properties and resources from damage.

And then, finally, any variance that's been approved has to be documented on the Erosion and Sediment Control Plan.

So where are we in terms of variance requests with both of these pipeline projects? Both Atlantic Coast and Mountain Valley have requested a variance from Minimum Standard 16 of the Erosion and Sediment Control regulation. That's the only variance

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that either developer has submitted.
MS16 limits the amount of open trench for installation of utility lines to 500 linear feet at any one time. So the Minimum Standard 16 says you can't have open trench for more than 500 feet, but you can request a variance.
Historically, variances from this requirement for major oil and gas pipeline projects have been approved. And that has to do with the nature of the construction activity.
So what did DEQ look at and consider in these variance requests? And let me just say, because Atlantic Coast Pipeline does not have approved E&S stormwater plans yet, there has not been a variance granted, that process of review and approval is still underway. For Mountain Valley Pipeline, they have granted the variance.
So what did we look at in evaluating that variance request? We looked at the length of the project. We looked at the diameter of the pipe involved, the equipment required, the construction techniques that are utilized in the field, and we also looked at ensuring safe working conditions for the construction crews.
We specifically considered a number of

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the construction techniques that are utilized in projects like this, such as there are multiple spreads under construction at the same time; various crews are out working on the site sort of in a train, and they've got independent responsibilities. Stringing and bending of the pipe happens out there next to the trench, and the trench needs to be ready to accommodate the pipe. And then, finally, the wielding occurs in the field right next to trench, and the welding happens up to 1800 feet per day, depending on the site -- you know, depending on the construction conditions.
So the open trench needs to be able to -- it needs to be open enough to continue this process of stringing, bending and welding pipe without any delays or down time to facilitate implementation of the project in an efficient and safe manner. And the quicker and more efficiently the pipe is in the ground, the quicker and more efficiently the trench can be closed, the topsoil can be restored, and stabilization can be implemented.
What we have proposed or what we have provided in the variance that was granted to Mountain Valley is that the amount of open trench is limited per spread, and it's directly related to the steepness of the slope. So as you'll see in the next slide, the

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amount of trench that can be open decreases as the steepness of the slope increases.
So for Tier I conditions where the slope is zero to less than 10 percent, trench length can be open for 7,000 feet. For Tier II, which is between slope conditions of 10 to 33 percent, and it's 5,000. And then for Tier III, which is the steepest areas where it's greater than 33 percent slope, the continuous trench can't exceed 2500 feet.
And then there's sort of this overall that under no condition can the total open trench length be greater than 16,000 feet per spread, because what happens is this open trench length is actually continuous trench, and as I'll talk about in a minute, there are a number of features that actually break up the continuous nature of the trench; some of which are physical considerations. And we actually require trench plugs. We require the trench to be physically plugged at intervals that I'll talk about in just a moment.
So the next slide highlights those features that will be considered a break in trench length. Road crossings, because it is, obviously, a break in the trench. Stream and wetland crossings; existing utility line crossings when the slope category

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changed; winch hill construction, which is where the main -- the way they actually put the pipe in and manage the pipe is different because of the steepness of the slope. And then the one where I put a star is that -- it says, you know, there is a native soil plug that has to remain in place until immediately before the pipeline is installed. That's not an actual feature. That's a requirement that we have imposed.
And on the next page you can see our schedule for trench breaker spacing. So what this does -- again, depending on the steepness of the slope, we are preventing that open trench from being a conduit or a flume for precipitation to just flow down in the trench area. So for conditions where there are flatter areas, lower slopes or lesser slopes, we require the plugs at 500 feet. And then once you get to the point where you have a slope greater than a hundred percent -- which is not an angle. I got very confused on how you could have a slope greater than a hundred percent. We require the plugs in the trench every 50 feet, and then a plug is required as the right-of-way comes down to any water body crossing. So that's designed to alleviate that fluming activity that happens in an open trench.
There are potential construction safety

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concerns that we considered when we looked at this variance. As I said, winch hill construction, I saw that in West Virginia, and it gave me vertigo. They literally have bulldozers winched to other equipment so they're staying flat on the face of the mountains, what happens in very, very steep conditions. And then there are some places because of the steepness where the pipeline has to be anchored, so it doesn't slip down the hill. And we want those construction activities -- for the safety consideration -- to finish up as quickly as possible and move on from that site.

So, as I mentioned, we have granted an open trench variance for Mountain Valley. We have received a request for an open trench variance for Atlantic Coast, but it has not yet been approved.

Everybody, okay?

(Interruption)

MS. DAVENPORT: The last thing you asked us to address is complaint response and coordination, and I have wordled into this with information about our ongoing compliance activities.

One of the first questions you specifically asked was whether we were coordinating with the Federal Energy Regulatory Commission and U.S. Army Corps of Engineers. We had a meeting in February

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in Lexington at VMI, as a matter of fact, where we took our pipeline compliance coordinators -- Jerome went, James went, I went, a host of us went, and we met with FERC's compliance monitors who are assigned to the Mountain Valley Pipeline project.

So they utilized a third-party contractor and every spread has a FERC compliance monitor, and their role is to make sure that the pipeline construction complies with all aspects of the FERC Certificate of Public Need and -- Public Necessity and Convenience.

I will say that there is a slightly different relationship, in my opinion, between the FERC compliance monitors and our DEQ inspection, our compliance guys and our third-party contractors, in that I got the sense that the FERC compliance monitors are there to watch what's being done, but if there are issues or concerns that are raised by citizens, they're not going to intervene or get as involved as DEQ is. And so they're out there watching everything about this project to make sure it complies with all of the requirements in the FERC certificate. There are weekly reports that are posted to the pipeline docket. We have accessed those. So that's one set of oversight, but that really is targeted to the FERC folks.

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We also have reached out to the folks at the Corps. We have not seen -- I couldn't speak to how much staff have run into the Corps out in the field. But if we have concerns and complaints outside of DEQ's regulatory authority, we refer those complaints, concerns, issues directly to FERC or the Corps via e-mail or telephone.

So when we get complaints in and it's not something that we have any authority over, we refer them on. And then we document that we have, in fact, referred that matter to another regulatory agency.

And then our investigations and inspections are done independently of either the FERC compliance monitors or the Army Corps of Engineer. We get out to look at the issues that we need to look at, and, as you'll see, we try and respond within 48 hours.

We have established a number of communication tools for folks to reach us. We have a publicly accessible web page that has a lot of background information, documents, approvals, decisions. It is updated when things happen that we think might be of interest to our citizens, whether it was the FERC stop work order or some of the recent federal court decisions. We try and keep that updated.

We also have two e-mail addresses where

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those -- anything that goes to those e-mail addresses is delivered directly to somebody in my shop or in the compliance shop to take look at it. We also have an incident hotline, which has its own phone number. (804)698-4003.

And then we also operate independently of pipelines. We have a Pollution Response Program database, which allows folks to report pollution incidents. And I have somebody in my shop who manages that and looks at it every day for complaints that are submitted to our PReP database that are directly related to pipelines.

So as I said, all of the citizen complaints that come in are logged and maintained in our Pollution Response Program database. We assign reference numbers and incident report numbers, and the information is kept in the database. And as I also mentioned, we have a designated person who gets that information into the database, coordinates with our compliance monitors, and gets the information back to the guys who are going to be in the field to say, hey, this is what you've got to look at. And those complaints are assigned, and we investigate -- initiate an investigation within 48 hours.

We have two full-time pipeline compliance

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coordinators who are DEQ employees. We have a third E&S and stormwater inspector who has been spending more and more of his time helping those guys out in the field. And Matt's actually here today if we have anymore specific questions that he can help me with.

And then we also have our third-party contract support, and we have an inspector with our third-party contract that is assigned to -- one inspector that's assigned to each spread, and then we also have a floating inspector who's out there to investigate compliance.

When a complaint comes in, we keep it open. We consider its status open until it's investigated and findings are reported, or the complaint's referred to another agency, such as FERC or the Corps.

And then we also put on our DEQ website the complaints and the results of the investigations weekly so folks can look to see what we have done in terms of following up with their complaints.

So some statistics: As of yesterday, we have logged 128 citizen complaints. We have investigated 91 complaints. And that means that 37 complaints are currently open and under review.

A lot of times our complaints come in

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with a photograph, and a photograph tells part of the story, but we really need to get out in the field, and we have to assess what led to that photograph, what led to that activity that was documented.

I have to say that the vast majority of the 91 complaints that we have investigated, we have not determined that there has been instance of noncompliance. It's probably like 5 percent of the ones that we've followed up on --

(Interruption)

MS. DAVENPORT: Now, we also have field inspections that we conduct by DEQ. As I mentioned, with the utilization of annual standards and specifications, DEQ sits as the Virginia Erosion and Sediment Control Program authority. Under our regulations, a program authority is supposed to inspect sites where land-disturbing activity is going on once every two weeks, and we are out there every day. We are not sticking to that schedule. We are out there as often as we need to be. And for most of the guys -- you know, Matt Stafford, Matt Grant and John McCutcheon are spending upwards of four days a week out on the pipeline.

(Interruption)

MS. DAVENPORT: We have conducted 40

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inspections. Of those 40 inspections, 21 we noted areas for corrective action. And, as I mentioned, the E&S regulation contemplates that we can go out there and say, Hey, this doesn't look like it was built according to the plan, according to the design, please fix it. We can identify instances where something was built in accordance with the plans, but it doesn't seem to be controlling E&S as much as we would like it to. So we say, Hey, you need to tweak this over here.

Nineteen of those inspections we have seen what we needed to see in the field and have not needed to request corrective action. And then of the twenty-one where we have noted areas for corrective action, nine of them are significant. And that includes three inspections where we have identified impacts to surface waters that are off the limits of disturbance. So there have been sedimentation events into streams.

I'm going to divert just a moment. We did issue a notice of violation last month to Mountain Valley that identified a number of violations at more than one site, a number of sites. And I just wanted to let you know that where they have been cited, the violation's generally clean water diversions that were on the approved plan and were not installed. And then

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talk about -- talked about that those are the pipes that carry rainwater from one side of the pipeline to the other without actually sending it through the disturbed land so we're not picking up additional sedimentation.

There were a couple of instances where corrective actions weren't taken within the timeframes required in the annual standards and specs. There were instances where there was a release of sediment latent stormwater off the construction right-of-way. There was a couple of instances of unauthorized fill where the sediment did, in fact, end up in state waters, and there was no permit for that. There were some areas that were not stabilized where stabilization is required. And then there was some instances where the water bars were not installed as -- per the plans. And the water bars are those features that actually move water off the construction right-of-way.

And another little tidbit that I came to understand from going out in the field, we utilized temporary water bars during construction, and every night those are reestablished on the whole working face in case it rains. And then once the facility -- once the project is complete, back to grade and stabilized, water bars -- permanent water bars are included in

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that.
So, Mr. Wayland, the pictures that you sent me concerning Grassy Hill are actually one of the sites that is the subject of the notice of violation. And this notice of violation is currently being worked on by enforcement and evaluated for whatever appropriate enforcement response is going to be. Would you like me to show the pictures? I would be happy to.
MR. WAYLAND: Sure. I think all of the Board members previously received the pictures, and I think they're probably circulated widely in the concerned communities.
MS. DAVENPORT: Matt or Jerome, I'm going to let you walk through these, because I did not get out there in the field to see these firsthand.
MR. STAFFORD: Chairman Dunn, members of the Board, I'm Matt Stafford. I work for the Office of Water Compliance. I'm just taking them through these photos?
MS. DAVENPORT: Just take them through, please.
MR. STAFFORD: Okay. This is one location at Grassy Hill. You have the compost filter socks in place. I believe this is the -- is that the repaired area below the -- where there was a clean

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water diversion that had not been put in place?
MR. LEACH: (Nods head.)
MR. STAFFORD: This area had received a lot of water that -- initial control was a P1, which is the white grayish colored silt fence that you see there. It was modified since that time to have fabric put down the embankment, riprap was put in, additional compost filter socks put in along that location to hold back -- hold back and filter water before releasing it into the stream.
I believe -- and I believe that is -- I believe that may be the location on the other side of the road from there where -- where it's further down Grassy Hill Road but at the end of that work area where there is -- and, again, they added additional compost filter sock, straw bales and silt fence. So that was another area where water was going where additional flow needed to be diverted from those areas.
MS. DAVENPORT: That's it.
MR. WAYLAND: So corrective actions were taken in those locations? And do these pictures show the corrective actions --
(Interruption)
MR. STAFFORD: That photo right there, that is the corrective action --

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(Interruption)
MS. WOOD: Ladies and gentlemen, please refrain from any outbursts. We were not able to hear the response from staff.
(Interruption)
MS. WOOD: Ma'am, if you'd please -- go ahead.
MR. STAFFORD: The actions that they did in the field at the time were to install the clean water diversion area, which is not pictured in any of these photos, and this work that was done here at the bottom like you see -- what is that, August?
MS. DAVENPORT: Third.
MR. STAFFORD: Third.
MS. DAVENPORT: I don't know if this was submitted to us as a citizen complaint, this August 3rd picture. If it was, it was assigned an investigation. We have not -- as I mentioned before, it's not immediacy. We have to figure out -- we have to schedule it. Sometimes we have to get access. If there are sites where there has been a potential impact off the right-of-way, we don't -- we have to get access to that property, especially the condemnation sites. We have to work through a process, because the construction activity is limited and access is limited

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to the defined right-of-way.
I think there is a sense that when we see something, we should be able to mobilize that day and go out and look at it, and that's not always the case. And even if it is, we still have to come back and understand what happened. We have to look at plans. We have to look at field notes. We have to figure out what caused the situation. And it's not the immediacy that some folks would like it to be.
MS. KELLAM: Can I jump in and just ask a question?
MR. WAYLAND: Yes.
MS. KELLAM: I think because of the scale of the project, it would be helpful to understand how -- how many miles of pipeline are actually being worked on at once. Is there just sort of a logistic -- I'm trying to understand the logistics. Do you have three people? Do we have three staff; is that right?
MS. DAVENPORT: We have two pipeline compliance coordinators, and Matt -- he really has another job, but he is kind of pulled into helping us on this. And then we have our third-party contractors, which we -- through our contract -- require them to have one person onsite on each spread for all hours of construction activity. So that --

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MS. KELLAM: How many spreads are there?
MS. DAVENPORT: There are three spreads, and the spreads range from 30 to 40 miles. Jerome?
MS. KELLAM: But they're not all active at the same time? I mean, there's not 30 to 40 miles being worked on at once or --
MS. DAVENPORT: The construction occurs in what I've been explained to as a train. So each spread is probably in a different state of construction. In some it could be just that the trees had been felled. In some it could be that the trees have been stumped and grubbed and the top soil has been removed. In some you can actually have a trench. In fact, there are about 20 miles -- and they were in some of the pictures that Ben showed you where pipe is in the ground, the trench has been closed, and the site is moving towards permanent stabilization. They've returned it to grade, or they are returning it to grade. So 20 percent is pretty much done. The other 80 percent is in different stages of construction activity, because the crews move through sequentially.
MS. KELLAM: Okay. So with -- you had this slide about the complaints and the field inspections.
MS. DAVENPORT: Yes.

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MS. KELLAM: Are the field inspections something that you do just independently, not in response to a complaint?
MS. DAVENPORT: Yes. Thank you. And I can go back to my report, and what I try -- and that was the part that I added, which is there is one set of investigations that's complaint driven, and then we have our normal course of what do we look at and what do the regulations say we're supposed to look at.
So the next slide here is how we investigate a complaint. As I mentioned, we log the complaint within 48 hours, and then we go out and look and determine whether or not approved controls were installed and maintained. If approved controls are in place, we assess any impacts, if there were any, and we look at corrective action log or punch list to see what kind of changes or adjustments may have been in the field. If we determine corrective action was taken, we look to see whether they were in the 24 hours that the reg allows or if there was an extension granted and approved, and then we follow up to make sure that whatever corrective action needed to be done was, in fact, taken.
Now, for the noncomplaint activity, we actually have three other types of compliance

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monitoring. And that is a focused field inspection, a comprehensive field inspection, and the Stormwater Pollution Prevention Plan or SWPPP inspection. And then, as I mentioned, the complaint investigations.
A SWPPP inspection I think of as more the administrative paperwork where we're going to go to the construction trailers. There is one for every site -- spread, rather. And that's where as holders of annual standards and specs -- and I'm just speaking about Mountain Valley now simply because that's the one that's under construction. So Mountain Valley has to keep their SWPPP updated. They have to make notations. They have to document that they are performing E&S inspections once every four days, which is a requirement. So that's kind of an administrative review is all of the paperwork.
And then a focused field inspection is when we may have been out and seen something, and we want to go make sure a corrective action is taken. Or we have discovered a challenge, say, with a water bar design that's already been approved, and we know, well, they were using that same design in this area that's similar, but let's go out and make sure that they really did what needed to be done to make it effective.
And then the comprehensive field

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inspections, they're a little challenging on a long linear project, because, typically, you would go to a residential development, and you'd be able to visit the whole site and look at all of the controls, but these are more sort of soup-to-nuts and everything that's in the plan installed where it's supposed to be.
So those are the different kinds of inspections that we do.
MS. DEAN: Mr. Chairman?
MR. DUNN: Yes.
MS. DEAN: Then can you also remind us what their self-inspection frequency is?
MS. DAVENPORT: Yes. That's once every four days.
MS. DEAN: And within 24 hours of a rain event?
MS. DAVENPORT: Oh, yes. I'm sorry, yes, within 24 hours of a rain event. Thank you.
MS. DEAN: And are they adhering to that?
MS. DAVENPORT: Some of the violations that are noted in that NOV indicated that, no, they had not been adhering to that, but we are looking. Jerome Brooks, who runs our Office of Water Compliance.
MR. BROOKS: Chairman Dunn and members of the Board, one point I wanted to make for Roberta -- I

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think she was asking -- you got maybe interrupted on how many staff are working on this project right now. You asked that question at the Board meeting in April. We have 13. We have three staff members here working on the project. We have two dedicated and one part-time. We also have an administrative assistant that handles all of the complaints that come in, coordinate that complaint and log it. We have 11 contractors assigned to this project right now. They rotate out. Two per spread; one inspection and one is for investigations. And we have one staff person we intend to hire in the next few weeks to assist us in that. There will be 14 altogether.

MS. DAVENPORT: I think we have covered everything that's in there. The last thing I wanted to report to you on again -- and this was not in the assignment of the directive from April, but I thought it was worth reporting back to you on the status of the upland 401 water quality certification that was issued by Virginia in December of 2017.

A petition for review of that certification was filed with the U.S. Court of Appeals for the Fourth Circuit, and on August 1st, the Court published its opinion regarding that petition for review, and the Court concluded that Virginia's

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issuance of the 401 water quality certification was not arbitrary and capricious, and the petition for review is denied.

I have just a couple of summary comments in terms of what the Court found. And the Court found that DEQ had a sufficient basis to find reasonable assurance that the measures, restrictions and programs in place in Virginia to prevent excess sediment from entering state waters satisfied antidegradation policy. The court reviewed and considered the use of annual standards and specifications, state erosion and sediment control requirements, findings of the U.S. Environmental Protection Agency relative to the construction general permit. And the Court found there was nothing unreasonable in DEQ's interpretation of its antidegradation policy.

