No. _____

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

SIERRA CLUB, WEST VIRGINIA RIVERS COALITION, INDIAN CREEK WATERSHED ASSOCIATION, APPALACHIAN VOICES, and CHESAPEAKE CLIMATE ACTION NETWORK,
Petitioners

v.

UNITED STATES ARMY CORPS OF ENGINEERS; and MARK T. ESPER, in his official capacity as Secretary of the U.S. Army; TODD T. SEMONITE, in his official capacity as U.S. Army Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers; PHILIP M. SECRIST, in his official capacity as District Commander of the U.S. Army Corps of Engineers, Huntington District, and MICHAEL E. HATTEN, in his official capacity as Chief, Regulatory Branch, U.S. Army Corps of Engineers, Huntington District
Respondents

PETITION FOR REVIEW

Derek O. Teaney
Joseph M. Lovett
APPALACHIAN MOUNTAIN ADVOCATES. INC.
P.O. Box 507
Lewisburg, WV 24901
Telephone: (304) 793-9007
Facsimile: (304) 645-9008
Email: dteaney@appalmad.org
Counsel for Petitioners

Pursuant to Section 19(d)(1) of the Natural Gas Act, 15 U.S.C. § 717r(d)(1), and Rule 15(a) of the Federal Rules of Appellate Procedure, SIERRA CLUB, WEST VIRGINIA RIVERS COALITION, INDIAN CREEK WATERSHED ASSOCIATION, APPALACHIAN VOICES, and CHESAPEAKE CLIMATE ACTION NETWORK hereby petition the United States Court of Appeals for the Fourth Circuit for review of the December 22, 2017 issuance by the United States Army Corps of Engineers of an authorization under Nationwide Permit Number 12 for the discharge of dredged and/or fill material to Mountain Valley Pipeline, LLC (United States Army Corps of Engineers File Number LRH-2015-582-GBR) (hereinafter, "NWP 12 Authorization"). In accordance with Local Rule 15(b), a copy of the NWP 12 Authorization is attached hereto as Exhibit A.

In accordance with Rule 15(c) of the Federal Rules of Civil Procedures, parties that may have been admitted to participate in the underlying procedure have been served with a copy of this Petition. Pursuant to Local Rule 15(b), attached hereto is a list of Respondents specifically identifying the Respondents' names and addresses.

Respectfully submitted,

/s/ Derek O. Teaney

Derek O. Teaney (W. Va. Bar No. 10223)
Joseph M. Lovett
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P.O. Box 507
Lewisburg, WV 24901

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Email: dteaney@appalmad.org

Dated February 13, 2018 *Counsel for Petitioners*

CERTIFICATE OF SERVICE

In accordance with Federal Rule of Appellate Procedure 15(c)(1) & (2), the undersigned hereby certifies that, on February 13, 2018, a true copy of this Petition for Review was served via first-class mail on each of the following entities that may have been admitted to participate in the agency proceedings:

1. Matthew Hoover
   EQT
   Senior Environmental Coordinator
   555 Southpoint Boulevard, Suite 200
   Canonsburg, PA 15317

2. CT Corporation System
   Registered Agent for Mountain Valley Pipeline, LLC
   5400 D Big Tyler Road
   Charleston, WV 25313

3. Paul Friedman
   Office of Energy Projects
   Federal Energy Regulatory Commission
   888 First Street, NE
   Washington, DC 20426

4. Josh Shaffer
   U.S. Army Corps of Engineers
   Pittsburgh District
   1000 Liberty Avenue
   Pittsburgh, PA 15222

5. Todd Miller
   Regulatory Project Manager
   U.S. Army Corps of Engineers
   Richmond Field Office
   9100 Arboretum Parkway, Suite 235
   Richmond, VA 23236

DATED: February 13, 2018 **/s/ Derek O. Teaney**

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Email: dteaney@appalmad.org

Counsel for Petitioners

LIST OF RESPONDENTS

Pursuant to Local Rule 15(b), Petitioners hereby provide a list of Respondents specifically identifying the Respondents' names and the addresses where Respondents may be served with copies of the Petition:

United States Army Corps of Engineers
441 G Street NW
Washington, DC 20314

Dr. Mark T. Esper
Secretary, United States Army
101 Army Pentagon
Washington, DC 20310-0101

Lt. General Todd T. Semonite
Commanding General and Chief of Engineers
United States Army Corps of Engineers
441 G Street NW
Washington, DC 20314

Col. Philip M. Secrist
District Commander
United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, WV 25701

Michael E. Hatten
Chief, Regulatory Branch
United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, WV 25701

EXHIBIT A

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO ATTENTION OF

December 22, 2017

Regulatory Division
Energy Resource Branch
LRH-2015-592-GBR

NATIONWIDE PERMIT NO. 12 VERIFICATION

Mr. Shawn Posey
Mountain Valley Pipeline, LLC
555 Southepointe Boulevard, Suite 200
Canonsburg, Pennsylvania 15317

Dear Mr. Posey:

I refer to the Mountain Valley Pipeline, LLC's request received on February 25, 2016 with an updated application received on February 17, 2017 and additional information received December 18, 2017 requesting a Department of the Army (DA) authorization to discharge dredged and/or fill material into waters of the United States (U.S.) in association with the Mountain Valley Pipeline (MVP) Project. The proposed project will involve the construction of a 304-mile 42-inch natural gas pipeline in Virginia and West Virginia. The MVP pipeline will cross the United States Army Corps of Engineers (Corps) Pittsburgh, Norfolk and Huntington Districts regulatory boundaries. Approximately 164-miles of the proposed pipeline, approximately 132-miles of proposed access roads, and three (3) compressor stations are located within the Huntington District's regulatory boundary in Monroe, Summers, Greenbrier, Nicholas, Webster, Braxton, Lewis, Harrison, and Wetzel Counties, West Virginia. The project has been assigned the following file number: LRH-2015-592-GBR. Please reference this number on all future correspondence related to this proposed project.

The Corps' authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a DA permit be obtained prior to discharging dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The proposed project, as described in your PCN and supplemental information, has been reviewed in accordance with Section 404 and Section 10. Based on your description of the proposed work, and other information available to us, it has been determined that this project will involve activities subject to the requirements of Section 404 and Section 10.

In the submitted information, you have requested a DA authorization to temporarily discharge dredged and/or fill material into 10,087 linear feet (0.863 acre) of ephemeral streams, 12,021 linear feet (1.550 acres) of intermittent streams, 16,213 linear feet (8.824 acres) of

perennial stream, 15.299 acres of palustrine emergent wetlands, 0.43 acre of palustrine scrub-shrub wetland and 2.558 acres of palustrine forested wetlands and the proposed permanent discharge of dredged and/or fill material into 803 linear feet (0.090 acre) of ephemeral stream, 1,018 linear feet (0.098 acre) of intermittent streams, 576 linear feet (0.0243 acre) of perennial stream, 0.639 acre of palustrine emergent wetland, 0.004 acre of palustrine scrub-shrub wetland and 0.012 acre of palustrine forested wetland. There are 591 single and complete crossings in the portion of the proposed project located within the Huntington District's regulatory boundary, as shown on the enclosed Table titled *Aquatic Resource Crossing Table Mountain Valley Pipeline Project.*

Based on the provided information, it has been determined the discharge of dredged and/or fill material into waters of the U.S. at 591 separate and distant locations in conjunction with the utility line project meets the criteria for Nationwide Permit (NWP) #12 under the January 6, 2017 Federal Register, Issuance and Reissuance of NWPs (82 FR 1860) provided you comply with all terms and conditions of the enclosed material and the enclosed special conditions. A copy of this NWP can be found on our website at: http://www.lrh.usace.army.mil/Missions/Regulatory.aspx. A copy of this NWP and this letter should be supplied to your project engineer responsible for project activities and a copy kept at the site during project work. Please be aware this NWP verification does not obviate the requirement to obtain any state or local assent required by law for the activities.