And I have provided a quote from the Court right there simply because I think it goes to the guts of some of the things we're talking about. And the Court said: Certainly it must be anticipated with large construction projects, that unanticipated problems will arise, leading at least to minor, short-term issues. Were Virginia's policy interpreted as rigidly as Petitioners suggested, no project affecting Tier 2 waters could ever be approved without

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an economic, slash, social development analysis.

My personal favorite quote from the Court's opinion is the next one: That although Virginia's approach was unorthodox, it was not arbitrary and capricious for Virginia to analyze the impacts from activities covered by Nationwide Permit 12 from upland activities related to construction.

And, finally, the Court concluded that together the conditions in the upland 401 certification, the requirements of our Virginia Wetland Protection program, the Corps' 404 permit, the approval of annual standards and specifications altogether provide reasonable assurance that water quality standards will not be violated.

That's the end of my report.

MS. KELLAM: All right, Melanie -- I mean Ms. Davenport, I have a question about -- and I think what -- this is sort of trying to distill the issues, and there's a little bit of overlap in between the two discussions and the Nationwide 12 -- really, I guess what -- as far as I understand to do any site specific repeal of the water quality certification would require an entire permit process to take back what we already issued. So that would be a process to repeal something, and then another process to go through

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individual permits for stream crossings; is that right?

MS. DAVENPORT: Yes.

MS. KELLAM: So it wouldn't --

MR. GRANDIS: It depends on what you're contemplating with issuing individual permits for some or all of the crossings of either pipeline and -- and it's my view that under your regulations the pipeline companies currently have permit coverage due to the fact that the Board, or DEQ, has approved the Corps' Nationwide 12 Permit, and the Court has since then verified coverage under that permit. So your regulations identify the only mechanisms. So in order to issue an individual permit, you'd have to first modify or revoke the existing permit coverage, and your regulation --

(Interruption)

MR. GRANDIS: That's the only mechanism for doing that.

MS. KELLAM: As I understand things, there is not a lot of -- the only difference for all practical purposes between the Nationwide 12 and the VWP is really process related to -- the Nationwide 12 is a general permit so it's automatic as long as they comply with the conditions. And the VWP would be a permit process where it would put out for notice and

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public comment?
MS. DAVENPORT: We actually have -- the Board has adopted by regulation a general permit under the VWP program for utility crossings, so we actually have a parallel general permit.
MS. KELLAM: So -- okay. So, generally -- I guess, generally, in linear projects do you use that, or do you use the Nationwide 12? Do you use the state or --
MS. DAVENPORT: We generally use the Nationwide 12, but there might be instances where there is a utility crossing of a water feature that's regulated under the Virginia Wetlands Program and is not under the jurisdiction of the Corps. So that's when we might use that individual -- I mean, I'm sorry, the VWP general --
(Interruption)
MS. KELLAM: So the Army Corps of Engineers, as I understand it, has a lot of experience with Nationwide 12, with the stream crossings. And a lot of the issues that people have raised are really going to things that have occurred since our April meeting, which have been a lot of discharges from sites that are undergoing work right now that are already being inspected by DEQ. And so there were 40

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inspections, and 21 of them noted areas for corrective action.
MS. DAVENPORT: Uh-huh.
MS. KELLAM: So that's, like, more than 50 percent of the sites are not even complying with the plans that are approved?
MS. DAVENPORT: No, because the regulations allow for corrective actions to happen within the 24 hours. So, in other words, there's not some of those absolute demarkations that folks are hoping there were. We design the plan. We go in the field. It gets implemented.
When you talk about the kinds of things that we see in the field, it might be that a water bar was installed, but it wasn't installed exactly where or exactly how it was defined in the plans, so our inspectors will say, Hey, you put in a water bar that's not correct. You have 24 hours to fix it. So that's what we mean when we say the note corrective actions are required.
MR. HAYES: Mr. Chairman, I have a motion, but my understanding is we're going to be hearing comment from the public.
MR. DUNN: Right.
MR. HAYES: I'd like to have my motion

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heard. It's 10 minutes -- roughly 10 minutes to 3:00 right now. I'd like to have the floor at 3:25 for the motion to be considered.
MR. DUNN: We have just heard from DEQ doing the work that we requested on getting input from the public. We've got an awful lot of input from the public. We have a lot of people here today that would like to speak. The requirements are not necessarily for public input for their report; however, I am going to open up to the public forum for 30 minutes for public input, and then we will continue our meeting.
MR. WAYLAND: Could we have -- I have some additional questions of Ms. Davenport and staff. Can we ask additional questions?
MR. DUNN: Sure.
MR. WAYLAND: Going back to -- well, I guess two things. First of all, to Mr. Davis' presentation, I was under the mistaken impression -- the hope that were we to rest authority from Nationwide 12 and establish that VWP permits would be issued -- a VWP permit or permits in the case of possibly more than one general permit, but my expectation was that if we did that, we would have the ability to make some avoidance decisions that, as it's been explained, aren't really available to us because of the limitation

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that the General Assembly has established that we don't have the ability to make a change in the right-of-way of a linear project. Is that correct, Mr. Davis?
MR. DAVIS: Yes, sir.
MR. WAYLAND: So my initial hope and belief that we might be able to accomplish some additional protections by using Virginia's authority rather than the Clean Water Act authority appears to be a nullity.
MR. DAVIS: (Nods head.)
MR. WAYLAND: My question -- my additional question, if I may.
MR. DUNN: Sure.
MR. WAYLAND: Going back to the imminent substantial adverse impact likely slide that you did, which I think was Page 6 of the presentation. The second bullet is erosion and sediment controls are not functioning and corrective action has not been proposed. And I guess I was curious about the meaning of "not functioning." Does "not functioning" mean that the required control measures were installed, but they've been overwhelmed by a storm greater than the one that was the basis on which the requirement was established? In other words, it was sized for a -- you know, a two-day storm, and you got a ten-day storm.

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You got a flow from a significantly larger storm, and it is not functioning. Is that covered by erosion and sediment controls are not functioning?

MS. DAVENPORT: I actually think there's a couple of different scenarios that could meet that definition. Part of it is that a feature was installed per plan, but sediment is still escaping the construction right-of-way. So that means you have to go back and rethink it and redesign it and correct it.

With the issue of the storm events that exceed the design capacity, if it gets washed out, it's not functioning, but then you still have that requirement to come in and put it back to what it was designed in the plan and what it's supposed to do to achieve the controls. So it's really those two different paths.

MR. WAYLAND: But in that second case if you lost measure because it was blown out by the storm, would DEQ be satisfied and would regulations require nothing more than you put back what was there and --

MS. DAVENPORT: Yes.

MR. WAYLAND: -- was established to be inadequate?

MS. DAVENPORT: Yes, because that's what the minimum standard said, yes. I mean, we might also

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say, you know, looks like you could consider putting some additional protections here, would you consider adding and stacking BMPs, and we might get to the result that way, yes.

MR. WAYLAND: And I promise this is the last question. I think you -- I think it was indicated that the storm event criterion for the measures was established in a general permit requirement that preceded our consideration of these projects; is that right? It was imported from the -- did you say it was imported from the construction general permit?

MR. LEACH: The origins of this particular requirement within the E&S regulations and statute originate from EPA and the construction general permit. It is a practice that's standardly done throughout the United States, and that is how they size the storm events for erosion and sediment control during active construction.

(Interruption)

MS. DEAN: One more clarification.

MS. DAVENPORT: Yes, ma'am.

MS. DEAN: So as you were walking us through VWP and the similarities between that and Nationwide 12, some of the statements were not allowing -- or impeding passage of normal high flows,

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substantial turbidity not authorized, water quality standards shall not be violated. And so in the situation that Bob was referring to a moment ago, if the practice is blown out due to the intensity of the storm, is the interpretation then that there is no need for any enforcement or mitigation or action related to that impact to water quality because of the intensity of the storm? I mean, because --

MS. DAVENPORT: We actually in some situations move from what is appropriate and authorized under E&S to what is considered a violation of the VWP program. So, in other words, if we see significant sedimentation in wetlands and streams offsite -- and the NOV actually cites a number of instances where those are out -- we've moved out from E&S and said those are violations of the VWP program because you did not have a permit to take that impact.

MS. DEAN: Okay.

MS. DAVENPORT: And the result is that that sedimentation, that buildup, that has to be removed.

MS. KELLAM: I'm sorry, that just -- this is -- James -- Mr. Golden and I spoke yesterday, and I was struggling with this issue that he discussed with me about turbidity not being a water quality standard,

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that you don't look at -- the question, you know, revolved around all of these pictures that we see. There's websites and, you know, e-mails, and we've all seen them. There's so many more than we've seen today. But that some of these are not violations, that -- so what I -- and I couldn't understand why -- you know, if there is stormwater moving off the site that is causing turbidity, you know, where you can see -- you can see sediment in the water. You don't see it deposited yet, but you see muddy water, why that wouldn't be a violation. But if I can understand it correctly, the violations come under VWP, and that's only for sedimentation?

MS. DAVENPORT: When I talk about a violation under the Virginia Water Protection permit, it is a filling of surface water, which means streams and wetlands without a permit. So if that sedimentation caused a filling of a wetland or a stream, we would say that was an unauthorized fill. You did not have a permit to do that. If we see sedimentation and turbidity in the water column, we do not have an in-stream water quality criterion for sediment. It's a -- and I don't know how you would even calculate. It's not like there is a point source and you can grab a sample of what's coming out of that

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actual pipe and analyze it and do the analysis.
If you've got turbidity that's moving downstream --
(Interruption)
MS. DAVENPORT: -- and is not settling out, it is a temporary event.
MR. WAYLAND: Can I see if I can help Roberta a little bit? I think what Melanie has said is if you've got the turbidity, and it's moved off -- it's moved out of the construction site, and it's in the stream, the turbidity is evidence of a discharge that was not authorized, and that's a violation of the law and regulations. It's not the same --
(Interruption)
MR. WAYLAND: I don't need any reinforcement. I've got a place to go, and I'm not quite there yet. It's not necessarily a violation of a water quality standard. The water quality standard isn't there to be violated, but it is a violation to do a discharge without a permit.
MS. DAVENPORT: Yes, but the challenge is there is no permit required for this construction activity. It is exempt from Clean Water Act 402 permitting, and it's exempt from needing coverage under the construction general permit. And even when you

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look at the requirements of the construction general permit, there isn't an in-stream end-of-pipe number. It's about employing practices, and it's about employing inspections, and it's about being responsive to what you see on that site to keep as much sediment on the site as possible. It's different from a traditional discharge permit.
MR. DUNN: Let's go to the public forum. When Cindy calls your name, please come forward and state your name. We've got 30 minutes.
MS. BERNDT: I do need to -- because I did tell some people before lunch -- or during lunch that if they came up with a plan for the usage of the 30 minutes -- it wasn't necessarily three minutes apiece, that we would present that to you for your consideration, but the room has to agree.
(Interruption)
MS. BERNDT: So everybody agrees that if I call on this list of people to speak, that everybody will be respectful, that nobody will complain when nobody else is called to talk on pipeline? So everybody is okay with that? Speak now or forever hold your peace, because if you don't hold your peace, we're going to ask you to leave. Sir?
PUBLIC SPEAKER: I can speak now? Okay.

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I think we need to kill this pipeline project --
(Interruption)
MS. BERNDT: No, that's not what I said. No, are you willing to accept these speakers?
(Interruption)
MS. BERNDT: I heard a no. Do you want to know who the 10 speakers are? The speakers would be David Sligh, Ruby Lorie, Jason Shelton, Bill Limpert, Charmayne Staloff, James Hargett, Ben Luckett, Tammy Belinsky, Peggy Sanner, Kathy Chandler, and if there is still time within the 30, Jon Sokolow, Minor Terry, and Genesis Chapman. Is everybody okay with that for the pipeline discussion?
(Multiple Responses)
MS. BERNDT: I don't need applause. I just -- just a thumbs up or something. Is everybody okay? Nobody objects?
(Multiple Responses)
MS. BERNDT: All right. So before I call on the pipeline people, there are three individuals that are nonpipeline. It's not going to take away from your 30 minutes, but I would like to let them go and then they can go, if they would like. Is that okay with everybody?
(Multiple Responses)

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MS. BERNDT: No complaints, no boos. Is that okay with the Board?
MR. WAYLAND: Yes.
MS. BERNDT: Okay. Mr. Chairman, we are now going to start on the pipeline, and I don't know if you all are going to divvy it up three minutes each. I would suggest you all just start lining up. David Sligh, Ruby Lorie, Jason Shelton and then Bill Limpert, and I'm going to -- and Charmayne Staloff. I would just start lining up, because I'm going to put the clock on 30 minutes and we'll go until -- don't start until I tell you to. I've got to get through the rest of this list. All right. So it's David Sligh, Ruby Lorie, Jason Shelton, Bill Limpert, Charmayne Staloff, James Hargett, Ben Luckett, Tammy Belinsky, Peggy Sanner, Kathy Chandler, Jon Sokolow, Minor Terry and Genesis Chapman.
MR. DUNN: Please state your name first.
DAVID SLIGH: My name is David Sligh. I represent Wild Virginia. I wanted to make the point that the discussion that asserted that the difference between the Corps of Engineers and Nationwide Permit and the Virginia responsibility under Clean Water Act Section 401, the assertion that this is merely procedural is simply not true. The fact is that the

ATTACHMENT B-4
Virginia Water Protection Permit Program Property-Access Agreement

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703)583-3800
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

Thomas A. Faha
Regional Director

Virginia Water Protection Permit Program Property-Access Agreement

Mountain Valley Pipeline, LLC (Mountain Valley) holds easements by which they are allowed access within the Project Area**.** Mountain Valley hereby authorizes the Department of Environmental Quality, its employees, agents, and contractors ("Authorized Parties") the right of entry to the Project Area to conduct inspections necessary to evaluate the application for and ensure compliance with the ("VWP Permit").

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.

Inspections may include but are not limited to the following activities:

1. Enter upon the Project Area, and have access to, inspect and copy any records that required as part of the VWP permit;
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 VWP permit or as otherwise required by law.

Easement holder understands that access to the Project Area is a requirement pursuant to 9VAC25-210-90 and the VWP Permit. The DEQ may enforce the provisions of this agreement utilizing all applicable procedures and authorities under Va. Code §§ 62.1-44.15 and 10.1-1186.

Robert J. Cooper	Robert J. Cooper	SVP Construction Services	02/19/2021
Easement Holder Name (Print)	**Easement Holder Signature**	**Title**	**Date**

ATTACHMENT B-5
Riparian Property Owner Information

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
1	120-A-16	GARY RICHARD AND JANET ELIZABETH DIFABLO BUSS		Craig County	VA	37.33138319	-80.42752238
2	121-A-15	TIMOTHY SHAWN HUGHES		Craig County	VA	37.32890445	-80.41430551
3	121-A-11_12_13	JESSICA DANIELLE HALL		Craig County	VA	37.32827578	-80.41978722
4	121-A-2_3_4_5_6	STACY SMITH		Craig County	VA	37.32647645	-80.42479285
5	121-A-14	JESSICA DANIELLE HALL		Craig County	VA	37.32560091	-80.41558161
6	120-A-14A	HELENA DELANEY TEEKELL TRUST		Craig County	VA	37.32438372	-80.42815633
7	120-A-8	RAMON A. ARELLANO		Craig County	VA	37.32326774	-80.44109213
8	120-A-8A	ROGER M. AND VICKI S. POWELL		Craig County	VA	37.32194644	-80.44217917
9	120-A-13	GORDON WAYNE AND DONNA W. JONES		Craig County	VA	37.32153495	-80.42850293
10	120-A-12	HELENA DELANEY TEEKEL TRUST		Craig County	VA	37.32130212	-80.43090826
11	120-A-9	DAWN E. CISEK		Craig County	VA	37.32081423	-80.44149687
12	120-A-10A	STEVEN C. AND JUDY R. HODGES		Craig County	VA	37.32079699	-80.43341381
13	240002100	WIMMER VIRGIL WYATT & ANTHONY EARL		Franklin County	CALLAWAY,VA 24067	37.1285098	-80.10545629
14	240000200	CRAIGHEAD DAVID M & NANCY G		Franklin County	CALLAWAY,VA 24067	37.1272228	-80.09603274
15	240000400	JAMISON SHIRLEY BOWMAN	4753 DILLONS MILL ROAD	Franklin County	CALLAWAY,VA 24067	37.12627296	-80.07823064
16	240002300	PRICE MARION WALDRON & WALDRON ANNE & R & MORGAN &	18210 CALLAWAY ROAD	Franklin County	CALLAWAY,VA 24067	37.1264036	-80.11572017
17	240000500	CRAIGHEAD SHERMAN E & MICHAEL EDWARD		Franklin County	CALLAWAY,VA 24067	37.12390067	-80.07457091
18	240000500	CRAIGHEAD SHERMAN E & MICHAEL EDWARD		Franklin County	CALLAWAY,VA 24067	37.12382282	-80.07164912
19	240001400	BOWMAN KEVIN P & CELENA G	1733 ADNEY GAP RD	Franklin County	CALLAWAY,VA 24067	37.12353374	-80.08230547
20	240001900	BOWMAN KEVIN P & CELENA G		Franklin County	CALLAWAY,VA 24067	37.12353018	-80.0875386
21	240001300	BOWMAN E P & EZRA S		Franklin County	CALLAWAY,VA 24067	37.12250905	-80.07733418
22	240003400	PRICE LUCY A		Franklin County	CALLAWAY,VA 24067	37.12197425	-80.10071035
23	240001800	FOLEY RUTH	1395 ADNEY GAP RD	Franklin County	CALLAWAY,VA 24067	37.12159131	-80.09014901
24	240000900	BROWN ALFRED L & DORIS ANN QUINN	555 FLANDERS RD	Franklin County	CALLAWAY,VA 24067	37.1211906	-80.05789959
25	240002700	WIMMER VIRGIL WYATT & ANTHONY EARL	76 SIGNAL HILL DR	Franklin County	CALLAWAY,VA 24067	37.12125589	-80.10891269
26	240004400	JAMISON SHIRLEY BOWMAN		Franklin County	CALLAWAY,VA 24067	37.12113676	-80.09535192
27	0240001001B	CLINGENPEEL LLOYD R & ROXIE C		Franklin County	CALLAWAY,VA 24067	37.12075533	-80.06890968
28	240001100	JAMISON SHIRLEY BOWMAN	1868 ADNEY GAP RD	Franklin County	CALLAWAY,VA 24067	37.1206927	-80.07196971
29	240000900	BROWN ALFRED L & DORIS ANN QUINN	555 FLANDERS RD	Franklin County	CALLAWAY,VA 24067	37.12051305	-80.06357571
30	240001700	BOWMAN E P & GRACE		Franklin County	CALLAWAY,VA 24067	37.11886917	-80.0882065
31	240001001	MEADOR DONALD L	5040 DILLONS MILL RD	Franklin County	CALLAWAY,VA 24067	37.11821681	-80.06795
32	240004000	NICHOLS JESSE WILLARD		Franklin County	CALLAWAY,VA 24067	37.11770116	-80.09756002
33	250002100	WRAY L BENTON JR & DIANE S & ALVIN E & LINDA L	989 WADES GAP RD	Franklin County	CALLAWAY,VA 24067	37.11704066	-80.05363124
34	240004100	WRAY WILLIAM HUBERT	140 ADNEY GAP ROAD	Franklin County	CALLAWAY,VA 24067	37.11428398	-80.09633348
35	240005400	CALLAWAY RUSSELL E & HEIDE K	4230 DILLONS MILL RD	Franklin County	CALLAWAY,VA 24067	37.11261653	-80.06387843
36	250002200	WRAY LUTHER & KATHLEEN (LE) & ALVIN & LINDA & L BE	703 WADES GAP RD	Franklin County	CALLAWAY,VA 24067	37.10935551	-80.05517866
37	250002400	WEBSTER JESSE ALBERT		Franklin County	CALLAWAY,VA 24067	37.10877674	-80.04430242
38	250002500	HARTMAN ALAN R	422 WADES GAP RD	Franklin County	CALLAWAY,VA 24067	37.10777947	-80.04653386
39	250002501	HARTMAN ALAN RANDOLPH	422 WADES GAP ROAD	Franklin County	CALLAWAY,VA 24067	37.10680347	-80.05029201
40	250002800	WEBSTER JESSE ALBERT	280 WADES GAP ROAD	Franklin County	CALLAWAY,VA 24067	37.10371945	-80.05095466
41	250003700	RHUDY ALEX C	744 WEBSTER CORNER	Franklin County	CALLAWAY,VA 24067	37.1032716	-80.03521743
42	250003300	FLORA JOHN B & JUDY R (TRUSTEES) & BURTNER JANET F		Franklin County	CALLAWAY,VA 24067	37.10226488	-80.04067806
43	250003801	MCDEARMON MARTHA A	634 WEBSTER CORNER RD	Franklin County	CALLAWAY,VA 24067	37.09871508	-80.03681701
44	250004100	OCCANNEECHI INC	1185 CAHAS MOUNTAIN RD	Franklin County	BOONES MILL,VA 24065	37.09807345	-80.02740074
45	0380000201D	MCDEARMON RICHARD H JR & WALTON ELLEN C	167 BEECH TREE LN	Franklin County	CALLAWAY,VA 24067	37.09627165	-80.03476423
46	0380000201B	MCDEARMON RICHARD H JR & WALTON ELLEN C	211 BEECH TREE LN	Franklin County	CALLAWAY,VA 24067	37.09563864	-80.03442126
47	370001301	WINGFIELD JAMES H & MILDRED K	LEANING OAK ROAD	Franklin County	BOONES MILL,VA 24065	37.09409706	-79.97341811
48	380002602	WOOD REBA KATHRYN	351 HOUSE ROCK RD	Franklin County	BOONES MILL,VA 24065	37.09388841	-79.99347056
49	370011106	LOVELESS GLENN W & JUNE S	255 MONTY RD	Franklin County	BOONES MILL,VA 24065	37.09371882	-79.97930885
50	380000904	KANE SCOTT W & WENDY H	526 SHAMROCK FARM LN	Franklin County	CALLAWAY,VA 24067	37.09397918	-80.03324212
51	370011116	S & S DEVELOPMENT INC	BETHLEHEM ROAD	Franklin County	BOONES MILL,VA 24065	37.09348539	-79.98294662
52	380001900	FRITH GLENN C & LINDA K	580 WILDWOOD RD	Franklin County	BOONES MILL,VA 24065	37.09360097	-80.00135123
53	370011000	FIKE JAMES R	331 MONTY RD	Franklin County	BOONES MILL,VA 24065	37.09320738	-79.97723774
54	370011115	J & M GRANTS INC	BETHLEHEM ROAD	Franklin County	BOONES MILL,VA 24065	37.09292624	-79.98308201
55	370011111	J & M GRANTS INC	MONTY ROAD	Franklin County	BOONES MILL,VA 24065	37.09279754	-79.98044823
56	370001800	KINSEY RAY A JR	LEANING OAK ROAD	Franklin County	BOONES MILL,VA 24065	37.09250559	-79.96140494
57	370001900	KINSEY RAY A JR	GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.09237396	-79.9563289
58	370011110	J & M GRANTS INC	MONTY ROAD	Franklin County	BOONES MILL,VA 24065	37.09258311	-79.98147496
59	380002500	HUGHES ETHEL NELSON	442 WILDWOOD RD	Franklin County	BOONES MILL,VA 24065	37.0923767	-79.99570618
60	380002600	WOOD REBA K		Franklin County	BOONES MILL,VA 24065	37.09228333	-79.98810503
61	370011114	J & M GRANTS INC	BETHLEHEM ROAD	Franklin County	BOONES MILL,VA 24065	37.09212312	-79.98323338
62	370001510	WORRELL RAYMOND THOMAS & LINDA D	320 HONEYBEE TRL	Franklin County	BOONES MILL,VA 24065	37.09165618	-79.97157269
63	370011000	FIKE JAMES R	331 MONTY RD	Franklin County	BOONES MILL,VA 24065	37.09172608	-79.97998309
64	370001511	WALTERS CARL W SR & CHERYL H	349 HONEYBEE TRL	Franklin County	BOONES MILL,VA 24065	37.09138784	-79.96923949
65	370010900	HEATHERWOOD PROPERTIES INC	MONTY ROAD	Franklin County	BOONES MILL,VA 24065	37.09133899	-79.97672841
66	380001501	OCCANNEECHI INC	854 CAHAS MOUNTAIN RD	Franklin County	BOONES MILL,VA 24065	37.09163978	-80.02033303
67	370001800	KINSEY RAY A JR	LEANING OAK ROAD	Franklin County	BOONES MILL,VA 24065	37.09116371	-79.96534896
68	370011112	J & M GRANTS INC	MONTY ROAD	Franklin County	BOONES MILL,VA 24065	37.09112372	-79.98152669
69	370011113	J & M GRANTS INC	MONTY ROAD	Franklin County	BOONES MILL,VA 24065	37.09011151	-79.98177893
70	370010701	WINGFIELD JAMES H & MILDRED K	MONTY ROAD	Franklin County	BOONES MILL,VA 24065	37.0897538	-79.9759489
71	370001600	WRAY HAROLD E & CAROLYN M	SAINT CLAIR LANE	Franklin County	BOONES MILL,VA 24065	37.08910568	-79.96732843
72	370001803	DRAPER JEFFREY B	855 LEANING OAK RD	Franklin County	BOONES MILL,VA 24065	37.08901283	-79.96310857
73	380001400	BOWLING WAYNE J & MARGIE SHIVELY	2280 CAHAS MOUNTAIN RD	Franklin County	BOONES MILL,VA 24065	37.08941783	-80.01265426
74	370001901	BERNARD STEPHEN W & ANNE W	GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.08857303	-79.94956937
75	370009906	COPENHAVER GEORGE W & JANICE P	887 LABELLEVUE DR	Franklin County	BOONES MILL,VA 24065	37.08854374	-79.96932669
76	0370009906A	FLINT RICHARD E III		Franklin County	BOONES MILL,VA 24065	37.08848988	-79.97096044
77	370001606	KEATON JOSEPH A & DAVID A	SAINT CLAIR LANE	Franklin County	BOONES MILL,VA 24065	37.08830981	-79.9640629
78	380002000	FLORA WENDELL WRAY & MARY MCNEIL	150 FLORADALE FARMS LANE	Franklin County	BOONES MILL,VA 24065	37.08813037	-80.00089914
79	0380002204B	OWEN EMILIE M	574 WILDWOOD RD	Franklin County	BOONES MILL,VA 24065	37.08767504	-79.99227297
80	0370001803A	DRAPER JOANNE H		Franklin County	BOONES MILL,VA 24065	37.08736733	-79.96164368
81	370001605	WADDELL EARNESTINE	89 SAINT CLAIR LN	Franklin County	BOONES MILL,VA 24065	37.08729275	-79.96263279
82	0370009305A	HANES DEREK T & MARION C	7681 GRASSY HILL RD	Franklin County	BOONES MILL,VA 24065	37.08660488	-79.95074427
83	370010100	FLINT RICHARD E III	567 HAWK RIDGE LN	Franklin County	BOONES MILL,VA 24065	37.08678699	-79.97233002
84	370009301	FLORA LYNN R & CYNTHIA D	GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.086565	-79.94815758
85	0370001803A	DRAPER JOANNE H		Franklin County	BOONES MILL,VA 24065	37.08664367	-79.96111291
86	380002002	FLORA CHARLES FREDRICK & STEPHANIE M		Franklin County	BOONES MILL,VA 24065	37.08695753	-80.00726409
87	380002203	HURT MARY FRANCES KING & MICHAEL S		Franklin County	BOONES MILL,VA 24065	37.08723686	-79.99596429
88	380001501	OCCANNEECHI INC	854 CAHAS MOUNTAIN RD	Franklin County	BOONES MILL,VA 24065	37.08558037	-80.01434922
89	370009303	CUSTER CAREY E & BETTY C	7565 GRASSY HILL RD	Franklin County	BOONES MILL,VA 24065	37.08479009	-79.94981093
90	380001300	JAMISON J CLARK JR & SHIRLEY BOWMAN & J CLARK SR &		Franklin County	BOONES MILL,VA 24065	37.08535676	-80.01954356
91	370008500	FLORA LYNN RAY	GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.08383185	-79.94571394
92	0380003402E	KINSEY BRIAN H & GEORGE D JR & STEVEN D	114 KINSEY HILL LANE	Franklin County	BOONES MILL,VA 24065	37.08369759	-80.00977964
93	370009600	PERKINSON DIANA M	2065 GREEN LEVEL RD	Franklin County	BOONES MILL,VA 24065	37.08268855	-79.96023787
94	380005100	JAMISON J CLARK JR & SHIRLEY BOWMAN & J CLARK SR &		Franklin County	BOONES MILL,VA 24065	37.08286406	-80.01769228
95	370017302	MORAN JEFFERY L & DANA A	GREEN LEVEL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.08161178	-79.94495751
96	370017700	IKENBERRY ROBERT G	GREEN LEVEL ROAD	Franklin County	BOONES MILL,VA 24065	37.08029671	-79.94072677
97	370005400	COUNTY OF FRANKLIN	VIRGIL H GOODE HWY	Franklin County	ROCKY MOUNT,VA 24151	37.07576178	-79.92552156
98	370018101	ANDERSON ORREN RICHARD & GENEVA BELL	GREEN LEVEL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.07601796	-79.93898255
99	370018000	CONNER BERNICE M & MARGIE S	3266 GREEN LEVEL RD	Franklin County	ROCKY MOUNT,VA 24151	37.07498744	-79.94062049
100	370018000	CONNER BERNICE M & MARGIE S	3266 GREEN LEVEL RD	Franklin County	ROCKY MOUNT,VA 24151	37.07414686	-79.94066481
101	370015400	FLORA DAVID C & JANIE B (LE) & GARY & D & VAN L &	190 WINDSWEPT LN	Franklin County	BOONES MILL,VA 24065	37.07226073	-79.93933604
102	370015500	FLORA DAVID C & JANIE B (LE) & GARY & D & VAN L &	133 WINDSWEPT LN	Franklin County	BOONES MILL,VA 24065	37.0713624	-79.93951603
103	370015601	RUTROUGH GARY W & HELEN J TRUSTEES	GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.07085646	-79.94064332
104	370015601	RUTROUGH GARY W & HELEN J TRUSTEES	GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.07073894	-79.93948828
105	370015600	RUTROUGH GARY W & HELEN J TRUSTEES	6370 GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.07029728	-79.94054171