This verification is valid until the expiration date of the NWPs, unless the NWP authorization is modified, suspended, or revoked. The verification will remain valid if the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization. All of the existing NWPs are scheduled to be modified, reissued, or revoked on March 18, 2022. Prior to this date, it is not necessary to contact this office for re-verification of your project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence this activity before March 18, 2022, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of the NWP and this verification letter must be kept at the site during construction. Upon completion of the activities authorized by this NWP verification, the enclosed certification must be signed and returned to this office. If you have any questions concerning the above, please contact Christopher L. Carson at 304-399-5819, by mail at the above address, or by email at christopher.l.carson@usace.army.mil.

Sincerely,

SPAGNA.TERESA.D.1229740519

Digitally signed by SPAGNA.TERESA.D.1229740519
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=SPAGNA.TERESA.D.1229740519
Date: 2017.12.22 10:04:08 -05'00'

Teresa D. Spagna
Chief, North Branch

Enclosures
cc: (next page)

cc:
Mr. Matthew Hoover
EQT
Senior Environmental Coordinator
555 Southpointe Boulevard, Suite 200
Canonsburg, Pennsylvania 15317

Mr. Paul Friedman
Office of Energy Projects
Federal Energy Regulatory Commission
Washington, D.C. 20426

Mr. Josh Shaffer
U.S. Army Corps of Engineers
Pittsburgh District
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222

Mr. Todd Miller
Regulatory Project Manager
U.S. Army Corps of Engineers
Richmond Field Office
9100 Arboretum Parkway, Ste 235
Richmond, Virginia 23236

Nationwide Permit 12 Verification Special Conditions
Mountain Valley Pipeline, LLC MVP Project
LRH-2015-592-GBR

1. This verification remains contingent upon the permittee's submitted Pre-Construction Notification (PCN) information regarding the scope and/or impacts of the project as described in the enclosed Figure 1 titled *Mountain Valley Pipeline Overview Map* and the aquatic resources identified in the enclosed Table titled *Aquatic Resource Crossing Table Mountain Valley Pipeline Project*. Should new information regarding the scope and/or impacts of the project become available that was not submitted to this office during our review of the proposal, the permittee must submit written information concerning proposed modification(s) to this office for review and evaluation, as soon as practicable.

   The permittee must complete wetland and stream investigations on all desktop evaluated aquatic resources, as identified in the enclosed Table titled *Aquatic Resource Crossing Table Mountain Valley Pipeline Project*, once access is granted. The permittee must submit to the Huntington District the information gathered during the field reconnaissance, including data forms, photographs, impact analysis and mitigation requirements, prior to the discharge of dredged and/or fill material in these desktop evaluated aquatic resources. If additional mitigation is necessary, the permittee must purchase the required mitigation credits prior to the discharge of dredged and/or fill material into waters of the United States.

2. The permittee is required to apply for and secure all necessary permits, certifications or other approvals from Federal, State and/or local regulatory agencies, prior to commencing the construction activity. These other Federal, State and/or local approvals and all conditions attached to or contained therein are hereby incorporated by reference as being special conditions of this verification.

3. Enclosed is a copy of Nationwide Permit 12, which will be kept at the site during construction. A copy of the nationwide permit verification, special conditions, and the submitted construction plans must be kept at the site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.

4. Construction activities will be performed during low flow conditions to the greatest extent practicable. Additionally, appropriate site specific best management practices for sediment and erosion control will be fully implemented during construction activities. The permittee shall ensure stream and riparian upland buffers are adequately flagged and/or staked before construction activities to ensure these areas are not inadvertently impacted pre-, during- or post-construction and follow the *Wetland and Waterbody Construction and Mitigation Procedures* and the *Upland Erosion Control, Revegetation Plan, and Maintenance Plan* established by the Federal Energy Regulatory Commission .

5. Completion of stream and wetland crossings must adhere to dates established in standard conditions for West Virginia nationwide permits including restrictions during the spawning season for warm water streams (April to June) and trout waters (September 14 to March 31).

6. At each stream crossing, substrate in the channel is to be removed and stockpiled separately from other excavated material. This native material must be reused in restoration of the stream channel and, upon final stream bed restoration, the stream must have similar substrate pattern, profile, dimension and embeddedness of the original stream channel. At each wetland crossing, the top 12 inches of soil are to be removed and stockpiled separately from other excavated material. This native material must be reused in the restoration of the wetland.

7. The permittee will document pre- and post-construction activities through photographs, both upstream and downstream of each channel and each bank. A minimum of four (4) photographs per stream crossing will be taken. For the major streams, as defined by the Federal Energy Regulatory Commission, additional photographs of the streams' banks will be taken for a minimum of six (6) photographs. For wetland crossings, the permittee will document prior to construction through photographs of the wetland with the Right of Way (ROW), the ROW as it enters the wetland, and the ROW as it exits the wetland. All photographs are to be geo-referenced and identified to correspond with aquatic feature names as described in the enclosed Table titled *Aquatic Resource Crossing Table Mountain Valley Pipeline Project*, with a date of the photograph taken and GPS coordinates. Upon completion of construction and reclamation of each stream and wetland crossing, associated photographs must be taken in the same manner and locations as pre-impact existing conditions with narrative documentation that the area has been returned to pre-construction contours. The pre- and post-construction photographs associated with each stream and wetland crossing must be submitted to the Huntington District along with the enclosed "Activity Completion Certification."

8. The permittee will submit post-construction reports upon completion of the activities at conducted with waters subject to Section 10 of the Rivers and Harbors Act of 1899 (Section 10) to document the restoration of the stream to pre-construction contours. Section 10 rivers within the Huntington District falling within the project boundary include the Gauley River, the Greenbrier River, and the Elk River. Post-construction reports will include in-stream habitat, bank characteristics, and GPS locations for boulders larger than 36-inches. The reports will include obtaining post-construction data consistent with methods used to document pre-construction conditions provided by the permittee for the above Section 10 stream crossing(s). The permittee will provide post-construction documentation that the restored streams have similar substrate pattern, profile, dimension and embeddedness of the original stream channels.

Nationwide Permit 12 Verification Special Conditions
Mountain Valley Pipeline, LLC MVP Project
LRH-2015-592-GBR

9. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if , in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the United States Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration. The permittee is solely responsible for insuring all activities are performed in compliance with all permit conditions.

10. The authorized work shall not interfere with the public's right to free navigation on navigable waters of the United States. The permittee will provide a site-specific spill response plan and Aid to Navigation (ATON) to provide public information on construction, instream activities, and any potential user restrictions during construction.

11. The permittee will purchase stream and wetland mitigation credits from multiple federally-approved mitigation bank(s) as indicated on Table 1 below. The permittee will submit confirmation to the Corps, Huntington District (Permit Number LRH-2015-592-GBR) of the purchase of the mitigation credits prior to the discharge of dredged and/or fill material into waters of the United States.

Table 1 – Required Mitigation within the Huntington District's Regulatory Boundary

Mitigation Bank	**Required Purchase of Wetlands Mitigation Bank Credits Prior to Discharge of Dredged and/or Fill Material**	**Required Purchase of Stream Mitigation Bank Credits Prior to Discharge of Dredged and/or Fill Material**
Kincheloe Mitigation Bank	0.3919	521
Foster Run Mitigation Bank	N/A	362
Spanishburg Mitigation Bank	2.6558	675
Beverly Mitigation Bank	0.5982	N/A
Total Mitigation Credits Required	3.6459	1,558

Nationwide Permit 12 Verification Special Conditions
Mountain Valley Pipeline, LLC MVP Project
LRH-2015-592

12. In the event any previously unknown historic or archaeological sites or human remains are uncovered while accomplishing the authorized activity, the permittee must cease all work in waters of the United States immediately and contact local, state and county law enforcement offices (only contact law enforcement on findings of human remains), the Corps at (304) 399-5210 and West Virginia State Historic Preservation Office at (304) 558-0220.The Federal Energy Regulatory Commission will initiate the Federal, state and tribal coordination required to comply with the National Historic Preservation Act and the applicable state and local laws and regulations. Federally recognized tribes are afforded a government-to-government status as sovereign nations and consultations are required under Executive Order 13175 and 36 CFR Part 800.