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
106	370015600	RUTROUGH GARY W & HELEN J TRUSTEES	6370 GRASSY HILL ROAD	Franklin County	BOONES MILL,VA 24065	37.07021143	-79.94005822
107	370015300	RUTROUGH GARY W & HELEN J TRUSTEES	6360 GRASSY HILL RD	Franklin County	BOONES MILL,VA 24065	37.06994122	-79.93968418
108	430003400	SAUL CHRISTINE PETERS (LE) & OTHER	6258 GRASSY HILL RD	Franklin County	BOONES MILL,VA 24065	37.06970902	-79.93752299
109	430004300	ECKLES GENEVA A & KENNETH EARL(LE)& & ECKLES BUDDY	1407 BRICK CHURCH RD	Franklin County	ROCKY MOUNT,VA 24151	37.06892559	-79.93306858
110	430005005	WILSON PAUL L & PEGGY M	54 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06830776	-79.92418912
111	440020300	ANGLE LEALDA T	1619 ANGLE PLANTATION ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06716906	-79.86247324
112	430005005	WILSON PAUL L & PEGGY M	54 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06806732	-79.92494014
113	430005006	CONNER STEVEN L	108 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06733891	-79.92355619
114	430004900	FISHER C KEVIN	1884 BRICK CHURCH RD	Franklin County	ROCKY MOUNT,VA 24151	37.06692911	-79.92218076
115	440019900	SANDY RIDGE BAPTIST CHURCH	1444 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.06632741	-79.87363107
116	440018700	MORGAN ROBERT WAYNE & PATRICIA ANN	BONBROOK MILL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06619762	-79.87658922
117	430005007	CASTLEMAN JOHN E & LOUISE T	186 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06659307	-79.92309295
118	430005006	CONNER STEVEN L	108 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06647402	-79.92538876
119	430004400	ECKLES GENEVA A & KENNETH EARL(LE)& & ECKLES BUDDY		Franklin County	BOONES MILL,VA 24065	37.06610601	-79.9320034
120	440206400	DYE TIMOTHY L & AMY S	1338 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.06542091	-79.87461079
121	430005007	CASTLEMAN JOHN E & LOUISE T	186 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06596064	-79.92455748
122	430005008	CASTLEMAN JOHN EDWIN & LOUISE T		Franklin County	ROCKY MOUNT,VA 24151	37.06590002	-79.92264594
123	440206500	QUINN CATHERINE B	BONBROOK MILL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06484959	-79.87482348
124	440018701	MORGAN KIMBERLY A	1345 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.06494607	-79.87738281
125	430005008	CASTLEMAN JOHN EDWIN & LOUISE T		Franklin County	ROCKY MOUNT,VA 24151	37.06523073	-79.92390044
126	440020001	HAYNES JAMES GLYNWOOD JR	WIRTZ ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06416959	-79.86751504
127	440206600	NOVITZKI ANTHONY B	1214 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.06442855	-79.87464856
128	440200400	LAW DEREK C & SHELBY A	155 SINK DR	Franklin County	ROCKY MOUNT,VA 24151	37.06413856	-79.87754843
129	430005009	SWITZER GREGORY B & PATRICIA F	333 CLOVERDALE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06444264	-79.92309473
130	440020400	GARBER STEPHEN H & BETTY H	1321 ANGLE PLANTATION RD	Franklin County	ROCKY MOUNT,VA 24151	37.06332674	-79.86292395
131	0440019801A	DIVERS MARK A & MARIE P	BONBROOK MILL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06390176	-79.87050988
132	440200500	DUDLEY LACY F & ROSE MARIE	SINK DR	Franklin County	ROCKY MOUNT,VA 24151	37.06369657	-79.87840331
133	0440016301A	CRAWFORD PAUL F & MARY STICKMAN & PAUL A & TERESA	575 THREE BROOKS LN	Franklin County	ROCKY MOUNT,VA 24151	37.06370728	-79.8798543
134	440020401	BECKNER CATHERINE R	ANGLE PLANTATION ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06327623	-79.85925018
135	440019801	SINK BEN A & JILL L	BONBROOK MILL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06290808	-79.87233587
136	430105200	JONES BOBBY I (LE) & RICHARD WAYNE	487 TEEL BROOKE RD	Franklin County	ROCKY MOUNT,VA 24151	37.0633926	-79.92247318
137	440200600	WOOD BRUCE M & JENNIFER	SINK DR	Franklin County	ROCKY MOUNT,VA 24151	37.06253634	-79.87797398
138	450000902	SMITHERS C KELLY	180 JONESMILL LN	Franklin County	ROCKY MOUNT,VA 24151	37.06214519	-79.85678884
139	430105100	LINKOUS KELVIN D & DEBRA D	495 TEEL BROOKE RD	Franklin County	ROCKY MOUNT,VA 24151	37.06263083	-79.92172026
140	440016301	CRAWFORD PAUL F & MARY STICKMAN	209 THREE BROOKS LN	Franklin County	ROCKY MOUNT,VA 24151	37.06195949	-79.88013445
141	440019500	HAYNES JAMES GLYNWOOD JR	844 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.06156135	-79.86794823
142	450006800	SMITHERS C KELLY	BOOKERTWASHINGTON HWY	Franklin County	ROCKY MOUNT,VA 24151	37.06115134	-79.83766754
143	440016300	MARTIN WILLIAM C III	110 THREE BROOKS LN	Franklin County	ROCKY MOUNT,VA 24151	37.0608705	-79.88093387
144	430105000	LANCASTER FRANKLIN D & SANDRA H	492 TEEL BROOKE RD	Franklin County	ROCKY MOUNT,VA 24151	37.06116647	-79.92133904
145	430104900	HODGES FLOYD CLAYTON & RITA SMITH	484 TEEL BROOKE RD	Franklin County	ROCKY MOUNT,VA 24151	37.06096898	-79.92242001
146	440016100	ENGLISH TOMMY LEE	95 PRICE LN	Franklin County	ROCKY MOUNT,VA 24151	37.06058496	-79.882139
147	440019300	HAYNES JAMES GLYNWOOD JR	BONBROOK MILL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06018515	-79.86494988
148	450001600	SMITHERS C KELLY & GAIL D	3175 BOOKER T WASHINGT HWY	Franklin County	ROCKY MOUNT,VA 24151	37.05995052	-79.84175411
149	440016000	CONNEL DOUGLAS JACK	161 PRICE LN	Franklin County	ROCKY MOUNT,VA 24151	37.05979084	-79.88127483
150	450000902	SMITHERS C KELLY	180 JONESMILL LN	Franklin County	ROCKY MOUNT,VA 24151	37.05934524	-79.85292503
151	440004300	WERNER DAVID J & BETTY B & REILLY & IAN ELLIOTT &	605 PARKVIEW DR	Franklin County	ROCKY MOUNT,VA 24151	37.05963428	-79.91550836
152	450008000	LYNCH RICHARD TRUSTEE OF CATHERINE R BECKNER TRUST	485 ANGLE PLANTATION ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.05892098	-79.84612941
153	0440004302A	ROSS DAVID E & KARI D	201 OLD MILL CREEK LANE	Franklin County	ROCKY MOUNT,VA 24151	37.05931494	-79.91003926
154	440015800	LDS HOLDINGS LC	180 AMT TECH DR	Franklin County	ROCKY MOUNT,VA 24151	37.05855032	-79.88210805
155	440015700	BROWN LYDIA LAVERNE	195 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.05808964	-79.88023862
156	430021500	LONGVIEW HOLSTEINS INC		Franklin County	ROCKY MOUNT,VA 24151	37.05816158	-79.92451408
157	450003200	ROOPE WALLACE ALFRED & MARTHA JANE & (LE) & OSBORN	450 LONGWOOD RD	Franklin County	ROCKY MOUNT,VA 24151	37.05642718	-79.83000105
158	450006800	SMITHERS C KELLY	BOOKERTWASHINGTON HWY	Franklin County	ROCKY MOUNT,VA 24151	37.05640104	-79.83588149
159	440011600	FITTS MICHAEL L & ANGELA D	VIRGIL H GOODE HWY	Franklin County	ROCKY MOUNT,VA 24151	37.05691621	-79.88598815
160	450001500	SMITHERS C KELLY & GAIL D	BOOKERTWASHINGTON HWY	Franklin County	ROCKY MOUNT,VA 24151	37.05646689	-79.83983092
161	440203800	HUNLEY RAYMOND MILTON & BARBARA	160 BONBROOK MILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.05667682	-79.88031491
162	450003401	STARKEY MICHAEL L & MARILYN R	393 LONGWOOD RD	Franklin County	ROCKY MOUNT,VA 24151	37.05605932	-79.82882263
163	440015200	FITTS MARY L	VIRGIL H GOODE HWY	Franklin County	ROCKY MOUNT,VA 24151	37.05629769	-79.88172275
164	450006802	ANGLE EDWARD M & HELENE S	411 FLINT HILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.05613536	-79.83296579
165	440004400	BUFORD GUY W & MARGARET S	985 IRON RIDGE RD	Franklin County	ROCKY MOUNT,VA 24151	37.05625192	-79.91419098
166	450003300	ROOPE WALLACE ALFRED & MARTHA JANE	445 LONGWOOD ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.0552931	-79.82962952
167	450006403	STARKEY MICHAEL L & MARILYN R	KNOLL RIDGE LANE	Franklin County	ROCKY MOUNT,VA 24151	37.05509449	-79.83309568
168	450003400	STARKEY VIRGINIA S	313 LONGWOOD RD	Franklin County	ROCKY MOUNT,VA 24151	37.05490447	-79.82748137
169	450008000	LYNCH RICHARD TRUSTEE OF CATHERINE R BECKNER TRUST	485 ANGLE PLANTATION ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.0547573	-79.84808031
170	450006404	ANGLE EDWARD M & HELENE S	KNOLL RIDGE LANE	Franklin County	ROCKY MOUNT,VA 24151	37.05430929	-79.8317278
171	450006801	ANGLE MARK W & JUDITH M	FLINT HILL ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.05417721	-79.8367091
172	450006600	STARKEY MICHAEL L & MARILYN R	KNOLL RIDGE LANE	Franklin County	ROCKY MOUNT,VA 24151	37.05410902	-79.82987835
173	450005500	NOVAK RAYMOND H II & KELLY L	939 FARM VIEW ROAD	Franklin County	GLADE HILL,VA 24092	37.05253963	-79.81263778
174	450006400	CARNER IRENE D & LYNCH HAZEL G	REDWOOD ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.05251284	-79.82540345
175	440011700	SINK JAMES W (TRUSTEE) & SINK EDITH G (TRUSTEE)	18863 VIRGIL H GOODE HWY	Franklin County	ROCKY MOUNT,VA 24151	37.05300166	-79.88717825
176	440006400	ANGLE DALE E & MARY A (TRUSTEES)	1116 IRON RIDGE RD	Franklin County	ROCKY MOUNT,VA 24151	37.05313019	-79.91104788
177	440006500	ANGLE DALE E & MARY A (TRUSTEES)	1556 IRON RIDGE ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.05213341	-79.90827737
178	440008900	SINK JOSEPH L & ALLEN LYNN SINK (TRUSTEES)	101 FOGGY RIDGE RD	Franklin County	ROCKY MOUNT,VA 24151	37.05172766	-79.8922095
179	450006100	BOARD O S JR		Franklin County	GLADE HILL,VA 24092	37.05046536	-79.81967307
180	440006600	ANGLE DEAN A & BETTY DENISE	1770 IRON RIDGE RD	Franklin County	ROCKY MOUNT,VA 24151	37.05061464	-79.90598088
181	440009000	SINK JOSEPH L & ALLEN LYNN SINK	FOGGY RIDGE ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.05011727	-79.89155013
182	440007300	BARNHART LOIS N & DONALD B	184 FOGGY RIDGE RD	Franklin County	ROCKY MOUNT,VA 24151	37.04788372	-79.901829
183	450005900	BROWN JOSEPH WYATT & SUSAN HOGAN	GREENWAY ROAD	Franklin County	GLADE HILL,VA 24092	37.04695601	-79.81492401
184	440008702	SINK J W	195 TOMJUL LN	Franklin County	ROCKY MOUNT,VA 24151	37.04754242	-79.89216758
185	440007400	MCBRIDE DARIUS ASHTON	356 FOGGY RIDGE ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.04707965	-79.89633583
186	450012003	MYERS SUSAN BOARD & BOARD WILLIAM D & KENNETH C &		Franklin County	GLADE HILL,VA 24092	37.04625798	-79.82105226
187	450013500	ALTICE RUSSELL EDWARD	FARM VIEW ROAD	Franklin County	GLADE HILL,VA 24092	37.04537721	-79.80521336
188	450013000	BROWN JOSEPH WYATT & SUSAN HOGAN	955 GREENWAY RD	Franklin County	GLADE HILL,VA 24092	37.04495182	-79.81118542
189	450012100	CAMPBELL DANIEL CURTIS	BOARD LANE	Franklin County	GLADE HILL,VA 24092	37.04486667	-79.82015654
190	450013600	WOLFE TERRY WAYNE & LINDA B (TRUSTEES)	1807 GOLDEN VIEW RD	Franklin County	GLADE HILL,VA 24092	37.04300005	-79.80166199
191	450012005	BOARD ONLEY S JR (LE) & BOARD WILLIAM D	GREENWAY ROAD	Franklin County	GLADE HILL,VA 24092	37.04317996	-79.82081143
192	450012001	BOARD O S JR & WILLIAM DAVID & KENNETH CRAIG		Franklin County	GLADE HILL,VA 24092	37.04287512	-79.8237695
193	450012200	WYATT RALPH DWIGHT & CATHERINE LORRAINE	345 GREENWAY RD	Franklin County	GLADE HILL,VA 24092	37.04220417	-79.82137538
194	450013506	MARTIN DOTTIE T	342 FARM VIEW RD	Franklin County	GLADE HILL,VA 24092	37.04148471	-79.80856665
195	450013502	ROBINSON JOHN	390 FARM VIEW RD	Franklin County	GLADE HILL,VA 24092	37.04099601	-79.80692283
196	450013602	VENNING & CO DEVELOPERS LLC	1808 GOLDEN VIEW ROAD	Franklin County	GLADE HILL,VA 24092	37.04023352	-79.80498532
197	540200300	MICHAEL R BAILEY CONSTRUCTION INC	GOLDEN VIEW ROAD	Franklin County	GLADE HILL,VA 24092	37.03935472	-79.79605995
198	540020601	HUBBARD KARL N	1697 GOLDEN VIEW RD	Franklin County	GLADE HILL,VA 24092	37.03898553	-79.80655247
199	540021600	RICH BEULAH CLEDITH PERDUE	1804 GOLDEN VIEW RD	Franklin County	GLADE HILL,VA 24092	37.03784659	-79.80379555
200	540021200	SMITH HERMAN F & MITZIE L	2076 GOLDEN VIEW RD	Franklin County	GLADE HILL,VA 24092	37.03767582	-79.79977531
201	540021800	FORD OKEY RAY & LORRAINE PERDUE		Franklin County	GLADE HILL,VA 24092	37.03705809	-79.80449996
202	540021700	FORD OKEY RAY & LORRAINE PERDUE		Franklin County	GLADE HILL,VA 24092	37.03802583	-79.80393226
203	540020701	MICHAEL R BAILEY CONSTRUCTION INC		Franklin County	GLADE HILL,VA 24092	37.03668558	-79.79678958
204	530000100	LUMSDEN JERRE C		Franklin County	GLADE HILL,VA 24092	37.03472233	-79.78387613
205	540020700	LUMSDEN JERRE C		Franklin County	GLADE HILL,VA 24092	37.03285835	-79.7913589
206	540021400	DAVIS CASTEEN R	1020 GOLDEN VIEW ROAD	Franklin County	GLADE HILL,VA 24092	37.03164419	-79.80299707
207	540020800	LUMSDEN JOHN S		Franklin County	GLADE HILL,VA 24092	37.03094541	-79.79618543
208	530000300	RIDDLE JAMES T & MARY P	WEBSTER ROAD	Franklin County	GLADE HILL,VA 24092	37.03057474	-79.78468072
209	530000200	RIDDLE JAMES T & MARY P	WEBSTER ROAD	Franklin County	GLADE HILL,VA 24092	37.03049741	-79.78337308
210	530000800	HOLLAND P L JR <ESTATE>	220 HOLLAND FARM LANE	Franklin County	GLADE HILL,VA 24092	37.02962149	-79.77772087

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
211	530000606	BROWN WILLIAM R & DIANNE B	1567 WEBSTER RD	Franklin County	GLADE HILL,VA 24092	37.0295734	-79.78617872
212	530000603	SMITHVIEW MANAGEMENT CORPORATION	85 POPLAR COURT LANE	Franklin County	GLADE HILL,VA 24092	37.02892035	-79.78282031
213	530000400	LUMSDEN PATSY S	1507 WEBSTER RD	Franklin County	GLADE HILL,VA 24092	37.02939741	-79.78871711
214	0530000603X	LUMSDEN	1819 WEBSTER RD	Franklin County	GLADE HILL,VA 24092	37.02769795	-79.78213427
215	530200100	WORRELL TIMOTHY L	1819 WEBSTER RD	Franklin County	GLADE HILL,VA 24092	37.02759743	-79.7818219
216	530001700	MILLS ALICE K <TRUSTEE>		Franklin County	GLADE HILL,VA 24092	37.02740168	-79.77112474
217	530012101	FRANKLIN REAL ESTATE COMPANY	POWELLS STORE ROAD	Franklin County	GLADE HILL,VA 24092	37.02613135	-79.76577396
218	530011900	COOKE RICKY JAMES & JAMIE LYNN		Franklin County	GLADE HILL,VA 24092	37.02391098	-79.76278742
219	530012500	JOHNSON GLADYS H & AVELINE BRENDA & ANN JOHNSON (T		Franklin County	GLADE HILL,VA 24092	37.02183483	-79.76012968
220	530012600	FRANKLIN REAL ESTATE COMPANY	1142 AYERS ROAD	Franklin County	GLADE HILL,VA 24092	37.01825304	-79.76365434
221	530011400	HODGES WALTER L & BETTY W	1979 TIMBER RIDGE RD	Franklin County	GLADE HILL,VA 24092	37.01601215	-79.75445251
222	530013100	DUDLEY SHELBY S	1401 TIMBER RIDGE RD	Franklin County	GLADE HILL,VA 24092	37.01282163	-79.75943642
223	650401400	BANK OF THE JAMES	TIMBER RIDGE ROAD	Franklin County	GLADE HILL,VA 24092	37.01200587	-79.75574836
224	650401600	PEGRAM ROBERT ALAN	1705 TIMBER RIDGE RD	Franklin County	GLADE HILL,VA 24092	37.01154816	-79.75434627
225	650401500	BANK OF THE JAMES	TIMBER RIDGE ROAD	Franklin County	GLADE HILL,VA 24092	37.01143512	-79.75493264
226	650402500	BANK OF THE JAMES	TIMBER RIDGE ROAD	Franklin County	GLADE HILL,VA 24092	37.01020622	-79.75412691
227	650402300	BANK OF THE JAMES	TIMBER RIDGE ROAD	Franklin County	GLADE HILL,VA 24092	37.0097742	-79.753123
228	650402600	BANK OF THE JAMES	TIMBER RIDGE ROAD	Franklin County	GLADE HILL,VA 24092	37.00854708	-79.75590057
229	650003400	LAW ELNORA P	414 TOBACCO ROAD	Franklin County	GLADE HILL,VA 24092	37.00760653	-79.75141784
230	650003200	POTTER JAMES DONALD & KAY D	93 TOBACCO RD	Franklin County	GLADE HILL,VA 24092	37.00557685	-79.75488368
231	650003402	LAW ELTON W	414 TOBACCO RD	Franklin County	GLADE HILL,VA 24092	37.00491546	-79.75088144
232	650003400	LAW ELNORA P	414 TOBACCO ROAD	Franklin County	GLADE HILL,VA 24092	37.00300592	-79.74878389
233	650004200	ROBERTSON CLAUDE THOMAS	753 SIMMONS CREEK RD	Franklin County	UNION HALL,VA 24176	36.99975194	-79.73895115
234	650005102	CRAUN DAVID W & JULIE P	815 KENWOOD ROAD	Franklin County	GLADE HILL,VA 24092	36.99923084	-79.74503641
235	650004200	ROBERTSON CLAUDE THOMAS	753 SIMMONS CREEK RD	Franklin County	UNION HALL,VA 24176	36.99768083	-79.73660417
236	660003804	HOLT DOUGLAS A & CONSTANCE A	255 BROOKS MILL RD	Franklin County	UNION HALL,VA 24176	36.99469606	-79.73210586
237	660100100	BETS INC	10660 OLD FRANKLIN TPKE	Franklin County	UNION HALL,VA 24176	36.99359244	-79.70566493
238	660009602	EDWARDS CRYSTAL DIANE		Franklin County	UNION HALL,VA 24176	36.99346254	-79.70735214
239	0660009501A	EDWARDS RONALD B II	102 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.99263606	-79.70704675
240	660100200	COOPER CONTRACTORS INC		Franklin County	UNION HALL,VA 24176	36.99256066	-79.70537526
241	660009502	CEMETERY		Franklin County	UNION HALL,VA 24176	36.99233326	-79.70640074
242	660004400	HALL PREDELMA ONEAL	74 EDWARDSWAY RD	Franklin County	UNION HALL,VA 24176	36.99190299	-79.71543168
243	660003802	ANGLE AL N & SHARON M		Franklin County	UNION HALL,VA 24176	36.99199679	-79.72438423
244	660009503	EDWARDS RONALD B	196 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.99166298	-79.70697198
245	660101200	COOPER CONTRACTORS INC		Franklin County	UNION HALL,VA 24176	36.9914107	-79.70145797
246	660009504	WALLER JANIS E		Franklin County	UNION HALL,VA 24176	36.99101094	-79.70637294
247	660003802	ANGLE AL N & SHARON M		Franklin County	UNION HALL,VA 24176	36.99113793	-79.72932928
248	660009505	FREEMAN-MARTIN GLORIA MARIE	256 HOLLIDAY LANE	Franklin County	UNION HALL,VA 24176	36.99044623	-79.70697035
249	660009400	SMITH OTHELIER	227 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.99028559	-79.70369606
250	660009001	WILLARD CONSTRUCTION OF SMITH MOUNTAIN LAKE LLC		Franklin County	UNION HALL,VA 24176	36.98990717	-79.69495193
251	660010200	LAMBERT GUY JOSEPH (TRUSTEE)		Franklin County	UNION HALL,VA 24176	36.98991437	-79.70559535
252	660010300	POINDEXTER ANDREW LEE		Franklin County	UNION HALL,VA 24176	36.98960054	-79.70491899
253	660010400	ONEILL GLADYS F	381 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.98922375	-79.70437227
254	660010602	LAMBERT SHARON E	233 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.98873903	-79.70269611
255	660010100	BLUE PENNY EDWARDS & ROBERT E III	2371 JACKS CREEK ROAD	Franklin County	UNION HALL,VA 24176	36.98847958	-79.70850664
256	660009200	SMITH OTHELIER		Franklin County	UNION HALL,VA 24176	36.98834616	-79.70068039
257	660004300	EDWARDS PROPERTIES LTD	10180 OLD FRANKLIN TPKE	Franklin County	UNION HALL,VA 24176	36.98843375	-79.71673748
258	660010500	POINDEXTER ANDREW L		Franklin County	UNION HALL,VA 24176	36.98844889	-79.7048461
259	660007700	WRIGHT DANIEL PAYNE & DONALD WAYNE		Franklin County	UNION HALL,VA 24176	36.98765056	-79.6826545
260	660008100	PERDUE GILES RUSSELL & JANICE TURNER	26 NOVELTY ROAD	Franklin County	UNION HALL,VA 24176	36.98706428	-79.68568471
261	660010600	LAMBERT CHRISTIOPHER ERIC	496 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.98727196	-79.70400411
262	660008100	PERDUE GILES RUSSELL & JANICE TURNER	26 NOVELTY ROAD	Franklin County	UNION HALL,VA 24176	36.98681643	-79.68614009
263	660011000	CLEMENTS ANN C & OTHERS		Franklin County	UNION HALL,VA 24176	36.98691713	-79.69854978
264	660004100	WILLIAMS ROBERT W & ROSEMARY <TRUSTEES>	128 TURTLE HILL ROAD	Franklin County	UNION HALL,VA 24176	36.98689407	-79.72031654
265	660011100	BROOKS ELAINE T (TRUSTEE) & CUNDIFF E W & B W HUBB		Franklin County	UNION HALL,VA 24176	36.98608106	-79.68591607
266	660010100	BLUE PENNY EDWARDS & ROBERT E III	2371 JACKS CREEK ROAD	Franklin County	UNION HALL,VA 24176	36.986236	-79.71157954
267	660010601	LAMBERT JOSEPH E & MARY I	237 HOLLIDAY LN	Franklin County	UNION HALL,VA 24176	36.9860232	-79.70176115
268	660011100	BROOKS ELAINE T (TRUSTEE) & CUNDIFF E W & B W HUBB		Franklin County	UNION HALL,VA 24176	36.98591873	-79.69271406
269	660003900	EDWARDS RONALD B		Franklin County	UNION HALL,VA 24176	36.98550376	-79.71425409
270	660011305	ZEIGLER LISA DARLENE	245 ZEIGLER LN	Franklin County	UNION HALL,VA 24176	36.98500302	-79.68596491
271	660010700	ONEAL GLADYS FRANCES	JACKS CREEK RD	Franklin County	UNION HALL,VA 24176	36.9837872	-79.70410772
272	660011302	ZEIGLER KENNEY D & RANDY C	250 ZEIGLER LN	Franklin County	UNION HALL,VA 24176	36.9835507	-79.68554104
273	660011302	ZEIGLER KENNEY D & RANDY C	250 ZEIGLER LN	Franklin County	UNION HALL,VA 24176	36.98345905	-79.68585891
274	660011100	BROOKS ELAINE T (TRUSTEE) & CUNDIFF E W & B W HUBB		Franklin County	UNION HALL,VA 24176	36.9834597	-79.68792375
275	660011800	POINDEXTER GLEN H & NANCY B	1130 NOVELTY RD	Franklin County	UNION HALL,VA 24176	36.98138304	-79.67352714
276	660011700	POINDEXTER BIRKWOOD T & AURIE C	NOVELTY ROAD	Franklin County	UNION HALL,VA 24176	36.98142628	-79.67763114
277	660012100	AMODEO DEBBIE	1354 NOVELTY RD	Franklin County	UNION HALL,VA 24176	36.98105491	-79.67293956
278	660011305	ZEIGLER LISA DARLENE	245 ZEIGLER LN	Franklin County	UNION HALL,VA 24176	36.98064178	-79.68371234
279	660012101	PENHOOK UNITED METHODIST CHURCH	1200 NOVELTY RD	Franklin County	UNION HALL,VA 24176	36.98048221	-79.67256442
280	660011703	POINDEXTER JAY H	1150 NOVELTY ROAD	Franklin County	UNION HALL,VA 24176	36.98024599	-79.67416985
281	660011300	STUMP ADAM KENDRICK & CONNIE Z	423 ZEIGLER LN	Franklin County	UNION HALL,VA 24176	36.97950078	-79.68630311
282	690000800	ENGLISH HENRY WARD		Franklin County	UNION HALL,VA 24176	36.97588615	-79.67293829
283	680000700	HUNT KEITH L & DEBORAH C		Franklin County	PENHOOK,VA 24137	36.97440816	-79.65547745
284	680000301	HORSLEY BENJAMIN F & TAMMY Y	1912 NOVELTY RD	Franklin County	PENHOOK,VA 24137	36.97335063	-79.65900724
285	680000900	NOVELTY LAND HOLDINGS LLC		Franklin County	PENHOOK,VA 24137	36.97294459	-79.64644026
286	680000600	BROWN DIXIE C & STRIKE ELDON R & PATSY C		Franklin County	PENHOOK,VA 24137	36.97192124	-79.65281267
287	690001000	CUNDIFF THOMAS C JR & DOROTHY RAMSEY	355 LISTENING HILL RD	Franklin County	PENHOOK,VA 24137	36.97092533	-79.66498118
288	680000200	POINDEXTER NORMA JEAN	2201 BAR RIDGE RD	Franklin County	PENHOOK,VA 24137	36.97030577	-79.66191866
289	680005000	LESTER CARL E	2019 RAMSEY MEMORIAL ROAD	Franklin County	PENHOOK,VA 24137	36.96935742	-79.63842822
290	690000700	MWV COMMUNITY DEVELOPMENT & LAND MANAGEMENT LLC		Franklin County	UNION HALL,VA 24176	36.96968983	-79.68673132
291	0720034202B	COVENANT PARTNERS LLC	TRIPPLE CREEK RD	Franklin County	ROCKY MOUNT,VA 24151	36.97148088	-79.87013046
292	720034200	FRANKLIN COMMUNITY BANK NA	685 TRIPPLE CREEK RD	Franklin County	ROCKY MOUNT,VA 24151	36.97148306	-79.87155093
293	680004600	HODGES KENNETH A & KEVIN A & DAVIS ERICA S		Franklin County	PENHOOK,VA 24137	36.96890404	-79.63115871
294	690000900	NIFONG WAYNE E & GAYL S	452 LISTENING HILL ROAD	Franklin County	PENHOOK,VA 24137	36.96877894	-79.67284677
295	680003600	WITCHER MEARL TRAVIS & CAROLYN MCENHEIMER	176 ASHWORTH RD	Franklin County	PENHOOK,VA 24137	36.96768628	-79.62078497
296	680000200	POINDEXTER NORMA JEAN	2201 BAR RIDGE RD	Franklin County	PENHOOK,VA 24137	36.96759024	-79.66061311
297	680005000	LESTER CARL E	2019 RAMSEY MEMORIAL ROAD	Franklin County	PENHOOK,VA 24137	36.96763939	-79.6363899
298	720034202	RONILE INC		Franklin County	ROCKY MOUNT,VA 24151	36.96937502	-79.86936354
299	680007000	WORKMAN ROBERT B III & JOAN M	19111 SNOW CREEK RD	Franklin County	PENHOOK,VA 24137	36.96655085	-79.62296737
300	680003600	WITCHER MEARL TRAVIS & CAROLYN MCENHEIMER	176 ASHWORTH RD	Franklin County	PENHOOK,VA 24137	36.96606481	-79.61755575
301	680005203	CABEEN GEORGE M & MARY J & KEMP & GEORGE FRANKLIN		Franklin County	PENHOOK,VA 24137	36.96627929	-79.64520405
302	680005300	DOUGHBOY LLC	1760 BAR RIDGE RD	Franklin County	PENHOOK,VA 24137	36.9661372	-79.65701392
303	680006800	WITCHER WESLEY (DR)		Franklin County	PENHOOK,VA 24137	36.96197928	-79.63008987
304	720020102	PEA PATCH RIDGE LLC	80 SONTAG RD	Franklin County	ROCKY MOUNT,VA 24151	36.95370803	-79.87882796
305	720020100	WORLEY DONALD E JR & JOYCE M	200 SONTAG ROAD	Franklin County	ROCKY MOUNT,VA 24151	36.95047409	-79.87841966
306	820003913	JAMISON DARELL CRAIG	VIRGIL H GOODE HWY	Franklin County	ROCKY MOUNT,VA 24151	36.94780517	-79.8821636
307	820003908	JAMISON DARELL CRAIG	VIRGIL H GOODE HWY	Franklin County	ROCKY MOUNT,VA 24151	36.94684401	-79.88139716
308	820003907	JAMISON DARELL C	10885 VIRGIL H GOODE	Franklin County	ROCKY MOUNT,VA 24151	36.94628247	-79.88093393
309	820013811	COUNTY OF FRANKLIN	CORPORATE DR	Franklin County	ROCKY MOUNT,VA 24151	36.93163404	-79.88094083
310	820013807	COUNTY OF FRANKLIN	278 CORPORATE DR	Franklin County	ROCKY MOUNT,VA 24151	36.93000204	-79.88408342
311	0450006802A	ANGLE EDWARD M & HELENE S	411 FLINT HILL RD	Franklin County	ROCKY MOUNT,VA 24151	37.05377728	-79.83574018
312	370005302	ROANOKE GAS COMPANY	1885 BRICK CHURCH ROAD	Franklin County	ROCKY MOUNT,VA 24151	37.06967498	-79.92461264
313	16-3B	UNITED STATES OF AMERICA		Giles County	RIPPLEMEAD,VA 24150	37.39955337	-80.68761266
314	16-2	UNITED STATES OF AMERICA		Giles County	RIPPLEMEAD,VA 24150	37.39480036	-80.6804803
315	16-9	SNIDER RAY H EST	SNIDER TOWN RD	Giles County	RIPPLEMEAD,VA 24150	37.38444424	-80.6748952

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
316	16-11A	SNIDER ISAIAH R JR		Giles County	RIPPLEMEAD,VA 24150	37.38408301	-80.67907072
317	16-X	NATIONAL GYPSUM		Giles County	RIPPLEMEAD,VA 24150	37.38275104	-80.67561669
318	16-8	LUCAS W A	SNIDERTOWN RD	Giles County	RIPPLEMEAD,VA 24150	37.3826588	-80.66694896
319	17-39	APG LIME CORPORATION		Giles County	RIPPLEMEAD,VA 24150	37.3813999	-80.66553579
320	16-11	COLLINS BERT E AND DANNY RAY LEE		Giles County	RIPPLEMEAD,VA 24150	37.38093384	-80.67778102
321	16-24	MORRIS BEDFORD		Giles County	RIPPLEMEAD,VA 24150	37.38083107	-80.66871572
322	16-26	MARTIN JIMMY LOWE ET UX	110 BRIDGE RD	Giles County	RIPPLEMEAD,VA 24150	37.3807787	-80.66667039
323	27-21C	SANDERS WALTER DANIEL OR BEULAH	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.38013578	-80.67596283
324	27-21	MERRIX NAOMI S	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.37914609	-80.67798619
325	27-6-2	DUNBAR MARY ALICE ROGERS	ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.37761911	-80.68311188
326	27-6-5	GALLAGHER DANIEL A OR SHERRI O	ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.37643306	-80.67728047
327	JEFFERSON NATIONAL FOREST 968	UNITED STATES OF AMERICA		Giles County	NARROWS,VA 24124	37.37563235	-80.72905227
328	27-6-3	GALLAGHER DANIEL A OR SHERRI O	279 ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.37364518	-80.68022992
329	27-8	HETZEL MARY RANDOLPH S ET AL	ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.37299195	-80.68512109
330	27-6-4	GALLAGHER DANIEL A OR SHERRI O	ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.37248225	-80.6772753
331	27-16B	SONGER EDWARD RAYMOND	157 ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.37005426	-80.67636942
332	27-8A	HETZEL MARY RANDOLPH SMITH ET AL	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36971269	-80.68812314
333	27-16C	LESTER THOMAS E OR DENISE M	206 ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.36932016	-80.67869507
334	27-18	ALTIZER DONNA L & ELIZABETH MAE	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36916888	-80.68429491
335	27-16A	JAMES RIVER HYDRATE & SUPPLY CO	ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.3684784	-80.6766158
336	27-18A	ALTIZER DAVID & ELIZABETH	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36806411	-80.68464602
337	16-12	COCHRAN CARL KEITH AND GARY THOMAS	3832 GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36730497	-80.69048403
338	27-18	ALTIZER DONNA L & ELIZABETH MAE	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36584097	-80.68756044
339	27-17	ALTIZER JOHN R OR KAREN L	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36570831	-80.67958551
340	27-19	ALTIZER ELIZABETH MAE	GRAVELY HILL RD	Giles County	RIPPLEMEAD,VA 24150	37.36297032	-80.68501752
341	27-73	APG LIME CORP	NORCROSS RD	Giles County	RIPPLEMEAD,VA 24150	37.36004768	-80.68364866
342	27-75	APG LIME CORP	NORCROSS RD	Giles County	RIPPLEMEAD,VA 24150	37.35888845	-80.67559718
343	27-72	WEBB JAMES A OR JANIE WEBB	246 HOOT OWL RD	Giles County	RIPPLEMEAD,VA 24150	37.35597939	-80.66700847
344	28-10A	BOWMAN ANTHONY L OR CAROL ANN	BIG STONEY CREEK RD	Giles County	RIPPLEMEAD,VA 24150	37.35242146	-80.66232715
345	28-10D	COON DEBBIE OR EVERETTE A RICHARDS	161 BUFFALO ANKLETS DR	Giles County	RIPPLEMEAD,VA 24150	37.3516923	-80.65128555
346	28-10	CROOK JASON A	551 BUFFALO ANKLETS	Giles County	RIPPLEMEAD,VA 24150	37.35145646	-80.65578702
347	28-10E2	TONEY RONNIE JR	BUFFALO ANKLETS RD	Giles County	PEMBROKE,VA 24136	37.35076284	-80.64866721
348	28-32	KAUFFELT DAVID L	519 HENDRICKSON RD	Giles County	PEMBROKE,VA 24136	37.35007477	-80.63725599
349	27-69	PHLEGAR WILLIAM CARROLL TRUSTEE	CEDAR HILL LN	Giles County	RIPPLEMEAD,VA 24150	37.34932274	-80.66792826
350	28-10E	WEBB DEBORAH	BUFFALO ANKLETS RD	Giles County	PEMBROKE,VA 24136	37.34892855	-80.64877142
351	28-32	KAUFFELT DAVID L	519 HENDRICKSON RD	Giles County	PEMBROKE,VA 24136	37.34792834	-80.64012539
352	28-10C	HILTON ROGER L SR OR BEVERLY S	255 BUFFALO ANKLETS DR	Giles County	RIPPLEMEAD,VA 24150	37.34785252	-80.65413008
353	28-10E1	WEBB DEBORAH	BUFFALO ANKLETS RD	Giles County	PEMBROKE,VA 24136	37.34778202	-80.64987093
354	28-32A	KAUFFELT DAVID L	BIG BRANCH RD	Giles County	PEMBROKE,VA 24136	37.3471538	-80.63529185
355	28-29N	THOMPSON DREMA KAY STEVERS	BIG BRANCH HOLLOW RD	Giles County	PEMBROKE,VA 24136	37.34642659	-80.63415885
356	28-29H	MCCLELLAN KENNETH NEAL		Giles County	PEMBROKE,VA 24136	37.3458388	-80.63243308
357	28-16	SIMMONS RUTH H & WILLIAM G	DRY BRANCH RD	Giles County	PEMBROKE,VA 24136	37.34569324	-80.64364827
358	28-29G	MCCLELLAN MARY M (LIFE TENANT)	319 BIG BRANCH HOLLOW RD	Giles County	PEMBROKE,VA 24136	37.34552347	-80.63298915
359	28-25C	CROY KEITH RANDALL	285 BIG BRANCH HOLLOW RD	Giles County	PEMBROKE,VA 24136	37.34527474	-80.63050892
360	28-28A	JONES TERRY L OR JUNE R	121 WINDSLOW DR	Giles County	PEMBROKE,VA 24136	37.3447209	-80.62636323
361	28-25	CROY ALDEN CARROLL	BIG BRANCH HOLLOW RD	Giles County	PEMBROKE,VA 24136	37.34467113	-80.63080828
362	28-32B	YOUNG PHILIP WAYNE	HENDRICKSON RD	Giles County	PEMBROKE,VA 24136	37.34456271	-80.63750145
363	29-13A	GRIGGS DONALD R AND DONNA SUE	161 BIG BRANCH HOLLOW RD	Giles County	PEMBROKE,VA 24136	37.34451683	-80.62411485
364	29-19	PRICE KIMBERLY HALE	1441 CASCADE DR	Giles County	PEMBROKE,VA 24136	37.34376474	-80.62135298
365	29-21A	WILLIAMS CHERYL D	1475 CASCADE DR	Giles County	PEMBROKE,VA 24136	37.34341477	-80.61984811
366	29-14	HILTON TOLBERT O ET UX	131 WINSLOW DR	Giles County	PEMBROKE,VA 24136	37.34342356	-80.62505413
367	28-28	HILTON JOHN WESLEY	WINSLOW DR	Giles County	PEMBROKE,VA 24136	37.34312667	-80.63017716
368	29-17	MARTIN ROBERT LEE	1382 CASCADE DR	Giles County	PEMBROKE,VA 24136	37.34272793	-80.62283096
369	29-15A	CUMBEE WILLIAM RALPH ET UX	1350 CASCADE DR	Giles County	PEMBROKE,VA 24136	37.34207557	-80.62469585
370	29-17	MARTIN ROBERT LEE	1382 CASCADE DR	Giles County	PEMBROKE,VA 24136	37.34097196	-80.62212952
371	29-40	CONKLIN WILLIAM E	839 KOW KAMP RD	Giles County	PEMBROKE,VA 24136	37.34088108	-80.60346436
372	29-25B	SIZEMORE INC		Giles County	PEMBROKE,VA 24136	37.34064345	-80.61751796
373	29-25	EAGLES NEST MINISTRIES INC	170 ARCHER TRL	Giles County	PEMBROKE,VA 24136	37.34030875	-80.62164791
374	29-36	SNIDOW J. F.	245 FORD LN	Giles County	PEMBROKE,VA 24136	37.33855976	-80.61175913
375	29-39	MARTIN LARRY WAYNE ET AL	201 LYDA LN	Giles County	PEMBROKE,VA 24136	37.33661464	-80.58812459
376	29-37	MAHAFFEY FRANCES K (LIFE TENANT)	KOW CAMP RD	Giles County	PEMBROKE,VA 24136	37.33663516	-80.60853603
377	29-30	MARSHALL DONALD L CAROLYN M	COLLINS AVE	Giles County	PEMBROKE,VA 24136	37.33631387	-80.61596302
378	29-40E	FULLER MICHAEL F OR BEVERLY F	1051 KOW CAMP RD	Giles County	PEMBROKE,VA 24136	37.33620239	-80.59493413
379	29-38	WILLIAMS WILLIAM E II OR BEVERLY S	KOW CAMP RD	Giles County	PEMBROKE,VA 24136	37.33619334	-80.60016729
380	29-40I1	MARTIN LARRY W OR PATRICIA P	LYDA LN	Giles County	PEMBROKE,VA 24136	37.33588141	-80.59267204
381	24B-14-R	BONDS STANLEY C	VIRGINIA AVE	Giles County	NARROWS,VA 24124	37.33580207	-80.80846861
382	24B-14-R	BONDS STANLEY C	VIRGINIA AVE	Giles County	NARROWS,VA 24124	37.33491012	-80.80786885
383	29-40B	WILLIAMS RALPH E OR GALE D	KOW CAMP RD	Giles County	PEMBROKE,VA 24136	37.33395009	-80.59504383
384	38A-6-G-L2	BONDS STANLEY C		Giles County	NARROWS,VA 24124	37.33427182	-80.80665992
385	43-53	CROY KERMIT L	DOE CREEK RD	Giles County	PEMBROKE,VA 24136	37.33352632	-80.58339614
386	38A-6-G-L1	MEADE JOHN F JR OR MARGARET A	4710 VIRGINIA AVE	Giles County	NARROWS,VA 24124	37.33386516	-80.80131126
387	38A-6-G-L2A	BUCKLAND J B AND RONALD E MANN		Giles County	NARROWS,VA 24124	37.33366916	-80.80391457
388	29-29	CRAIG JAMES R OR PATRICIA E	188 BOBWHITE LN	Giles County	PEMBROKE,VA 24136	37.33109755	-80.61675683
389	30-4	DOE CREEK FARM INC	412 DOE CREEK FARM RD	Giles County	PEMBROKE,VA 24136	37.32971065	-80.57653452
390	30-4B	HOLLOPTER GARY OR ALLISON	412 DOE CREEK FARM RD	Giles County	PEMBROKE,VA 24136	37.32896882	-80.58188137
391	30-4A	FREEMAN WILLIAM P TRUSTEE	412 DOE CREEK FARM RD	Giles County	PEMBROKE,VA 24136	37.32797718	-80.57607257
392	44-3-1B	KESSLER JACQUELINE M	MOUNTAIN LAKE RD	Giles County	PEMBROKE,VA 24136	37.32624011	-80.55725231
393	44-13A	CASEY RICKIE D OR MAXINE A	MOUNTAIN LAKE RD	Giles County	PEMBROKE,VA 24136	37.32554174	-80.55141252
394	44-3-3A	LEGGE STEPHEN D OR DAVID LEGGE OR	MOUNTAIN LAKE RD	Giles County	PEMBROKE,VA 24136	37.32554001	-80.55446425
395	44A-1-34	BEACHAM VERNON V SR OR VERNON V II	HIGH NOON RD	Giles County	PEMBROKE,VA 24136	37.32371965	-80.56551268
396	44A-1-32	GRAHAM MARC W	HIGH NOON RD	Giles County	PEMBROKE,VA 24136	37.3236856	-80.5613373
397	43-60	MOORE SAM H AND GRETCHEN M MILLER	VIRGINIA AVE	Giles County	PEMBROKE,VA 24136	37.32371794	-80.57727918
398	44-3-1C	KESSLER STEVEN D	MOUNTAIN LAKE RD	Giles County	PEMBROKE,VA 24136	37.3235105	-80.55686059
399	44A-1-31	GRAHAM MARC W	HIGH NOON RD	Giles County	PEMBROKE,VA 24136	37.32341178	-80.55980118
400	44-3-1D	KESSLER JACQUELINE M	OFF MTN LAKE RD	Giles County	PEMBROKE,VA 24136	37.32316207	-80.55842963
401	44A-1-33	BEACHAM VERNON V SR OR VERNON V II	HIGH NOON RD	Giles County	PEMBROKE,VA 24136	37.32300284	-80.56362748
402	47-11	STEELE BUFORD	206 STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.3212571	-80.44404297
403	47-12A	MAXEY DAWN E	402 STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.3200963	-80.44109695
404	47-12C	SMITH ROBERT H	428 STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.31944376	-80.4399726
405	47-1-3	PETTIPIECE MARK OR TERESA J	STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.31913071	-80.43455615
406	42-12B2A	COMMONWEALTH OF VIRGINIA	VIRGINIA AVE	Giles County	PEMBROKE,VA 24136	37.31971028	-80.65808426
407	44-23	HOGE-PERKINS MARIE	742 BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.31864418	-80.55404574
408	47-1-2	JONES GEORGE LEE	STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.31811266	-80.43601089
409	47-11	STEELE BUFORD	206 STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.31759748	-80.44254555
410	42-12B2	INDUSTRIAL DEVELOPMENT AUTHORITY OF	VIRGINIA AVE	Giles County	RIPPLEMEAD,VA 24150	37.31832363	-80.65804055
411	45-71	CHESTNUT MILL RANCH, LLC, KEVIN BROWNE		Giles County	PEMBROKE,VA 24136	37.31760944	-80.53750517
412	44-21	GREEVER RUBY J & EFFIE E SHRADER	OFF BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.31761593	-80.54443655
413	44-22	HOGE-PERKINS MARIE	BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.31739359	-80.54852016
414	45-54	KAUFFELT VIRGINIA ANN	MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31729294	-80.5256143
415	45-64	MARTIN KITTY P	OFF CAVE HILL RD	Giles County	NEWPORT,VA 24128	37.31724327	-80.53293958
416	47-1-1	JONES GEORGE LEE	STEELE ACRES RD	Giles County	NEWPORT,VA 24128	37.31661149	-80.43720349
417	45-72	CHESTNUT MILL RANCH, LLC, KEVIN BROWNE		Giles County	PEMBROKE,VA 24136	37.31696975	-80.54078581
418	44-26	GREEVER HOWARD J OR RUBY JANE E	BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.31632769	-80.54591729
419	45-51	KAUFFELT VIRGINIA ANN	MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31583414	-80.52729242
420	47-9	GIVENS CLARENCE B OR KAROLYN W	199 LEFFELL LN	Giles County	NEWPORT,VA 24128	37.31530894	-80.4460861