13. The United States Fish and Wildlife Service's (USFWS) Biological Opinion for the Mountain Valley Pipeline, LLC; Docket Number CP16-10-000; Project #05E2VA00-2016-F-0880 and #05E2WV00-2015-F-0046 (BO) and dated November 21, 2017 contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. The permittee's authorization under this Corps nationwide permit verification is conditional upon their compliance with all of the mandatory terms and conditions associated with the incidental take of the BO, which terms and conditions are incorporated by reference as being special conditions of the Section 404 and Section 10 nationwide permit verification. Section 7 obligations under Endangered Species Act must be reconsidered if new information reveals impacts of the project that may affect federally listed species or critical habitat in a manner not previously considered, the proposed project is subsequently modified to include activities which were not considered during Section 7 consultation with the United States Fish and Wildlife Service, or new species are listed or critical habitat designated that might be affected by the subject project. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the Endangered Species Act.

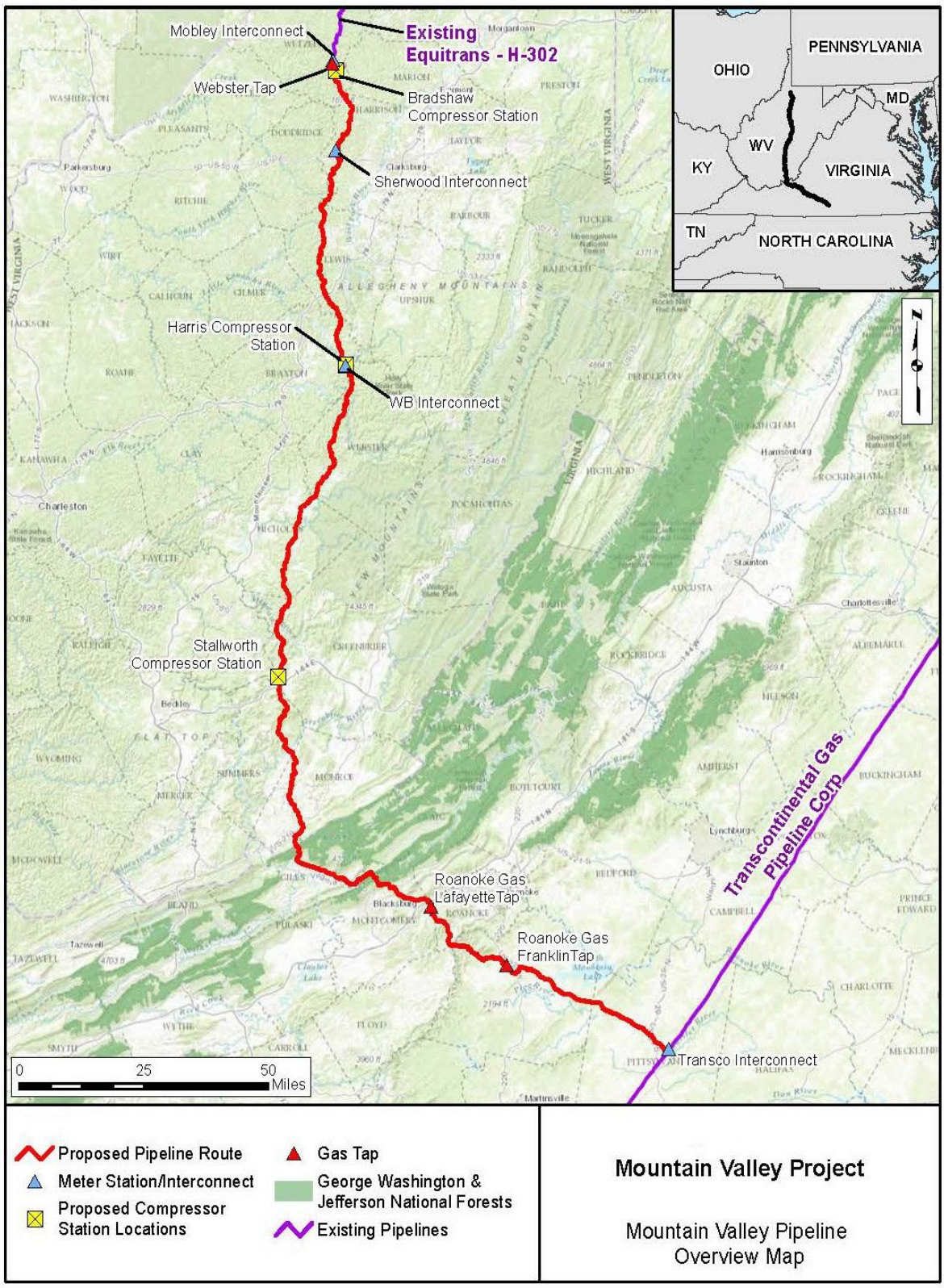

Figure 1. MVP overview.