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
421	45-53	KAUFFELT VIRGINIA ANN	MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31543517	-80.52914052
422	45-48	LINK ERNEST A ET UX	423 MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31529136	-80.52018748
423	44-26A	VICKERY DEBRA L	BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.31372665	-80.54614661
424	45-52	KAUFFELT VIRGINIA ANN	MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31358182	-80.52275559
425	47-8	REYNOLDS KATHERINE L AND	BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.31360698	-80.4513436
426	44-26C	NEWPORT RECREATION CENTER	BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.31239125	-80.54287953
427	45-43	LINK JAMES BARRY ET AL	COVERED BRIDGE LN	Giles County	NEWPORT,VA 24128	37.31213534	-80.51858252
428	45-44	LINK JAMES BARRY ET AL	COVERED BRIDGE LN	Giles County	NEWPORT,VA 24128	37.3114671	-80.51480879
429	45-46	LINK JAMES BARRY ET AL	MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31132795	-80.51273592
430	45-66	CHESTNUT MILL RANCH, LLC, KEVIN BROWNE		Giles County	NEWPORT,VA 24128	37.31127129	-80.52764704
431	45-40A	LINK JAMES BARRY ET AL	MOUNTAIN LAKE RD	Giles County	NEWPORT,VA 24128	37.31084356	-80.51469077
432	47-7	REYNOLDS CHARLES WILLIAM		Giles County	NEWPORT,VA 24128	37.30919491	-80.45433089
433	45-70	CHESTNUT MILL RANCH LLC	204 BRICKYARD RD	Giles County	PEMBROKE,VA 24136	37.3098172	-80.53588718
434	45-39E	LUCAS CALVIN B OR VIRGINIA C	TAWNEYS CAVE LN	Giles County	NEWPORT,VA 24128	37.30912744	-80.51272392
435	46-52	DOWDY FARM LLC		Giles County	NEWPORT,VA 24128	37.30784346	-80.46450849
436	45-39D	YOLTON DAVID G	8165 VIRGINIA AVE	Giles County	NEWPORT,VA 24128	37.3066288	-80.5089103
437	45-72	CHESTNUT MILL RANCH, LLC, KEVIN BROWNE		Giles County	PEMBROKE,VA 24136	37.30654655	-80.53965379
438	46-51	WILLIAMS FRANCES D	BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.30501621	-80.46497909
439	46-1-3	REYNOLDS SAMUEL HALE OR MARY S	OLD FURNACE RD	Giles County	NEWPORT,VA 24128	37.30394818	-80.4690381
440	45-30A	QUINN FRANK S III OR KATHERINE A	215 ZELLS MILL RD	Giles County	NEWPORT,VA 24128	37.30372922	-80.50130654
441	45-36	LUCAS JAMES E ET UX	8277 VIRGINIA AVE	Giles County	NEWPORT,VA 24128	37.30358913	-80.5065003
442	46-1-2A	REYNOLDS SAM & MARY	194 OLD FURNACE RD	Giles County	NEWPORT,VA 24128	37.30308329	-80.4725482
443	46-11	HODSDEN JOSEPH D TRUSTEE & TAMARA N	237 CLOVER HOLLOW RD	Giles County	NEWPORT,VA 24128	37.30306999	-80.49773939
444	46-22	ALLEN MARJORIE S	528 BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.30133467	-80.48933545
445	46-49	MATTOX JAMES D	381 OLD FURNACE RD	Giles County	NEWPORT,VA 24128	37.30028262	-80.46288992
446	45-33I	NEWPORT DEVELOPMENT COMPANY LLC	WINDING WAY DR	Giles County	NEWPORT,VA 24128	37.30039644	-80.50194652
447	46-25B	HUFFMAN BENNY L	BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.29945067	-80.4863068
448	46-12	MARTIN DONALD W OR DEBORAH R	480 BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.29945072	-80.48959448
449	46-15	WILLIAMS CLARICE TRENT	485 WINDING WAY DR	Giles County	NEWPORT,VA 24128	37.29769661	-80.49684076
450	46-49A	MATTOX JAMES D	OLD FURNACE RD	Giles County	NEWPORT,VA 24128	37.30038722	-80.46951976
451	46-2-B	YOLTON DAVID G OR KAREN M	390 BLUEGRASS TRL	Giles County	NEWPORT,VA 24128	37.29703428	-80.49201569
452	46-2-A	MARTIN DONALD W	370 BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.29695456	-80.48809736
453	46-66	DEPLAZES JERRY J ET UX	291 SEVEN OAKS RD	Giles County	NEWPORT,VA 24128	37.29685254	-80.47942105
454	46-20A	ECHOLS ESTIAL EARL JR ET UX	362 BLUEGRASS TRL	Giles County	NEWPORT,VA 24128	37.2967976	-80.49350286
455	46-19B	PAYNE J MAURICE EST	BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.29633905	-80.49352233
456	46-19A	MARTIN DONALD W OR DEBORAH R	329 BLUE GRASS TRL	Giles County	NEWPORT,VA 24128	37.29608038	-80.49461569
457	46-19	DUNCAN GERALD W OR RUTH M	OLD NEWPORT RD	Giles County	NEWPORT,VA 24128	37.2952662	-80.49035962
458	61-12B	SHAFFER CLIFFORD A OR TERESA C H	249 BROOKSDIE LN	Giles County	NEWPORT,VA 24128	37.29425439	-80.48332872
459	46-66X	BROUGHTON GEORGE E	8943 VIRGINIA AVE	Giles County	NEWPORT,VA 24128	37.29759256	-80.46702965
460	42-12B2C	MAIN STREET MEDICAL LLC	VIRGINIA AVE	Giles County	RIPPLEMEAD,VA 24150	37.31938467	-80.6565269
461	27-8	HETZEL MARY RANDOLPH S ET AL	ROGERS RD	Giles County	RIPPLEMEAD,VA 24150	37.36973664	-80.6871397
462	42-12B2D	INDUSTRIAL DEVELOPMENT AUTHORITY OF	VIRGINIA AVE	Giles County	RIPPLEMEAD,VA 24150	37.31900431	-80.65593573
463	70756	U S GOVERNMENT		Montgomery County	BLACKSBURG,VA 24060	37.32248442	-80.36210243
464	21156	WINGO DONALD L		Montgomery County	BLACKSBURG,VA 24060	37.31404175	-80.40276275
465	9482	HYPES LOWELL T	1538 CRAIG CREEK RD	Montgomery County	BLACKSBURG,VA 24060	37.31325413	-80.40990743
466	9482	HYPES LOWELL T	1538 CRAIG CREEK RD	Montgomery County	BLACKSBURG,VA 24060	37.31306858	-80.40613326
467	26945	HUTTON JAMES L HUTTON PHYLLIS M		Montgomery County	BLACKSBURG,VA 24060	37.29788158	-80.3691181
468	15900	POWELL SANDRA TOWNES		Montgomery County	BLACKSBURG,VA 24060	37.29860342	-80.38939503
469	30449	PRICE NELSON S PRICE AMANDA J	3090 MT TABOR RD	Montgomery County	BLACKSBURG,VA 24060	37.29717763	-80.36054097
470	32870	JOHNSON MODE A		Montgomery County	BLACKSBURG,VA 24060	37.29680439	-80.3627732
471	24589	TRIPLETT THOMAS W TRIPLETT BONNIE B		Montgomery County	BLACKSBURG,VA 24060	37.29676544	-80.37342318
472	5668	DYER FAMILY TRUST DYER LIVING TRUST		Montgomery County	BLACKSBURG,VA 24060	37.29682835	-80.39104345
473	1262	JOHNSON MODE A	3030 MT TABOR RD	Montgomery County	BLACKSBURG,VA 24060	37.29653229	-80.36542452
474	9443	HUTTON JAMES L HUTTON PHYLLIS M		Montgomery County	BLACKSBURG,VA 24060	37.29588992	-80.36976896
475	24591	JONES ROBERT M JONES DONNA T		Montgomery County	BLACKSBURG,VA 24060	37.29540669	-80.37867577
476	7708	BUCHANAN JAMES M		Montgomery County	BLACKSBURG,VA 24060	37.29452689	-80.34950905
477	24588	JONES ROBERT M JONES DONNA THOMAS	2628 MT TABOR RD	Montgomery County	BLACKSBURG,VA 24060	37.29377345	-80.37609105
478	24590	MARGARET MCGRAW SLAYTON LIV TR C/O MARGARET MCGRAW	2626 MT TABOR RD	Montgomery County	BLACKSBURG,VA 24060	37.29364712	-80.3820718
479	15895	BUCHANAN JAMES M PETER BERNHOLZ		Montgomery County	BLACKSBURG,VA 24060	37.29207485	-80.35548165
480	19482	WHALEY LEIGH C JR WHALEY MARY K		Montgomery County	BLACKSBURG,VA 24060	37.29178306	-80.36190953
481	19481	DOSS DONALD M DOSS LINDA M		Montgomery County	BLACKSBURG,VA 24060	37.29129361	-80.36022526
482	6739	FUGATE JOSHUA B LE ETAL C/O SHARON LINKOUS ETAL	1812 DRY RUN RD	Montgomery County	BLACKSBURG,VA 24060	37.29039498	-80.3442186
483	9688	TURMAN LUMBER COMPANY INC		Montgomery County	BLACKSBURG,VA 24060	37.28615889	-80.33407843
484	110940	HENDERSON MARK E NEFF HENDERSON LAURA	3760 MILL CREEK RD	Montgomery County	BLACKSBURG,VA 24060	37.28229192	-80.3453734
485	13432	NEILY WARREN S JR LE ETAL C/O JUDITH T NEILY		Montgomery County	BLACKSBURG,VA 24060	37.27917967	-80.32728116
486	16068	ROANOKE VALLEY 4 WHLERS ASSC C/O ANITA HACKERT	3870 BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.27527623	-80.24746932
487	31198	ROANOKE VALLEY 4 WHLERS ASSC C/O ANITA HECKERT		Montgomery County	ELLISTON,VA 24087	37.27479951	-80.25150184
488	30954	NORFOLK & WESTERN RAILWAY CO		Montgomery County	ELLISTON,VA 24087	37.27446072	-80.24623785
489	32745	MILLS JAMES CLINTON JR		Montgomery County	ELLISTON,VA 24087	37.27399686	-80.25243683
490	16068	ROANOKE VALLEY 4 WHLERS ASSC C/O ANITA HACKERT	3870 BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.27341889	-80.24416131
491	2599	BROWN JAMES HOWE JR	2537 CATAWBA RD	Montgomery County	BLACKSBURG,VA 24060	37.27138226	-80.29697158
492	32744	SOWERS JO MILLS	BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.27046045	-80.25058733
493	13872	ORR LIVING TRUST ORR LESLIE F TRUSTEE	2243 CATAWBA RD	Montgomery County	BLACKSBURG,VA 24060	37.27078573	-80.32617236
494	5370	WILLIAMS L F & PAULINE S C/O H RONNIE MONTGOMERY E		Montgomery County	ELLISTON,VA 24087	37.26957074	-80.24867073
495	30927	NORFOLK & WESTERN RAILWAY CO		Montgomery County	ELLISTON,VA 24087	37.26835865	-80.25221906
496	7636	CRAFT WILLIAM ROBERT LEE III CRAFT TAMMY BARNETT		Montgomery County	ELLISTON,VA 24087	37.26506394	-80.30915425
497	13819	TOMELTY JOSEPH PATRICK	3401 HALF ACRE OF ROCKS RD	Montgomery County	ELLISTON,VA 24087	37.2614605	-80.29155683
498	7635	CRAFT WILLIAM ROBERT LEE III CRAFT TAMMY BARNETT		Montgomery County	BLACKSBURG,VA 24060	37.26079631	-80.30580069
499	5578	KORB JAMES H KORB LISA K	3491 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.26046866	-80.28321234
500	2853	HS TEJAS LTD		Montgomery County	ELLISTON,VA 24087	37.25983861	-80.23950747
501	14257	ARNOLD LLOYD E	3588 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25946438	-80.2760548
502	8743	HERTWECK BRYAN M HERTWECK LARA BURKHOLDER	3451 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25943954	-80.28549472
503	120705	PERKINS RONALD L PERKINS LINDA R	FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25924688	-80.28106931
504	120706	MAXEY BENNY G MAXEY BETTY H	FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25900135	-80.28003417
505	951	PEREZ ENRIQUE PEREZ PAMELA M		Montgomery County	ELLISTON,VA 24087	37.25861789	-80.29963984
506	170027	COX KENNETH WADE	HALF ACRE OF ROCKS RD	Montgomery County	ELLISTON,VA 24087	37.25848681	-80.28723425
507	170028	COX KENNEY C COX PATRICIA B	FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25839679	-80.28360498
508	21559	LONG DONALD W LONG EVELYN W		Montgomery County	ELLISTON,VA 24087	37.2583855	-80.2884142
509	8906	STEINER LEONARD C STEINER DEBORAH L	3566 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25815904	-80.279201
510	190165	ARNOLD LLOYD E	FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25789553	-80.27498721
511	33209	MEADOWS SHEILA M	3475 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25763989	-80.28301204
512	5774	RATLIFF TIMOTHY E RATLIFF LISA A	2902 BACCHUS LN	Montgomery County	ELLISTON,VA 24087	37.25765437	-80.29154563
513	14249	PERDUE CORA EVELYN R	3060 TREMONT RD	Montgomery County	ELLISTON,VA 24087	37.25750093	-80.28909294
514	30035	SCOTT DENNY R	3568 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25735913	-80.27614509
515	120708	BOWMAN STEVEN A BOWMAN RACHEL A	3520 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.2572977	-80.27958118
516	14256	PERDUE HOWARD D	3564 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25704602	-80.27736074
517	21560	LONG DONALD W LONG EVELYN W	3239 HALF ACRE OF ROCKS RD	Montgomery County	ELLISTON,VA 24087	37.25704394	-80.28725224
518	12030	SCOTT DENNY R SCOTT TAMMY K	FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25681046	-80.27393169
519	33280	TAYLOR SHAWN M TAYLOR TRACY L	3421 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.2565679	-80.28500498
520	1477	REESE FAMILY LTD PARTNERSHIP C/O LYNN J REESE		Montgomery County	ELLISTON,VA 24087	37.25623859	-80.2658302
521	14919	JOSEPH SCOTT TAYLOR ESTATE C/O DEBORAH FLINT & STE	3189 HALF ACRE OF ROCKS RD	Montgomery County	ELLISTON,VA 24087	37.25629257	-80.28633408
522	8440	HOGAN CHARLES E HOGAN SUSAN C		Montgomery County	ELLISTON,VA 24087	37.25527537	-80.22185835
523	20506	TAYLOR STANLEY W TAYLOR BOBBIE K	3124 HALF ACRE OF ROCKS RD	Montgomery County	ELLISTON,VA 24087	37.25512768	-80.28594822
524	23554	FIELD PAUL E FIELD JEWELL C	3134 BACCHUS LN	Montgomery County	ELLISTON,VA 24087	37.25397399	-80.28946359
525	160248	HS TEJAS LTD	3261 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.25309108	-80.24628701