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
1	S-J63	RPW	R4SB3	Wetzel	39.562824	-80.541691	0.0069	-	33	-	Station	Temporary	-	Field	2-1
1	S-ST13	RPW	R4SB3	Wetzel	39.562750	-80.541814	-	0.0105	-	51	Station	Permanent	Foster Run	Field	2-1
1	S-ST13	RPW	R4SB3	Wetzel	39.562545	-80.541549	0.0019	-	9	-	Station	Temporary	-	Field	2-1
1	S-ST14	NRPW	R6	Wetzel	39.562629	-80.541666	-	0.0047	-	23	Station	Permanent	Foster Run	Field	2-1
1	S-ST14	NRPW	R6	Wetzel	39.562580	-80.541378	0.0036	-	18	-	Station	Temporary	-	Field	2-1
1	S-ST10	RPW	R4SB3	Wetzel	39.562384	-80.542424	-	0.0145	-	70	Station	Permanent	Foster Run	Field	2-1
1	S-ST10	RPW	R4SB3	Wetzel	39.562262	-80.542374	0.0018	-	9	-	Station	Temporary	-	Field	2-1
1	**Mobley Crossing S-J63, S-ST13, S-ST14, ST10 Total**		**-**	**-**	**-**	**-**	**0.0142**	**0.0297**	**69**	**144**	**-**	**-**	**-**	**Field**	
2	S-ST18	RPW	R4SB3	Wetzel	39.561766	-80.540136	0.0026	-	12	-	Temporary Access Road	Temporary	-	Field	2-2
2	S-ST18	RPW	R4SB3	Wetzel	39.561753	-80.540125	-	0.0023	-	11	Permanent Access Road	Permanent	Foster Run	Field	2-2
2	**S-ST18 Total**		**-**	**-**	**-**	**-**	**0.0026**	**0.0023**	**12**	**11**	**-**	**-**	**-**	**Field**	
3	S-A1a	RPW	R2UB1	Wetzel	39.553946	-80.545046	0.0641	-	1034	-	Pipeline ROW	Temporary	-	Field	2-3
3	W-A1a	RPWWD	PEM	Wetzel	39.553912	-80.544941	0.0038	-	18	-	Pipeline ROW	Temporary	-	Field	2-3
3	**S-A1a & W-A1a Total**		**-**	**-**	**-**	**-**	**0.0679**	**-**	**1052**	**-**	**-**	**-**	**-**	**Field**	
4	**W-A2a**	**RPWWN**	**PEM**	**Wetzel**	**39.553508**	**-80.545518**	**0.0732**	**-**	**1181**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-3**
5	**S-A3a**	**RPW**	**R4SB3**	**Wetzel**	**39.551814**	**-80.545633**	**0.0166**	**-**	**267**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-4**
6	S-J66	RPW	R4SB3	Wetzel	39.546334	-80.544020	0.0057	-	28	-	Temporary Access Road	Temporary	-	Field	2-5
6	S-J66	RPW	R4SB3	Wetzel	39.546030	-80.544314	0.0053	-	85	-	Pipeline ROW	Temporary	-	Field	2-5
6	**S-J66 Total**		**-**	**-**	**-**	**-**	**0.0110**	**-**	**113**	**-**	**-**	**-**	**-**	**Field**	
7	**W-A4a**	**NRPWW**	**PEM**	**Wetzel**	**39.544654**	**-80.542771**	**0.0226**	**-**	**364**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-5**
8	**W-YZ8**	**NRPWW**	**PEM**	**Wetzel**	**39.535721**	**-80.525972**	**0.0104**	**-**	**50**	**-**	**Station**	**Temporary**	**-**	**Field**	**2-10**
9	**S-A5a**	**RPW**	**R4SB3**	**Wetzel**	**39.534241**	**-80.540995**	**0.0126**	**-**	**203**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-9**
10	**S-A6a**	**RPW**	**R2UB1**	**Wetzel**	**39.534023**	**-80.540889**	**0.0376**	**-**	**606**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-9**
11	S-A115	RPW	R2UB1	Wetzel	39.506513	-80.526502	0.0207	-	100	-	Permanent Access Road	Temporary	-	Field	2-19
11	S-A125	RPW	R2UB1	Wetzel	39.503477	-80.532902	0.0621	-	1003	-	Pipeline ROW	Temporary	-	Field	2-17
11	**S-A115 & S-A125 Total**		**-**	**-**	**-**	**-**	**0.0828**	**-**	**1103**	**-**	**-**	**-**	**-**	**Field**	
12	W-IJ31	RPWWN	PEM	Wetzel	39.505764	-80.541781	0.0992	-	480	-	ATWS	Temporary	-	Field	2-16
12	W-IJ31	RPWWN	PEM	Wetzel	39.505612	-80.541681	-	0.0082	-	40	Permanent Access Road	Permanent	Kincheloe	Field	2-16
12	**W-IJ31 Total**		**-**	**-**	**-**	**-**	**0.0992**	**0.0082**	**480**	**40**	**-**	**-**	**-**	**Field**	
13	S-A116	RPW	R4SB3	Wetzel	39.505572	-80.525608	0.0015	-	7	-	Temporary Access Road	Temporary	-	Field	2-19
13	S-A116	RPW	R4SB3	Wetzel	39.505571	-80.525615	-	0.0048	-	31	Permanent Access Road	Permanent	Foster Run	Field	2-19
13	S-A116	RPW	R4SB3	Wetzel	39.505489	-80.525655	0.0015	-	7	-	Temporary Access Road	Temporary	-	Field	2-19
13	S-A117	RPW	R4SB3	Wetzel	39.503142	-80.522977	-	0.0050	-	33	Permanent Access Road	Permanent	Foster Run	Field	2-18
13	S-A117	RPW	R4SB3	Wetzel	39.503135	-80.523044	0.0015	-	7	-	Temporary Access Road	Temporary	-	Field	2-18
13	S-A117	RPW	R4SB3	Wetzel	39.503132	-80.522918	0.0025	-	12	-	Temporary Access Road	Temporary	-	Field	2-18
13	**S-A117 & A116 Total**		**-**	**-**	**-**	**-**	**0.0070**	**0.0098**	**33**	**64**	**-**	**-**	**-**	**Field**	
14	**S-A124**	**RPW**	**R4SB1**	**Wetzel**	**39.503288**	**-80.532680**	**0.0276**	**-**	**445**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-17**
15	S-A118	RPW	R4SB3	Wetzel	39.502399	-80.523520	0.0109	-	176	-	Pipeline ROW	Temporary	-	Field	2-18
15	W-A27-PFO	RPWWD	PFO	Wetzel	39.502389	-80.523497	-	0.0547†	882†	-	Pipeline ROW	Temporary	Kincheloe	Field	2-18
15	W-A27-PEM	RPWWD	PEM	Wetzel	39.502356	-80.523420	0.0497	-	802	-	Pipeline ROW	Temporary	-	Field	2-18
15	**S-A118 & W-A27 Total**		**-**	**-**	**-**	**-**	**0.0606**	**0.0547**	**1860**	**-**	**-**	**-**	**-**	**Field**	
16	**W-A35**	**NRPWW**	**PEM**	**Wetzel**	**39.491159**	**-80.520537**	**0.0066**	**-**	**107**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-21**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
17	S-A120	RPW	R4SB4	Wetzel	39.489914	-80.522135	0.0011	-	5	-	Temporary Access Road	Temporary	-	Field	2-21
17	S-A120	RPW	R4SB4	Wetzel	39.489890	-80.522083	-	0.0036	-	15	Permanent Access Road	Permanent	Foster Run	Field	2-21
17	S-A120	RPW	R4SB4	Wetzel	39.489866	-80.522029	0.0012	-	6	-	Temporary Access Road	Temporary	-	Field	2-21
17	S-A120	RPW	R4SB4	Wetzel	39.489712	-80.520728	0.0149	-	241	-	Pipeline ROW	Temporary	-	Field	2-21
17	S-A119	RPW	R4SB3	Wetzel	39.489589	-80.520532	0.0171	-	276	-	Pipeline ROW	Temporary	-	Field	2-21
17	W-A34	RPWWD	PEM	Wetzel	39.489742	-80.520750	0.0833	-	1343	-	Pipeline ROW	Temporary	-	Field	2-21
17	**S-A119, S-A120 & W-A34 Total**		**-**	**-**	**-**	**-**	**0.1176**	**0.0036**	**1872**	**15**	**-**	**-**	**-**	**Field**	
18	S-QR34	NRPW	R6	Wetzel	39.489140	-80.520658	-	0.0072	-	24	Permanent Access Road	Permanent	Foster Run	Field	2-21
18	S-QR34	NRPW	R6	Wetzel	39.489062	-80.520519	0.0004	-	2	-	Temporary Access Road	Temporary	-	Field	2-21
18	**S-QR34 Total**		**-**	**-**	**-**	**-**	**0.0004**	**0.0072**	**2**	**24**	**-**	**-**	**-**	**Field**	
19	**W-A31**	**NRPWW**	**PEM**	**Wetzel**	**39.486706**	**-80.531774**	**0.0270**	**-**	**131**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-23**
20	**W-A28**	**NRPWW**	**PEM**	**Wetzel**	**39.486505**	**-80.537877**	**0.2609**	**-**	**1263**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-24**
21	**W-A30**	**RPWWN**	**PEM**	**Wetzel**	**39.486248**	**-80.534108**	**0.1546**	**-**	**748**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-24**
22	**W-A29**	**NRPWW**	**PEM**	**Wetzel**	**39.485936**	**-80.536196**	**0.0129**	**-**	**63**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-24**
23	**W-A33**	**NRPWW**	**PEM**	**Wetzel**	**39.484775**	**-80.526191**	**0.0294**	**-**	**142**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-23**
24	**W-A32**	**NRPWW**	**PEM**	**Wetzel**	**39.484485**	**-80.528316**	**0.0713**	**-**	**345**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-23**
25	**S-A114**	**NRPW**	**R6**	**Wetzel**	**39.481424**	**-80.518386**	**0.0042**	**-**	**20**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-26**
26	**S-J60**	**RPW**	**R2RB2**	**Wetzel**	**39.474354**	**-80.511825**	**0.0243**	**-**	**392**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-28**
27	**W-A26**	**RPWWD**	**PEM**	**Wetzel**	**39.473051**	**-80.524008**	**0.4412**	**-**	**2136**	**-**	**Temporary Access Road/ATWS**	**Temporary**	**-**	**Field**	**2-27**
28	S-J56	RPW	R2UB1	Wetzel	39.464315	-80.502077	0.0173	-	279	-	Pipeline ROW	Temporary	-	Field	2-30
28	S-J56	RPW	R2UB1	Wetzel	39.464105	-80.502318	0.0054	-	26	-	Temporary Access Road	Temporary	-	Field	2-30
28	S-J56	RPW	R2UB1	Wetzel	39.463899	-80.502594	-	0.0095	-	46	Permanent Access Road	Permanent	Foster Run	Field	2-30
28	W-WX5	RPWWD	PEM	Wetzel	39.463909	-80.502672	0.0011	-	5	-	Temporary Access Road	Temporary	-	Field	2-30
28	**S-J56 &W-WX5 Total**		**-**	**-**	**-**	**-**	**0.0238**	**0.0095**	**310**	**46**	**-**	**-**	**-**	**Field**	
29	W-WX4	RPWWD	PEM	Wetzel	39.463864	-80.502581	0.0040	-	19	-	Temporary Access Road	Temporary	-	Field	2-30
29	W-WX4	RPWWD	PEM	Wetzel	39.463844	-80.502622	-	0.0055	-	27	Permanent Access Road	Permanent	Kincheloe	Field	2-30
29	**W-WX4 Total**		**-**	**-**	**-**	**-**	**0.0040**	**0.0055**	**19**	**27**	**-**	**-**	**-**	**Field**	
30	S-J59	RPW	R4SB	Wetzel	39.462705	-80.504726	-	0.0005	-	2	Permanent Access Road	Permanent	Foster Run	Field	2-30
30	S-J59	RPW	R4SB	Wetzel	39.462684	-80.504736	0.0007	-	3	-	Temporary Access Road	Temporary	-	Field	2-30
30	**S-J59 Total**		**-**	**-**	**-**	**-**	**0.0007**	**0.0005**	**3**	**2**	**-**	**-**	**-**	**Field**	
31	W-K52	RPWWN	PEM	Doddridge	39.236762	-80.558524	0.0021	-	10	-	Temporary Access Road	Temporary	-	Field	2-32
31	W-K52	RPWWN	PEM	Doddridge	39.236727	-80.558550	-	0.0115	-	56	Permanent Access Road	Permanent	Kincheloe	Field	2-32
31	**W-K52 Total**		**-**	**-**	**-**	**-**	**0.0021**	**0.0115**	**10**	**56**	**-**	**-**	**-**	**Field**	
32	S-K77	RPW	R4SB3	Doddridge	39.229029	-80.552534	0.0034	-	54	-	Pipeline ROW	Temporary	-	Field	2-38
32	S-K77	RPW	R4SB3	Doddridge	39.228942	-80.552437	0.0085	-	137	-	Pipeline ROW	Temporary	-	Field	2-38
32	W-K45	RPWWD	PEM	Doddridge	39.228900	-80.552328	0.0401	-	648	-	Pipeline ROW	Temporary	-	Field	2-38