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
526	20824	WHITTAKER FREDERICK A WHITTAKER ELIZABETH S		Montgomery County	ELLISTON,VA 24087	37.25295541	-80.23204333
527	34187	REESE FAMILY LTD PARTNERSHIP C/O LYNN J REESE	BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.25283785	-80.26038158
528	170229	UNDERWOOD JAMES D & DONNA M	BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.25272296	-80.25803658
529	17721	SMITH CORA LEE C/O W E SMITH		Montgomery County	ELLISTON,VA 24087	37.25278101	-80.29427923
530	3364	CHERRY ALMA B		Montgomery County	ELLISTON,VA 24087	37.25258653	-80.29119993
531	1478	REESE FAMILY LTD PARTNERSHIP C/O LYNN J REESE	LINDSAY DR	Montgomery County	ELLISTON,VA 24087	37.25246375	-80.27382639
532	3363	CHERRY ALMA B		Montgomery County	ELLISTON,VA 24087	37.2524386	-80.28165387
533	140569	REESE FAMILY LTD PARTNERSHIP C/O LYNN J REESE	3011 TAYLOR LN	Montgomery County	ELLISTON,VA 24087	37.25234049	-80.27543449
534	34186	MOUNTAIN VALLEY PIPELINE LLC	3001 BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.25213073	-80.26106118
535	25398	REESE FAMILY LTD PARTNERSHIP C/O LYNN J REESE		Montgomery County	ELLISTON,VA 24087	37.25204383	-80.26765277
536	160247	HS TEJAS LTD	3280 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.25151864	-80.24154947
537	35861	MOUNTAIN VALLEY PIPELINE LLC	3010 BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.25154431	-80.259191
538	8493	BRENNALT IVAN H & BRENNALT ERIC E ETAL		Montgomery County	ELLISTON,VA 24087	37.25145592	-80.25347908
539	10558	FIELD PAUL R	3128 BACCHUS LN	Montgomery County	ELLISTON,VA 24087	37.25074976	-80.28728918
540	120001	APGAR P I ESTATE C/O DONALD APGAR	REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24981667	-80.21433039
541	160244	HS TEJAS LTD	2985 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24996509	-80.23859912
542	8023	DEACON GERALD W DEACON SANDRA L	3227 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.25011359	-80.28642261
543	30946	NORFOLK & WESTERN RAILWAY CO		Montgomery County	ELLISTON,VA 24087	37.24989918	-80.2576763
544	160246	HS TEJAS LTD	3141 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24950851	-80.24230996
545	23092	ZOOK BRENDA	BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.24946063	-80.25903377
546	23092	ZOOK BRENDA	BRADSHAW RD	Montgomery County	ELLISTON,VA 24087	37.24879997	-80.25677048
547	3365	HESS ANTHONY EDWARD HESS CARMELLA	3211 FLATWOODS RD	Montgomery County	ELLISTON,VA 24087	37.24876115	-80.2859918
548	160245	HS TEJAS LTD	3031 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24801143	-80.24144866
549	4910	DENNIS KENNETH A ETAL		Montgomery County	ELLISTON,VA 24087	37.24791669	-80.23371057
550	160242	HS TEJAS LTD	2881 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24780681	-80.23748207
551	3368	CHERRY ALMA B		Montgomery County	ELLISTON,VA 24087	37.24804357	-80.28685734
552	160243	HS TEJAS LTD	2971 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.2461783	-80.24110807
553	31305	HOWARD ELIJAH D		Montgomery County	ELLISTON,VA 24087	37.24566433	-80.23304406
554	21098	HANSEN DONALD E HANSEN POLLY E	2530 CANNERY RD	Montgomery County	LAFAYETTE,VA 24087	37.24468756	-80.20731387
555	160241	HS TEJAS LTD	2811 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24472864	-80.23772167
556	34153	MCBROOM JOHN W MCBROOM CHASTITY G	2536 CANNERY RD	Montgomery County	LAFAYETTE,VA 24087	37.2439966	-80.20367984
557	160240	HS TEJAS LTD	2761 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24421257	-80.2410484
558	6496	HOWARD ELIJAH HOWARD KRISTIN		Montgomery County	ELLISTON,VA 24087	37.24410861	-80.23468062
559	80578	MCBROOM JOHN W MCBROOM CHASTITY G	CANNERY RD	Montgomery County	ELLISTON,VA 24087	37.24326318	-80.20589322
560	20405	HOWARD DELMER WAYNE	2740 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24324489	-80.23203739
561	160239	HS TEJAS LTD	2701 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24181543	-80.23718103
562	2152	BOONE WORTH H JR C/O WORTH INC		Montgomery County	ELLISTON,VA 24087	37.24172977	-80.2312898
563	3025	WIMMER MCCLANAHAN HOLLY R MCCLANAHAN ROBERT C	2630 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.24022656	-80.23137414
564	2902	NOVAK STEPHEN J NOVAK MEREDITH C	6670 STONES KEEP LN	Montgomery County	ELLISTON,VA 24087	37.23878981	-80.20133626
565	210206	FURROW ALBERT	2443 REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.23855921	-80.2341952
566	220076	HALL SEAN L & MICHELLE S	6670 STONES KEEP LN	Montgomery County	ELLISTON,VA 24087	37.23674955	-80.19908927
567	2902	NOVAK STEPHEN J NOVAK MEREDITH C	6670 STONES KEEP LN	Montgomery County	ELLISTON,VA 24087	37.23582281	-80.2004062
568	220076	HALL SEAN L & MICHELLE S	6670 STONES KEEP LN	Montgomery County	ELLISTON,VA 24087	37.23481491	-80.19845737
569	8619	HESLEP RICHARD ARTHUR		Montgomery County	ELLISTON,VA 24087	37.23473225	-80.19648265
570	35144	BRABHAM HENRY J IV	REESE MTN RD	Montgomery County	ELLISTON,VA 24087	37.23426016	-80.23932244
571	70806	VIRGINIA DEPT OF HIGHWAYS	5375 NORTH FORK RD	Montgomery County	ELLISTON,VA 24087	37.23398135	-80.23037815
572	10352	BLUE EAGLE PARTNERSHIP LLC	5383 NORTH FORK RD	Montgomery County	ELLISTON,VA 24087	37.23356062	-80.22773442
573	843	APGAR DONALD D APGAR MILDRED M		Montgomery County	ELLISTON,VA 24087	37.23323015	-80.19928245
574	16298	CRAIGHEAD GEORGE A CRAIGHEAD HELEN P		Montgomery County	ELLISTON,VA 24087	37.23318021	-80.19746981
575	842	APGAR FREDERICK I APGAR JEANETTE H	5613 APGAR DR	Montgomery County	ELLISTON,VA 24087	37.23287147	-80.20070456
576	844	GLOCK BRIAN DAVID BUCH SUSAN ELIZABETH GLOCK	APGAR DR	Montgomery County	ELLISTON,VA 24087	37.23203771	-80.19957381
577	9048	HOWARD FRANK A ETAL	2280 HOWARD DR	Montgomery County	ELLISTON,VA 24087	37.23100669	-80.19610294
578	9065	SOUTHERN REGION INDUSTRIAL REALTY INC	6713 COVE HOLLOW RD	Montgomery County	ELLISTON,VA 24087	37.23018762	-80.19869675
579	160410	NORFOLK SOUTHERN RAILWAY CO		Montgomery County	ELLISTON,VA 24087	37.22892193	-80.2012558
580	9063	SISSON & RYAN INC		Montgomery County	ELLISTON,VA 24087	37.22587725	-80.19925367
581	13751	OLD VIRGINIA BRICK INC		Montgomery County	ELLISTON,VA 24087	37.22548932	-80.20487625
582	538	AKERS GORDON L & JERRY LEE AKERS CHARLES LACY		Montgomery County	ELLISTON,VA 24087	37.22205965	-80.20402008
583	21080	BERUBE DENNIS G BERUBE DIXIE L	5723 BERRY PATCH LN	Montgomery County	ELLISTON,VA 24087	37.22057856	-80.19765317
584	21549	MILLS ROBERT E		Montgomery County	ELLISTON,VA 24087	37.21970205	-80.20323545
585	21547	MILLS ROBERT E		Montgomery County	ELLISTON,VA 24087	37.21743427	-80.20063071
586	3911	MELTON DONALD EVERETT		Montgomery County	ELLISTON,VA 24087	37.21712249	-80.19362943
587	29056	EPPERLY RANDALL KEITH EPPERLY JOANNE ALICE		Montgomery County	ELLISTON,VA 24087	37.21572886	-80.1894617
588	2833	EANES JACK E SR EANES DORCAS M	6180 YELLOW FINCH LN	Montgomery County	ELLISTON,VA 24087	37.21484521	-80.19139206
589	30271	BOHON CLETUS W BOHON BEVERLY A	6210 YELLOW FINCH LN	Montgomery County	ELLISTON,VA 24087	37.21398908	-80.19289485
590	32431	LAW JAMES C LAW CAROLYN D	6175 YELLOW FINCH LN	Montgomery County	ELLISTON,VA 24087	37.2135439	-80.19027434
591	17761	BOHON CLETUS W & BOHON BEVERLY A		Montgomery County	ELLISTON,VA 24087	37.21239037	-80.1961238
592	18808	LAW JAMES CABEL LAW CAROLYN DIANA EANES		Montgomery County	ELLISTON,VA 24087	37.21070511	-80.19176409
593	11673	EANES JACK EANES DORCAS M		Montgomery County	ELLISTON,VA 24087	37.20723579	-80.19072527
594	2846	HALDENBY HOLDINGS LLC		Montgomery County	ELLISTON,VA 24087	37.17954931	-80.19373886
595	21104	WIMMER CHARLES S	1521 RADFORD RD	Montgomery County	CHRISTIANSBURG,VA 24073	37.12743546	-80.44260804
596	240091	ROANOKE GAS COMPANY	6670 STONES KEEP LN	Montgomery County	ELLISTON,VA 24087	37.23881887	-80.19840482
597	1561-23-4459	DAVID, JOSEPH DREWRY		Pittsylvania County	PENHOOK,VA 24137	36.9671231	-79.59664864
598	1561-32-4812	DAVID, ELWOOD JUNE	2073 ARMSTRONG RD	Pittsylvania County	PENHOOK,VA 24137	36.96556988	-79.59385373
599	1561-52-6704	WITCHER, ROY H	13685 W GRETNA RD	Pittsylvania County	SANDY LEVEL,VA 24161	36.96529992	-79.58594178
600	1561-52-5640	WITCHER, ROY H		Pittsylvania County	PENHOOK,VA 24137	36.9649445	-79.58621049
601	1561-52-5438	WITCHER, ROY H		Pittsylvania County	PENHOOK,VA 24137	36.96463341	-79.58607158
602	1561-42-8793	HUDSON, BARBARA JEAN ET ALS		Pittsylvania County	PENHOOK,VA 24137	36.96435204	-79.5887162
603	1561-32-4812	DAVID, ELWOOD JUNE	2073 ARMSTRONG RD	Pittsylvania County	PENHOOK,VA 24137	36.96430544	-79.5913373
604	1561-12-9077	BOBBITT, BERNICE I ET ALS		Pittsylvania County	PENHOOK,VA 24137	36.96373767	-79.59866854
605	1561-00-0394	FRANKLIN GROCERY & GRAIN CORP		Pittsylvania County	PENHOOK,VA 24137	36.96265261	-79.60603809
606	1561-22-1144	DOSS, HARRY B		Pittsylvania County	PENHOOK,VA 24137	36.96237037	-79.5930388
607	1561-50-7957	BUSH, JERRY W SR	13459 W GRETNA RD	Pittsylvania County	SANDY LEVEL,VA 24161	36.96048608	-79.58528442
608	1561-30-7767	BUSH, JERRY W SR		Pittsylvania County	PENHOOK,VA 24137	36.95987606	-79.59223651
609	1561-40-5710	QUARLES, FAYE E	13749 W GRETNA RD	Pittsylvania County	SANDY LEVEL,VA 24161	36.95966933	-79.58962302
610	1570-09-0923	HUDSON, BARBARA JEAN ET ALS		Pittsylvania County	SANDY LEVEL,VA 24161	36.9580347	-79.57142115
611	1570-19-3736	HUDSON, BARBARA JEAN ET ALS		Pittsylvania County	SANDY LEVEL,VA 24161	36.9574532	-79.56644789
612	1570-09-0923	HUDSON, BARBARA JEAN ET ALS		Pittsylvania County	SANDY LEVEL,VA 24161	36.9564142	-79.56650442
613	1560-69-1403	TEAMAN GLENN R TRUSTEE	8777 MUSEVILLE RD	Pittsylvania County	SANDY LEVEL,VA 24161	36.95627321	-79.58424481
614	1560-69-4077	TEAMAN GLENN R TRUSTEE		Pittsylvania County	SANDY LEVEL,VA 24161	36.95528035	-79.58296332
615	1560-68-9630	RIDDLE, MARY LEE		Pittsylvania County	SANDY LEVEL,VA 24161	36.95400992	-79.58130829
616	1560-77-0258	RIDDLE, MARY LEE	8424 MUSEVILLE RD	Pittsylvania County	SANDY LEVEL,VA 24161	36.95033275	-79.5808336
617	1560-95-4718	GRUBB, RUBY HODGES		Pittsylvania County	SANDY LEVEL,VA 24161	36.94891949	-79.57886466
618	1560-95-4718	GRUBB, RUBY HODGES		Pittsylvania County	SANDY LEVEL,VA 24161	36.94638282	-79.57256109
619	1570-14-2618	MWV LAND SALES INC		Pittsylvania County	SANDY LEVEL,VA 24161	36.94337344	-79.56592144
620	1570-44-2557	MEASE, MONCIE EDGAR II		Pittsylvania County	SANDY LEVEL,VA 24161	36.94317936	-79.55612151
621	1560-94-0683	SHELTON, R EDWARD		Pittsylvania County	SANDY LEVEL,VA 24161	36.94334677	-79.57352294
622	1570-23-1867	TOSH, MICHAEL GUY	581 STAR LAND DR	Pittsylvania County	SANDY LEVEL,VA 24161	36.94135883	-79.56351731
623	1570-53-1873	FOSTER WILLIAM H TRUST DTD 9-21-2005	3480 GRASSLAND DR	Pittsylvania County	SANDY LEVEL,VA 24161	36.94104211	-79.55334269
624	1570-23-5176	MWV LAND SALES INC		Pittsylvania County	SANDY LEVEL,VA 24161	36.93922051	-79.56118772
625	1570-62-9766	FOSTER WILLIAM H TRUST DTD 9-21-2005	3480 GRASSLAND DR	Pittsylvania County	SANDY LEVEL,VA 24161	36.93827443	-79.54751531
626	1570-12-1595	MWV LAND SALES INC		Pittsylvania County	SANDY LEVEL,VA 24161	36.93782995	-79.56598605
627	1580-02-2305	RORER, WILLIAM R	4153 OXFORD RD	Pittsylvania County	CHATHAM,VA 24531	36.93707998	-79.53552405
628	1580-21-4530	RORER, WILLIAM R		Pittsylvania County	CHATHAM,VA 24531	36.93486683	-79.52808846
629	1570-60-6981	MEASE, MONCIE EDGAR II		Pittsylvania County	SANDY LEVEL,VA 24161	36.93354827	-79.54706452
630	1580-00-0360	COOK, MOLLIE		Pittsylvania County	CHATHAM,VA 24531	36.93159484	-79.53612199