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
32	**S-K77 & W-K45 Total**		**-**	**-**	**-**	**-**	**0.0520**	**-**	**839**	**-**	**-**	**-**	**-**	**Field**	
33	**S-K78**	**RPW**	**R4SB5**	**Doddridge**	**39.227664**	**-80.551302**	**0.0080**	**-**	**39**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-38**
34	**S-K67**	**RPW**	**R4SB3**	**Doddridge**	**39.210269**	**-80.553179**	**0.0177**	**-**	**285**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
35	**S-K65**	**RPW**	**R4SB3**	**Doddridge**	**39.209813**	**-80.552450**	**0.0165**	**-**	**267**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
36	S-K63	RPW	R4SB5	Doddridge	39.209001	-80.552035	0.0010	-	5	-	Pipeline ROW	Temporary	-	Field	2-41
36	W-K41	RPWWD	PEM	Doddridge	39.208990	-80.551957	0.0160	-	259	-	Pipeline ROW	Temporary	-	Field	2-41
36	**S-K63 & W-K41 Total**		**-**	**-**	**-**	**-**	**0.0170**	**-**	**264**	**-**	**-**	**-**	**-**	**Field**	
37	**W-K40**	**NRPWW**	**PEM**	**Doddridge**	**39.208395**	**-80.552038**	**0.0096**	**-**	**155**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
38	**S-K54**	**RPW**	**R4SB3**	**Doddridge**	**39.207673**	**-80.552957**	**0.0127**	**-**	**204**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
39	**S-K55**	**NRPW**	**R6**	**Doddridge**	**39.207657**	**-80.552852**	**0.0018**	**-**	**9**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
40	**S-K58**	**NRPW**	**R6**	**Doddridge**	**39.205595**	**-80.553224**	**0.0045**	**-**	**72**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
41	**S-K59**	**NRPW**	**R6**	**Doddridge**	**39.204704**	**-80.553272**	**0.0044**	**-**	**70**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
42	**S-K60**	**NRPW**	**R6**	**Doddridge**	**39.203779**	**-80.553410**	**0.0090**	**-**	**144**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-41**
43	S-A110/K62	RPW	R4SB3	Doddridge	39.201436	-80.553238	0.0063	-	30	-	ATWS	Temporary	-	Field	2-42
43	S-A110/K62	RPW	R4SB3	Doddridge	39.201316	-80.553306	-	0.0040	-	13	Permanent Access Road	Permanent	Foster Run	Field	2-42
43	S-A110/K62	RPW	R4SB3	Doddridge	39.201286	-80.553425	0.0095	-	154	-	Pipeline ROW	Temporary	-	Field	2-42
43	**S-A110/K62 Total**		**-**	**-**	**-**	**-**	**0.0158**	**0.0040**	**184**	**13**	**-**	**-**	**-**	**Field**	
44	S-A109	RPW	R4SB4	Doddridge	39.201257	-80.553474	0.0046	-	22	-	Pipeline ROW	Temporary	-	Field	2-42
44	W-A23	RPWWD	PEM	Doddridge	39.201219	-80.552848	0.2277	-	1102	-	ATWS	Temporary	-	Field	2-42
44	W-A23	RPWWD	PEM	Doddridge	39.201188	-80.552996	0.2701	-	4358	-	Pipeline ROW	Temporary	-	Field	2-42
44	W-A23	RPWWD	PEM	Doddridge	39.201157	-80.553264	-	0.0579	-	280	Permanent Access Road	Permanent	Kincheloe	Field	2-42
44	**S-A109 & W-A23 Total**		**-**	**-**	**-**	**-**	**0.5024**	**0.0579**	**5482**	**280**	**-**	**-**	**-**	**Field**	
45	**S-A111**	**RPW**	**R2UB1**	**Doddridge**	**39.200749**	**-80.553190**	**0.0247**	**-**	**399**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-42**
46	**W-B57**	**NRPWW**	**PEM**	**Lewis**	**39.111745**	**-80.587352**	**0.0336**	**-**	**163**	**-**	**Pipeline ROW/Temporary Access Road**	**Temporary**	**-**	**Field**	**2-49**
47	W-K33-PSS	RPWWD	PSS	Lewis	39.095059	-80.585064	-	0.0024†	12†	-	Pipeline ROW	Temporary	Kincheloe	Field	2-51
47	W-K33-PEM	RPWWD	PEM	Lewis	39.095056	-80.584787	0.1544	-	2490	-	Pipeline ROW	Temporary	-	Field	2-51
47	S-J46	RPW	R2UB1	Lewis	39.094778	-80.584826	0.0343	-	553	-	Pipeline ROW	Temporary	-	Field	2-51
47	**S-J46 & W-K33 Total**		**-**	**-**	**-**	**-**	**0.1887**	**0.0024**	**3055**	**-**	**-**	**-**	**-**	**Field**	
48	S-J47b	RPW	R4SB3	Lewis	39.094003	-80.585481	0.0067	-	108	-	Pipeline ROW	Temporary	-	Field	2-51
48	W-K34-PEM	RPWWD	PEM	Lewis	39.093945	-80.585460	0.0345	-	557	-	Pipeline ROW	Temporary	-	Field	2-51
48	**S-J47b & W-K34-PEM Total**		**-**	**-**	**-**	**-**	**0.0412**	**-**	**665**	**-**	**-**	**-**	**-**	**Field**	
49	**W-K39**	**NRPWW**	**PEM**	**Lewis**	**39.092655**	**-80.586749**	**0.0030**	**-**	**14**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-51**
50	**S-H172**	**NRPW**	**R6**	**Lewis**	**39.057704**	**-80.581416**	**0.0125**	**-**	**61**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-56**
51	**W-H109**	**NRPWW**	**PEM**	**Lewis**	**39.053324**	**-80.582020**	**0.0027**	**-**	**13**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-57**
52	**S-H170**	**NRPW**	**R6**	**Lewis**	**39.053159**	**-80.582083**	**0.0052**	**-**	**84**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-57**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
53	W-I22-PEM	RPWWD	PEM	Lewis	39.052768	-80.582196	0.0386	-	622	-	Pipeline ROW/Temporary Access Road/ATWS	Temporary	-	Field	2-57
53	W-I22-PEM	RPWWD	PEM	Lewis	39.052760	-80.582147	-	0.0059	-	28	Permanent Access Road	Permanent	Kincheloe	Field	2-57
53	S-I64	RPW	R2UB3	Lewis	39.052748	-80.582213	0.0062	-	99	-	Pipeline ROW	Temporary	-	Field	2-57
53	TTWV-W-201	RPWWD	PEM	Lewis	39.052728	-80.583223	0.0226	-	109	-	ATWS	Temporary	-	Desktop	2-57
53	W-I22-PEM-2	RPWWD	PEM	Lewis	39.052499	-80.580974	0.1395	-	675	-	ATWS	Temporary	-	Field	2-57
53	**S-I64, W-I22 & TTWV-W-201 Total**		**-**	**-**	**-**	**-**	**0.2069**	**0.0059**	**1505**	**28**	**-**	**-**	**-**	**Field**	
54	**TTWV-S-217**	**RPW**	**R4**	**Lewis**	**39.052420**	**-80.581605**	**0.0076**	**-**	**37**	**-**	**ATWS**	**Temporary**	**-**	**Desktop**	**2-57**
55	**S-KK3a**	**NRPW**	**R6**	**Lewis**	**39.019605**	**-80.597895**	**0.0101**	**-**	**164**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-62**
56	W-KK6	RPWWD	PEM	Lewis	39.017820	-80.596977	0.0104	-	50	-	Pipeline ROW	Temporary	-	Field	2-62
56	S-KK5	RPW	R4SB3	Lewis	39.017783	-80.596853	0.0069	-	111	-	Pipeline ROW	Temporary	-	Field	2-62
56	S-KK5	RPW	R4SB3	Lewis	39.017738	-80.597017	0.0011	-	18	-	Pipeline ROW	Temporary	-	Field	2-62
56	S-KK5	RPW	R4SB3	Lewis	39.017718	-80.597027	0.0011	-	18	-	Pipeline ROW	Temporary	-	Field	2-62
56	**S-KK5 & W-KK6 Total**		**-**	**-**	**-**	**-**	**0.0195**	**-**	**197**		**-**	**-**	**-**	**Field**	
57	**S-KK6**	**RPW**	**R4SB3**	**Lewis**	**39.017621**	**-80.596939**	**0.0056**	**-**	**90**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-62**
58	**S-KK7**	**RPW**	**R2UB1**	**Lewis**	**39.017519**	**-80.597010**	**0.0132**	**-**	**213**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-62**
59	**W-L42**	**NRPWW**	**PEM**	**Lewis**	**39.011413**	**-80.594436**	**0.0021**	**-**	**10**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-63**
60	W-K28	NRPWW	PEM	Lewis	39.009891	-80.597843	0.0088	-	43	-	Temporary Access Road	Temporary	-	Field	2-63
60	W-K28	NRPWW	PEM	Lewis	39.009838	-80.598294	-	0.0091	-	44	Permanent Access Road	Permanent	Kincheloe	Field	2-63
60	**W-K28 Total**		**-**	**-**	**-**	**-**	**0.0088**	**0.0091**	**43**	**44**	**-**	**-**	**-**	**Field**	
61	W-L41	NRPWW	PEM	Lewis	39.005782	-80.595121	0.0048	-	23	-	Temporary Access Road	Temporary	-	Field	2-64
61	W-L41	NRPWW	PEM	Lewis	39.005703	-80.595151	-	0.0111	-	54	Permanent Access Road	Permanent	Kincheloe	Field	2-64
61	**W-L41 Total**		**-**	**-**	**-**	**-**	**0.0048**	**0.0111**	**23**	**54**	**-**	**-**	**-**	**Field**	
62	**S-K45**	**NRPW**	**R6**	**Lewis**	**39.002598**	**-80.595591**	**0.0011**	**-**	**6**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-62**
63	**S-K43**	**RPW**	**R2UB1**	**Lewis**	**39.002045**	**-80.596098**	**0.0164**	**-**	**264**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-64**
64	**S-K38**	**NRPW**	**R6**	**Lewis**	**38.992357**	**-80.592929**	**0.0061**	**-**	**99**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-66**
65	**W-L39**	**NRPWW**	**PEM**	**Lewis**	**38.986897**	**-80.601380**	**0.0071**	**-**	**34**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-68**
66	S-I63	RPW	R2UB1	Lewis	38.970163	-80.592886	0.0189	-	92	-	ATWS	Temporary	-	Field	2-71
66	S-I63	RPW	R2UB1	Lewis	38.969369	-80.593138	0.0294	-	474	-	Pipeline ROW	Temporary	-	Field	2-71
66	S-I63	RPW	R2UB1	Lewis	38.969290	-80.593203	0.0095	-	46	-	Permanent Access Road	Temporary	-	Field	2-71
66	S-I63	RPW	R2UB1	Lewis	38.969239	-80.593244	0.0092	-	44	-	Temporary Access Road	Temporary	-	Field	2-71
66	**S-I63 Total**		**-**	**-**	**-**	**-**	**0.0670**	**-**	**656**	**-**	**-**	**-**	**-**	**Field**	
67	**W-I15**	**RPWWN**	**PEM**	**Lewis**	**38.968609**	**-80.592042**	**0.0631**	**-**	**1018**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-71**
68	**W-I16**	**NRPWW**	**PEM**	**Lewis**	**38.964758**	**-80.590881**	**0.0299**	**-**	**483**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-72**
69	**W-I21**	**ISOLATE**	**PEM**	**Lewis**	**38.964195**	**-80.590961**	**0.0584**	**-**	**283**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-72**
70	**W-I20**	**NRPWW**	**PEM**	**Lewis**	**38.962362**	**-80.590607**	**0.0113**	**-**	**55**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-72**
71	**W-I17**	**ISOLATE**	**PEM**	**Lewis**	**38.962126**	**-80.590741**	**0.0017**	**-**	**8**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-72**
72	**W-UU7**	**NRPWW**	**PEM**	**Lewis**	**38.933646**	**-80.585074**	**0.0038**	**-**	**19**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-78**
73	**W-H103**	**RPWWN**	**PEM**	**Lewis**	**38.933290**	**-80.584765**	**0.0138**	**-**	**223**	**-**	**Pipeline ROW/ATWS**	**Temporary**	**-**	**Field**	**2-78**
74	S-H160	RPW	R2UB2	Lewis	38.933179	-80.584562	0.0409	-	660	-	Pipeline ROW	Temporary	-	Field	2-78
74	S-L76	RPW	R2UB1	Lewis	38.929761	-80.575251	0.0115	-	56	-	Permanent Access Road	Temporary	-	Field	2-80
74	**S-H160 & S-L76 Total**		**-**	**-**	**-**	**-**	**0.0524**	**-**	**716**	**-**	**-**	**-**	**-**	**Field**	
75	**W-H102**	**RPWWN**	**PEM**	**Lewis**	**38.933168**	**-80.584990**	**0.0129**	**-**	**62**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-78**
76	**S-H159**	**NRPW**	**R6**	**Lewis**	**38.933155**	**-80.585092**	**0.0053**	**-**	**26**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-78**
77	**W-H104**	**RPWWN**	**PEM**	**Lewis**	**38.933071**	**-80.585385**	**0.0203**	**-**	**98**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-78**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
78	**W-IJ39**	**RPWWN**	**PEM**	**Lewis**	**38.932381**	**-80.587400**	**0.0842**	**-**	**407**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-78**
79	W-H107	RPWWD	PEM	Lewis	38.932901	-80.584200	0.0284	-	138	-	Pipeline ROW	Temporary	-	Field	2-78
79	S-H158/H161	RPW	R4SB5	Lewis	38.932002	-80.583184	0.0054	-	26	-	Pipeline ROW	Temporary	-	Field	2-78
79	**S-H158/H-616 & W-H107 Total**		**-**	**-**	**-**	**-**	**0.0338**	**-**	**164**	**-**	**-**	**-**	**-**	**Field**	
80	W-H98	NRPWW	PEM	Lewis	38.925976	-80.578373	-	0.0331	-	160	Permanent Access Road	Permanent	Kincheloe	Field	2-79
80	W-H98	NRPWW	PEM	Lewis	38.925868	-80.578367	0.0032	-	15	-	Temporary Access Road	Temporary	-	Field	2-79
80	**W-H98 Total**		**-**	**-**	**-**	**-**	**0.0032**	**0.0331**	**15**	**160**	**-**	**-**	**-**	**Field**	
81	**S-H153**	**RPW**	**R3UB2**	**Lewis**	**38.922846**	**-80.579227**	**0.0262**	**-**	**423**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-81**
82	**S-H152**	**NRPW**	**R6**	**Lewis**	**38.922565**	**-80.579100**	**0.0011**	**-**	**5**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-81**
83	W-UU8	RPWWD	PEM	Lewis	38.921791	-80.569178	0.1477	-	715	-	Temporary Access Road/ATWS	Temporary	-	Field	2-84
83	W-L36	RPWWD	PEM	Lewis	38.921541	-80.568772	0.0566	-	274	-	Temporary Access Road/ATWS	Temporary	-	Field	2-84
83	**W-UU8 & W-L36 Total**		**-**	**-**	**-**	**-**	**0.2043**	**-**	**989**	**-**	**-**	**-**	**-**	**Field**	
84	**W-WX6**	**RPWWD**	**PEM**	**Lewis**	**38.919959**	**-80.571769**	**0.0111**	**-**	**54**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-83**
85	**S-H145**	**RPW**	**R3UB1**	**Lewis**	**38.918986**	**-80.573838**	**0.0313**	**-**	**505**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-83**
86	**S-H166**	**NRPW**	**R6**	**Lewis**	**38.918893**	**-80.573461**	**0.0026**	**-**	**13**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-83**
87	**W-H108**	**RPWWN**	**PEM**	**Lewis**	**38.918766**	**-80.573564**	**0.0261**	**-**	**422**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-83**
88	**S-H165**	**NRPW**	**R6**	**Lewis**	**38.918602**	**-80.573256**	**0.0198**	**-**	**320**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-83**
89	**S-H167**	**NRPW**	**R6**	**Lewis**	**38.918489**	**-80.573480**	**0.0025**	**-**	**12**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-83**
90	**S-H163**	**RPW**	**R4SB4**	**Lewis**	**38.916385**	**-80.571676**	**0.0193**	**-**	**93**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-83**
91	**S-H144**	**NRPW**	**R6**	**Lewis**	**38.916132**	**-80.571681**	**0.0104**	**-**	**168**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-83**
92	TTWV-S-216	NRPW	R6	Lewis	38.914056	-80.572045	0.0076	-	122	-	Pipeline ROW/ATWS	Temporary	-	Desktop	2-85
92	W-H96	RPWWD	PEM	Lewis	38.913939	-80.571910	0.0039	-	19	-	Pipeline ROW	Temporary	-	Field	2-85
92	**TTWV-S-216 & W-H96**		**-**	**-**	**-**	**-**	**0.0115**	**-**	**141**	**-**	**-**	**-**	**-**	**Field**	
93	TTWV-S-208	RPW	R2	Lewis	38.913440	-80.571839	0.0161	-	259	-	Pipeline ROW	Temporary	-	Desktop	2-85
93	W-H95	RPWWD	PEM	Lewis	38.913311	-80.571953	0.0934	-	1507	-	Pipeline ROW	Temporary	-	Field	2-85
93	TTWV-S-209	RPW	R4	Lewis	38.913235	-80.571939	0.0138	-	222	-	Pipeline ROW	Temporary	-	Desktop	2-85
93	**TTWV-S-209, TTWV-S208 & W-H95 Total**		**-**	**-**	**-**	**-**	**0.1233**	**-**	**1988**	**-**	**-**	**-**	**-**	**Field**	
94	W-VV9	RPWWD	PEM	Lewis	38.904701	-80.563951	0.0534	-	259	-	Pipeline ROW	Temporary	-	Field	2-87
94	S-VV13	RPW	R2UB1	Lewis	38.903930	-80.563537	0.0540	-	870	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-89
94	S-VV13	RPW	R2UB1	Lewis	38.903318	-80.563794	0.0317	-	154	-	Temporary Access Road	Temporary	-	Field	2-89
94	W-CD18	RPWWD	PEM	Lewis	38.902751	-80.564644	0.0322	-	156	-	Temporary Access Road	Temporary	-	Field	2-87
94	W-CD19	RPWWD	PEM	Lewis	38.902618	-80.564694	0.0080	-	39	-	Temporary Access Road	Temporary	-	Field	2-87
94	S-VV13d	RPW	R2UB1	Lewis	38.902549	-80.564778	0.0210	-	102	-	Temporary Access Road	Temporary	-	Field	2-89
94	S-VV13c	RPW	R2UB1	Lewis	38.901736	-80.565501	0.0211	-	102	-	Temporary Access Road	Temporary	-	Field	2-89
94	S-VV13b	RPW	R2UB1	Lewis	38.898431	-80.568250	0.0143	-	69	-	Temporary Access Road	Temporary	-	Field	2-89
94	W-CD20	RPWWD	PEM	Lewis	38.901264	-80.566126	0.0059	-	29	-	Temporary Access Road	Temporary	-	Field	2-89
94	W-CD23	RPWWD	PEM	Lewis	38.898699	-80.568306	0.0349	-	169	-	Temporary Access Road	Temporary	-	Field	2-89
94	W-CD24	RPWWD	PEM	Lewis	38.898648	-80.568238	0.0094	-	45	-	Temporary Access Road	Temporary	-	Field	2-89