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
631	1580-00-8311	CLEMENTS, LEWIS O JR	3657 OXFORD RD	Pittsylvania County	CHATHAM,VA 24531	36.93155581	-79.53355385
632	1489-39-5745	OSBORNE, GIRARD ENOCH	1624 LARK DR	Pittsylvania County	CHATHAM,VA 24531	36.92999008	-79.52410479
633	1489-09-2901	CLEMENT, THOMAS	3657 OXFORD RD	Pittsylvania County	CHATHAM,VA 24531	36.93000524	-79.5358765
634	1489-29-4509	JEFFERSON, ROGER P	3540 OXFORD RD	Pittsylvania County	CHATHAM,VA 24531	36.92958445	-79.52803401
635	1489-58-3782	JEFFERSON, ROGER P		Pittsylvania County	CHATHAM,VA 24531	36.92721858	-79.51806072
636	1489-47-0499	JEFFERSON, ROGER P	2249 LARK DR	Pittsylvania County	CHATHAM,VA 24531	36.92373207	-79.52228491
637	1499-07-3292	SHELHORSE, HENRY MARION		Pittsylvania County	CHATHAM,VA 24531	36.92270812	-79.50009832
638	1489-07-4261	JEFFERSON, ROGER P		Pittsylvania County	CHATHAM,VA 24531	36.92302754	-79.53474071
639	1489-86-7542	MCLAUGHLIN, BEVERLY ADAMS		Pittsylvania County	CHATHAM,VA 24531	36.92167301	-79.50625372
640	1499-36-6136	PEARSON, MARY R LIFE TENANT	2805 TOSHES RD	Pittsylvania County	CHATHAM,VA 24531	36.92054607	-79.48927759
641	1489-65-9830	JEFFERSON, ROGER P	2715 SNOWBERRY RD	Pittsylvania County	CHATHAM,VA 24531	36.91952604	-79.51257722
642	1499-14-5945	NUCKOLS, ROBERT EDWARD		Pittsylvania County	CHATHAM,VA 24531	36.91720615	-79.49635491
643	1499-44-5858	PEARSON, MARY Y LIFE TENANT	2481 TOSHES RD	Pittsylvania County	CHATHAM,VA 24531	36.91679855	-79.4867473
644	1499-24-4022	LINTHICUM, HERBERT W		Pittsylvania County	CHATHAM,VA 24531	36.91465578	-79.49417146
645	1499-53-3686	TONEY, LOUISE BRYANT		Pittsylvania County	CHATHAM,VA 24531	36.91375332	-79.48351335
646	1499-72-3859	OWEN, KEVIN EARL		Pittsylvania County	CHATHAM,VA 24531	36.91160375	-79.47665127
647	1499-42-2337	LINTHICUM, HERBERT W		Pittsylvania County	CHATHAM,VA 24531	36.9102033	-79.48736364
648	1499-51-8899	OWEN, JESSE EARLE		Pittsylvania County	CHATHAM,VA 24531	36.90894524	-79.48197107
649	1499-80-0532	OWEN, KEVIN EARL		Pittsylvania County	CHATHAM,VA 24531	36.90723911	-79.47566861
650	1499-90-9788	REYNOLDS, ROBERT J	2045 OLD RED EYE RD	Pittsylvania County	CHATHAM,VA 24531	36.90592314	-79.46768774
651	1499-80-0532	OWEN, KEVIN EARL		Pittsylvania County	CHATHAM,VA 24531	36.90493802	-79.47365521
652	2408-09-7078	OWEN, KEVIN EARL		Pittsylvania County	CHATHAM,VA 24531	36.90140987	-79.46482846
653	2408-27-4519	OAKES, TIMOTHY W		Pittsylvania County	CHATHAM,VA 24531	36.89757903	-79.45915449
654	2418-06-9860	HASKINS, KENNETH L		Pittsylvania County	CHATHAM,VA 24531	36.89559066	-79.42996257
655	2408-56-0919	MARSTIN, WILLIAM L		Pittsylvania County	CHATHAM,VA 24531	36.89560798	-79.45027941
656	2408-06-7831	WILLIAMS, DOUGLAS WAYNE LIFE TENANT		Pittsylvania County	CHATHAM,VA 24531	36.89513899	-79.46482928
657	2408-46-2609	MASON, JOHNNY M		Pittsylvania County	CHATHAM,VA 24531	36.89448398	-79.45322559
658	2408-66-8225	BARTON, JOSEPH E JR		Pittsylvania County	CHATHAM,VA 24531	36.89395386	-79.4444335
659	2408-26-8209	TOWLER, DWIGHT A	3750 ANDERSON MILL ROAD	Pittsylvania County	CHATHAM,VA 24531	36.8938932	-79.4576418
660	2408-86-7068	LUCAS, JENNIFER HARDEN	2572 ANDERSON MILL RD	Pittsylvania County	CHATHAM,VA 24531	36.89334312	-79.43750421
661	2408-55-6668	BRYANT, LOUIS WADE	3401 ANDERSON MILL RD	Pittsylvania County	CHATHAM,VA 24531	36.89230253	-79.447791
662	2408-95-3503	INGRAM, TERRY LEE	2348 ANDERSON MILL RD	Pittsylvania County	CHATHAM,VA 24531	36.89194255	-79.43558088
663	2408-75-4535	MCDANIEL, BETTY RAY ET ALS		Pittsylvania County	CHATHAM,VA 24531	36.89199017	-79.44218763
664	2418-04-3295	WOODSON, ROBERT L		Pittsylvania County	CHATHAM,VA 24531	36.88856834	-79.43181241
665	2418-04-1120	WOODSON, DAVID R		Pittsylvania County	CHATHAM,VA 24531	36.88815863	-79.4327791
666	2418-03-9452	WOODSON, ROBERT L & OTHERS		Pittsylvania County	CHATHAM,VA 24531	36.88643188	-79.42974002
667	2418-22-5946	SWANSON, MARY ALICE ET ALS		Pittsylvania County	CHATHAM,VA 24531	36.88513478	-79.42436986
668	2418-12-7175	POPE, PHYLLIS JEAN MOTLEY	1388 RIDDLE RD	Pittsylvania County	CHATHAM,VA 24531	36.88266054	-79.42707803
669	2418-22-3036	CRADDOCK, JAMES R	1312 RIDDLE RD	Pittsylvania County	CHATHAM,VA 24531	36.88245811	-79.42501038
670	2418-21-5984	CRADDOCK, JAMES R		Pittsylvania County	CHATHAM,VA 24531	36.88201478	-79.42411878
671	2418-30-2966	SHELTON, WALTER HURT JR		Pittsylvania County	CHATHAM,VA 24531	36.88195242	-79.42226196
672	2418-41-9409	MOTLEY, EUGENE RYLAND	717 RIDDLE RD	Pittsylvania County	CHATHAM,VA 24531	36.88085288	-79.41643274
673	2418-50-8820	LAKE ANNA INVESTMENTS L C		Pittsylvania County	CHATHAM,VA 24531	36.87858089	-79.41287144
674	2418-30-2966	SHELTON, WALTER HURT JR		Pittsylvania County	CHATHAM,VA 24531	36.87845796	-79.42154498
675	2417-49-1304	POWELL, DEAN MORRIS		Pittsylvania County	CHATHAM,VA 24531	36.87489558	-79.41895751
676	2417-89-1099	COMMONWEALTH FOREST INVESTMENTS INC		Pittsylvania County	CHATHAM,VA 24531	36.87444827	-79.40499415
677	2417-99-5129	GILL, ELIZABETH J		Pittsylvania County	CHATHAM,VA 24531	36.87423538	-79.40043537
678	2417-68-8838	OAKGROVE CHRISTIAN CHURCH		Pittsylvania County	CHATHAM,VA 24531	36.87399063	-79.40981325
679	2417-58-4539	DALTON, A DOUGLAS JR		Pittsylvania County	CHATHAM,VA 24531	36.87285059	-79.41423103
680	2417-78-3420	LIGHTHOUSE DELIVERANCE CENTER	20540 U S HIGHWAY NO 29	Pittsylvania County	CHATHAM,VA 24531	36.87249274	-79.40792697
681	2417-78-3227	DAVENPORT, BEN J JR		Pittsylvania County	CHATHAM,VA 24531	36.87214718	-79.40792976
682	2417-78-3175	BRUNNER, ARTHUR J		Pittsylvania County	CHATHAM,VA 24531	36.87181022	-79.40776557
683	2417-97-1683	MOTLEY, CRAIG CURTIS		Pittsylvania County	CHATHAM,VA 24531	36.87038743	-79.40159211
684	2417-87-1135	COMMONWEALTH FOREST INVESTMENTS INC		Pittsylvania County	CHATHAM,VA 24531	36.86905588	-79.4051886
685	2417-96-2930	RIDDLE, IRIS M		Pittsylvania County	CHATHAM,VA 24531	36.86822641	-79.40136918
686	2417-86-1458	WESTBROOK, ELIZABETH R		Pittsylvania County	CHATHAM,VA 24531	36.86721598	-79.4050934
687	2417-86-4372	MOTLEY, NELSON C TRUSTEE	133 DUAL TRACK RD	Pittsylvania County	CHATHAM,VA 24531	36.86683738	-79.40400416
688	2427-06-1292	ADAMS, JOHN G II	19780 U S HIGHWAY NO 29	Pittsylvania County	CHATHAM,VA 24531	36.86657385	-79.39805746
689	2427-16-2148	SHELTON, HAROLD J	19808 U S HIGHWAY NO 29	Pittsylvania County	CHATHAM,VA 24531	36.86640132	-79.39427494
690	2427-23-5940	TOLER, LAURA JANE	241 STRADER RD	Pittsylvania County	CHATHAM,VA 24531	36.86020128	-79.39076948
691	2427-22-4237	ROBERTSON, RUTH MAE		Pittsylvania County	CHATHAM,VA 24531	36.85556975	-79.39029123
692	2427-12-7078	WHITTLE, JOHN D III ET ALS	552 MILL CREEK RD	Pittsylvania County	CHATHAM,VA 24531	36.85525332	-79.39227111
693	2427-11-4877	WHITTLE, JOHN D III ET ALS	500 MILL CREEK RD	Pittsylvania County	CHATHAM,VA 24531	36.85453134	-79.39330241
694	2427-71-7879	DAVIS, WAYNE WINSTON JR	1918 MILL CREEK RD	Pittsylvania County	CHATHAM,VA 24531	36.85319387	-79.37039362
695	2427-11-5178	GILL, ELIZABETH J		Pittsylvania County	CHATHAM,VA 24531	36.85258898	-79.3931861
696	2427-21-1168	GILL, ELIZABETH J	476 MILL CREEK RD	Pittsylvania County	CHATHAM,VA 24531	36.8525613	-79.39121377
697	2427-21-9255	COSBY, ELLA MAE ET ALS		Pittsylvania County	CHATHAM,VA 24531	36.8525132	-79.38822347
698	2427-30-5719	JONES, LOUISE & OTHERS		Pittsylvania County	CHATHAM,VA 24531	36.85241789	-79.38643774
699	2427-30-4184	FITZGERALD, FORREST		Pittsylvania County	CHATHAM,VA 24531	36.851919	-79.38646297
700	2427-50-0255	MOTLEY, JOSEPH FULLER ET ALS		Pittsylvania County	CHATHAM,VA 24531	36.85038595	-79.38134311
701	2427-30-5083	FITZGERALD, FORREST	537 NEIGHBORHOOD RD	Pittsylvania County	CHATHAM,VA 24531	36.84985985	-79.38670414
702	2427-30-9081	CLARK, JUANITA W	127 JACKSON LN	Pittsylvania County	CHATHAM,VA 24531	36.84964134	-79.38513417
703	2426-69-3980	MOTLEY, BYRON D		Pittsylvania County	CHATHAM,VA 24531	36.84949392	-79.37648261
704	2426-88-4949	HANKINS, JAMES R LIFE TENANT		Pittsylvania County	CHATHAM,VA 24531	36.84707891	-79.36997439
705	2426-97-2787	TATE, MAURICE E TAYLOR		Pittsylvania County	CHATHAM,VA 24531	36.84367609	-79.36692429
706	2426-87-3293	WILSON, ALICE MARTIN TAYLOR		Pittsylvania County	CHATHAM,VA 24531	36.84211189	-79.36988874
707	2436-06-0273	REDD, WILLIE E JR		Pittsylvania County	CHATHAM,VA 24531	36.83968961	-79.36438492
708	2426-95-2849	WILSON, ALICE MARTIN TAYLOR	1685 CHALK LEVEL RD	Pittsylvania County	CHATHAM,VA 24531	36.83861922	-79.36701553
709	2436-05-4217	TOWN OF CHATHAM		Pittsylvania County	CHATHAM,VA 24531	36.8379343	-79.36204838
710	2436-05-4452	GRUBB	1905 CHALK LEVEL RD	Pittsylvania County	CHATHAM,VA 24531	36.83714264	-79.36346936
711	2436-75-1295	BROWN, ANN F TRUSTEE U/A		Pittsylvania County	CHATHAM,VA 24531	36.83667794	-79.33921008
712	2436-95-5098	FOWLKES, RINDA G		Pittsylvania County	CHATHAM,VA 24531	36.83641651	-79.33157954
713	2436-64-3488	HESS, LYLE F	1271 TRANSCO ROAD	Pittsylvania County	CHATHAM,VA 24531	36.83486045	-79.34209731
714	2436-63-4849	CEMETERY		Pittsylvania County	CHATHAM,VA 24531	36.8330263	-79.34196376
715	2436-53-9983	HESS, LYLE F	1271 TRANSCO ROAD	Pittsylvania County	CHATHAM,VA 24531	36.83301682	-79.34348612
716	2436-03-5489	STUMP, THOMAS S	1912 CHALK LEVEL RD	Pittsylvania County	CHATHAM,VA 24531	36.83206259	-79.36224511
717	2436-73-3459	TRANSCONTINENTAL GAS PIPELINE CORPORATION		Pittsylvania County	CHATHAM,VA 24531	36.83125949	-79.33896771
718	2436-42-6652	JONES, MARY		Pittsylvania County	CHATHAM,VA 24531	36.82980287	-79.34928021
719	2436-21-9771	ROBERTSON, JULIAN WAYNE	740 WAYNE ROBERTSON RD	Pittsylvania County	CHATHAM,VA 24531	36.82727006	-79.35372173
720	2436-60-3630	THORSON, EVE M ET ALS		Pittsylvania County	CHATHAM,VA 24531	36.82482742	-79.34341549
721	2421-82-4471	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.69153442	-79.36779621
722	2421-82-0338	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.69140859	-79.36927033
723	2421-82-4360	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.69125442	-79.36782614
724	2421-82-4250	FORD BROTHERS L L C	5929 U S HIGHWAY NO 29	Pittsylvania County	BLAIRS,VA 24527	36.69090904	-79.36786831
725	2421-82-4140	FORD BROTHERS L L C	5929 U S HIGHWAY NO 29	Pittsylvania County	BLAIRS,VA 24527	36.6905893	-79.36791171
726	2421-82-4020	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.69035206	-79.36795091
727	2421-72-9091	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.69035671	-79.36951854
728	2421-81-4911	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.69010776	-79.3680164
729	2421-81-3795	FORD BROTHERS L L C	5765 U S HIGHWAY NO 29	Pittsylvania County	BLAIRS,VA 24527	36.68967323	-79.36805081
730	2421-81-2744	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.68962298	-79.36854438
731	2421-81-1732	FORD BROTHERS L L C		Pittsylvania County	BLAIRS,VA 24527	36.68954025	-79.36906062
732	2421-71-5701	BOARD OF SUPERVISORS PITTS CO	200 BLAIRS MIDDLE SCHOOL CIR	Pittsylvania County	BLAIRS,VA 24527	36.68956957	-79.37121449
733	2427-12-7949	ELLIS, JANE SELF	241 STRADER RD	Pittsylvania County	CHATHAM,VA 24531	36.85794644	-79.392904
734	2436-05-4817	TOWN OF CHATHAM		Pittsylvania County	CHATHAM,VA 24531	36.83751946	-79.36373046
735	055.03-02-14.00-0000	MCGLOTHLIN ELIZABETH JEAN;KING GARY	3878 GARMAN RD	Roanoke County	SALEM,VA 24153	37.27307261	-80.11824405

Property Owner Information

Owner Phone Number, Email, Fax, SCC unknown. Not included.

MAP ID	GPIN	Owner Name	Owner Street Address	County	City, State, Zip	Latitude	Longitude
736	055.03-02-13.00-0000	OBENCHAIN HORACE M	GARMAN RD	Roanoke County	SALEM,VA 24153	37.2709991	-80.12105487
737	055.03-02-12.00-0000	OBENCHAIN HORACE M	GARMAN RD	Roanoke County	SALEM,VA 24153	37.26959261	-80.12393864
738	063.03-01-04.00-0000	THOMAS LTD	CAMPBELL DR	Roanoke County	SALEM,VA 24153	37.24546002	-80.19927649
739	072.02-01-43.00-0000	COUCH JESSE D;COUCH MELANIE J	7034 SUTHERLAND CR	Roanoke County	SALEM,VA 24153	37.24255977	-80.19826533
740	072.02-01-45.00-0000	THOMAS LTD	6591 WEST MAIN ST	Roanoke County	SALEM,VA 24153	37.23942343	-80.19426914
741	072.02-01-46.00-0000	GUNTER DWIGHT A	5822 WEST RIVER RD	Roanoke County	SALEM,VA 24153	37.23481407	-80.19346359
742	082.00-01-15.00-0000	MELTON DON E	7391 COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.2187106	-80.18798656
743	082.00-01-16.00-0000	MELTON DON E	COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.21639826	-80.18712184
744	082.00-01-17.00-0000	EPPERLY RANDALL KEITH	7393 COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.21576176	-80.18804406
745	082.00-01-37.00-0000	GRAY KATHLEEN D	7561 COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.21153757	-80.18431812
746	082.00-01-38.00-0000	TEAFORD KEVIN S;TEAFORD DANA T	7487 COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.20812095	-80.18221891
747	082.00-01-40.00-0000	ANDREWS ANN ELIZABETH	7485 COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.20491738	-80.18596046
748	082.00-01-41.00-0000	MAXWELL MARY ANN;MAXWELL JAMES LOUIS	COVE HOLLOW RD	Roanoke County	ELLISTON,VA 24087	37.19843113	-80.17506746
749	093.00-01-44.00-0000	CRONK MARK W;CRONK ALISON G	8451 HONEYSUCKLE RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.19363428	-80.16322609
750	093.00-01-47.00-0000	EVANGEL FOURSQUARE CHURCH TRUSTEES	8301 HONEYSUCKLE RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.19149218	-80.15691433
751	093.00-01-47.00-0000	EVANGEL FOURSQUARE CHURCH TRUSTEES	8301 HONEYSUCKLE RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.19122749	-80.15829263
752	093.00-01-44.00-0000	CRONK MARK W;CRONK ALISON G	8451 HONEYSUCKLE RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.18859926	-80.1524595
753	102.00-01-01.02-0000	TERRY GRACE MINOR	POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.18709462	-80.17531581
754	093.00-01-34.00-0000	CFX INC	POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.18293863	-80.14646626
755	093.00-01-46.00-0000	TERRY ELIZABETH LEE	8744 HONEYSUCKLE RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.18131662	-80.16224743
756	093.00-01-34.01-0000	SCOTT JAMES T;SCOTT KAREN B	8443 POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.1811403	-80.14189098
757	093.00-01-33.00-0000	CFX INC	POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.18028169	-80.14758097
758	093.00-01-33.01-0000	CFX INC	POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.18037135	-80.14135798
759	102.00-01-05.00-0000	SCOTT MICHAEL THOMAS	8469 POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.17751335	-80.14200186
760	102.00-01-08.00-0000	TERRY JOHN COLES III	8741 POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.17237369	-80.13674394
761	103.00-02-01.00-0000	TERRY HILAH PARKS	8873 POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.17004096	-80.12782872
762	102.00-01-02.00-0000	TERRY FRANK H JR ETAL	8755 POOR MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.16817949	-80.14532267
763	102.00-01-11.00-0000	DUNCAN AGNES M	10450 RUSSWOOD RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.16120328	-80.14003666
764	102.00-01-12.00-0000	JONES MARTHA C ESTATE;ROLLIER MATTHE	10383 RUSSWOOD RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.15906385	-80.13583052
765	102.00-01-13.00-0000	COFFEY BRUCE M;COFFEY MARY E	10303 RUSSWOOD RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.15767859	-80.13351954
766	102.00-01-13.01-0000	LUCKI JACQUELINE J	RUSSWOOD RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.15766172	-80.13283445
767	103.00-02-43.00-0000	RIVES MARY ELLEN	10239 BOTTOM CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.15659472	-80.13009093
768	102.00-01-14.00-0000	LUCKI JACQUELINE J	10289 RUSSWOOD RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.15626764	-80.13167444
769	110.00-01-44.00-0000	TERRY ELIZABETH LEE	BOTTOM CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.15175002	-80.13388149
770	110.00-01-46.00-0000	HENRY JEROME DAVID;HENRY DORIS MARIE	10578 BOTTOM CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.14768068	-80.13872569
771	110.00-01-56.01-0000	HAMM ROBERT MATTHEW;HAMM AIMEE CHASE	10420 MILL CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.14391387	-80.13116172
772	110.00-01-56.00-0000	VEST FRED W	10434 MILL CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.14344743	-80.1338433
773	110.00-01-50.00-0000	WALDRON LOIS KING LIFE ESTATE	10800 BOTTOM CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.14317738	-80.14123339
774	110.00-01-54.00-0000	MONTUORI LENORA W	BOTTOM CREEK RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.14082205	-80.13564661
775	111.00-01-56.03-0000	CONNER BETTY T	10538 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13986165	-80.1242341
776	111.00-01-56.02-0000	CROWE KERMIT C;CROWE ALVA T	10571 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13977749	-80.12636877
777	110.00-01-55.00-0000	FULTON JOHN D JR;BROKAW JANICE VANNE	GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13955489	-80.13816554
778	111.00-01-56.05-0000	CROWE TEDDY D;CROWE SUSAN F	10577 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13955257	-80.12855773
779	111.00-01-63.00-0000	MORSE CLINTON S	GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13911385	-80.13121559
780	111.00-01-56.06-0000	WEHREND GREGG A;LICHLYTER LYNETTE V	10585 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13760552	-80.12728174
781	111.00-01-56.00-0000	FERGUSON GEORGE ROBERT;FERGUSON DANA	10575 BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.13744446	-80.12610267
782	111.00-01-62.00-0000	PHILLIPS ALEXANDER B;PHILLIPS EMILY	GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.1373788	-80.13113148
783	111.00-01-56.01-0000	WEHREND GREGG A;LICHLYTER LYNETTE V	10573 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13735548	-80.12802165
784	111.00-01-62.01-0000	CHANDLER JAMES T;CHANDLER KATHY E	GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.136882	-80.13687411
785	111.00-01-61.03-0000	LESTER DAVID W;LESTER MICHELLE R	10660 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13628554	-80.12995381
786	111.00-01-58.00-0000	ANDREWS MARTHA A	10627 BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.13605109	-80.12807341
787	111.00-01-61.02-0000	LESTER MICHAEL L;LESTER TERESA A	10700 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13606821	-80.13104888
788	111.00-01-61.01-0000	LESTER LONNIE L;LESTER JUDITH P	10701 BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.13529068	-80.1306531
789	117.00-01-40.00-0000	CONNER JEFFERY L	10757 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13451591	-80.1347912
790	061.02-02-16.01-0000	DEPARTMENT OF THE INTERIOR	2725 MOUNTAIN VIEW RD	Roanoke County	ROANOKE,VA 24014	37.13410631	-80.11621066
791	117.00-01-39.00-0000	FRALEY JENNIFER L	10812 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13383061	-80.13613339
792	111.00-01-61.00-0000	DAMERON REBECCA JANE	10721 BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.13368638	-80.13181873
793	117.00-01-38.00-0000	CHANDLER JAMES T;CHANDLER KATHY E	10858 GREEN HOLLOW DR	Roanoke County	BENT MOUNTAIN,VA 24059	37.13361694	-80.13884812
794	117.00-01-41.01-0000	MONTUORI LENORA W	MONTUORI	Roanoke County	BENT MOUNTAIN,VA 24059	37.13326383	-80.13317518
795	117.00-01-41.00-0000	MONTUORI LENORA W	MONTUORI	Roanoke County	BENT MOUNTAIN,VA 24059	37.13259023	-80.13502107
796	117.00-01-41.02-0000	MONTUORI LENORA W	10773 MONTUORI	Roanoke County	BENT MOUNTAIN,VA 24059	37.13191633	-80.13339414
797	117.00-01-43.02-0000	MONTUORI LENORA W	MONTUORI	Roanoke County	BENT MOUNTAIN,VA 24059	37.13168253	-80.1371218
798	117.00-01-42.00-0000	MONTUORI LENORA W	10799 BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.13111883	-80.1323509
799	117.00-01-43.00-0000	MONTUORI LENORA W	10779 MONTUORI	Roanoke County	BENT MOUNTAIN,VA 24059	37.1309369	-80.13582233
800	118.00-01-10.00-0000	UNITED STATES OF AMERICA	BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.12989677	-80.12417395
801	117.00-01-45.00-0000	MONTUORI LENORA	BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.12933554	-80.13239812
802	118.00-01-09.00-0000	THOMPSON HOWARD M;THOMPSON CHRISTINE	10864 BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.12928642	-80.12821406
803	117.00-01-46.00-0000	MONTUORI LENORA W	11069 ROCKY RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.12891393	-80.13697628
804	118.00-01-16.00-0000	UNITED STATES OF AMERICA	BENT MOUNTAIN RD	Roanoke County	BENT MOUNTAIN,VA 24059	37.1261194	-80.12287109

Owner Phone Number, Email, Fax, SCC unknown. Not included.