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
94	**S-VV13, W-VV9, W-CD18, W-CD19, W-CD20, W-CD23, W-CD24 Total**		**-**	**-**	**-**	**-**	**0.2859**	**-**	**1994**	**-**	**-**	**-**	**-**	**Field**	
95	S-CD16	RPW	R4SB5	Lewis	38.904135	-80.563719	0.0388	-	188	-	Pipeline ROW	Temporary	-	Field	2-87
95	W-CD17	RPWWD	PEM	Lewis	38.904074	-80.563709	0.0335	-	162	-	Pipeline ROW	Temporary	-	Field	2-87
95	**S-CD16 & W-CD17 Total**		**-**	**-**	**-**	**-**	**0.0723**	**-**	**350**	**-**	**-**	**-**	**-**	**Field**	
96	**W-CD16**	**RPWWN**	**PEM**	**Lewis**	**38.903722**	**-80.563418**	**0.0249**	**-**	**401**	**-**	**Pipeline ROW/Temporary Access Road/ ATWS**	**Temporary**	**-**	**Field**	**2-87**
97	S-VV12	RPW	R3UB1	Lewis	38.903575	-80.563308	0.0211	-	341	-	Pipeline ROW	Temporary	-	Field	2-87
97	W-VV8	RPWWD	PEM	Lewis	38.903514	-80.563258	0.0708	-	1143	-	Pipeline ROW	Temporary	-	Field	2-87
97	S-VV11	NRPW	R6	Lewis	38.903610	-80.563186	0.0007	-	3	-	Pipeline ROW	Temporary	-	Field	2-87
97	**S-VV12, S-VV11 & W-VV8 Total**		**-**	**-**	**-**	**-**	**0.0927**	**-**	**1487**	**-**	**-**	**-**	**-**	**Field**	
98	**W-CD21**	**RPWWN**	**PEM**	**Lewis**	**38.901049**	**-80.566582**	**0.0161**	**-**	**78**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-89**
99	S-VV20	NRPW	R6	Lewis	38.900233	-80.563491	0.0028	-	13	-	Temporary Access Road	Temporary	-	Field	2-89
99	S-VV20	NRPW	R6	Lewis	38.900178	-80.563184	0.0030	-	15	-	Temporary Access Road	Temporary	-	Field	2-89
99	**S-VV20 Total**		**-**	**-**	**-**	**-**	**0.0058**	**-**	**28**	**-**	**-**	**-**	**-**	**Field**	
100	W-CD22	RPWWD	PEM	Lewis	38.899690	-80.568061	0.0448	-	217	-	Temporary Access Road	Temporary	-	Field	2-89
100	S-CD17	RPW	R4SB5	Lewis	38.899594	-80.568144	0.0152	-	73	-	Temporary Access Road	Temporary	-	Field	2-89
100	**W-CD22 & S-CD17**		**-**	**-**	**-**	**-**	**0.0600**	**-**	**290**	**-**	**-**	**-**	**-**	**Field**	
101	**S-VV19**	**NRPW**	**R6**	**Lewis**	**38.899505**	**-80.563925**	**0.0043**	**-**	**21**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-89**
102	**W-CD36**	**RPWWN**	**PEM**	**Lewis**	**38.898177**	**-80.568287**	**0.0049**	**-**	**24**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-89**
103	**W-CD25**	**RPWWN**	**PEM**	**Lewis**	**38.898021**	**-80.568159**	**0.0100**	**-**	**48**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-89**
104	**W-CD26**	**RPWWN**	**PEM**	**Lewis**	**38.897805**	**-80.568155**	**0.0114**	**-**	**55**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-89**
105	**W-VV10**	**NRPWW**	**PEM**	**Lewis**	**38.897282**	**-80.567014**	**0.0091**	**-**	**44**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-89**
106	S-VV16	NRPW	R6	Lewis	38.896271	-80.566551	0.0202	-	98	-	Temporary Access Road	Temporary	-	Field	2-89
106	W-CD27	RPWWD	PEM	Lewis	38.895449	-80.566532	0.0025	-	12	-	Temporary Access Road	Temporary	-	Field	2-90
106	**S-VV16 & W-CD27 Total**		**-**	**-**	**-**	**-**	**0.0227**	**-**	**110**	**-**	**-**	**-**	**-**	**Field**	
107	S-CD20	RPW	R4SB3	Lewis	38.893770	-80.565983	0.0607	-	294	-	Temporary Access Road	Temporary	-	Field	2-90
107	W-CD28	RPWWD	PEM	Lewis	38.893740	-80.566012	0.0950	-	460	-	Temporary Access Road	Temporary	-	Field	2-90
107	**S-CD20 & W-CD28 Total**		**-**	**-**	**-**	**-**	**0.1557**	**-**	**754**	**-**	**-**	**-**	**-**	**Field**	
108	**W-CD33**	**RPWWN**	**PEM**	**Lewis**	**38.893519**	**-80.566006**	**0.0120**	**-**	**58**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-90**
109	**W-UV17**	**RPWWN**	**PFO**	**Lewis**	**38.893199**	**-80.556196**	**-**	**0.0055†**	**27†**	**-**	**Pipeline ROW**	**Temporary**	**Kincheloe**	**Field**	**2-91**
110	**S-UV11**	**RPW**	**R2UB1**	**Lewis**	**38.893014**	**-80.556192**	**0.0523**	**-**	**844**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-91**
111	**W-ST16**	**RPWWN**	**PEM**	**Lewis**	**38.892534**	**-80.556680**	**0.0711**	**-**	**344**	**-**	**Anode Bed**	**Temporary**	**-**	**Field**	**2-91**
112	W-VV11	Isolate	PEM	Lewis	38.890612	-80.554981	-	0.0236	-	114	Permanent Access Road	Permanent	Kincheloe	Field	2-91

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
112	W-VV11	Isolate	PEM	Lewis	38.890576	-80.554852	0.0010	-	5	-	Temporary Access Road	Temporary	-	Field	2-91
112	**W-VV11 Total**		**-**	**-**	**-**	**-**	**0.0010**	**0.0236**	**5**	**114**	**-**	**-**	**-**	**Field**	
113	S-VV22	NRPW	R6	Lewis	38.890504	-80.550970	0.0006	-	3	-	Temporary Access Road	Temporary	-	Field	2-91
113	S-VV22	NRPW	R6	Lewis	38.890435	-80.550982	-	0.0018	-	6	Permanent Access Road	Permanent	Kincheloe	Field	2-91
113	S-VV22	NRPW	R6	Lewis	38.890411	-80.550986	0.0005	-	3	-	Temporary Access Road	Temporary	-	Field	2-91
113	**S-VV22 Total**		**-**	**-**	**-**	**-**	**0.0011**	**0.0018**	**6**	**6**	**-**	**-**	**-**	**Field**	
114	W-VV12	NRPWW	PEM	Lewis	38.890309	-80.553784	0.0070	-	34	-	Temporary Access Road	Temporary	-	Field	2-91
114	W-VV12	NRPWW	PEM	Lewis	38.890278	-80.553822	-	0.0207	-	100	Permanent Access Road	Permanent	Kincheloe	Field	2-91
114	**W-VV12 Total**		**-**	**-**	**-**	**-**	**0.0070**	**0.0207**	**34**	**100**	**-**	**-**	**-**	**Field**	
115	S-VV21	NRPW	R6	Lewis	38.890236	-80.553817	-	0.0007	-	2	Permanent Access Road	Permanent	Kincheloe	Field	2-91
115	S-VV21	NRPW	R6	Lewis	38.890221	-80.553817	0.0005	-	3	-	Temporary Access Road	Temporary	-	Field	2-91
115	**S-VV21 Total**		**-**	**-**	**-**	**-**	**0.0005**	**0.0007**	**3**	**2**	**-**	**-**	**-**	**Field**	
116	S-L61	RPW	R4SB3	Lewis	38.880040	-80.563579	0.0065	-	32	-	Permanent Access Road	Temporary	-	Field	2-94
116	S-L61	RPW	R4SB3	Lewis	38.879034	-80.564307	0.0069	-	34	-	Temporary Access Road	Temporary	-	Field	2-94
116	**S-L61 Total**		**-**	**-**	**-**	**-**	**0.0134**	**-**	**66**	**-**	**-**	**-**	**-**	Field	
117	TTWV-S-132	RPW	R4	Lewis	38.864085	-80.525859	0.0078	-	38	-	ATWS	Temporary	-	Desktop	2-98
118	S-VV9	RPW	R3UB1	Lewis	38.863254	-80.525763	0.0183	-	296	-	Pipeline ROW	Temporary	-	Field	2-98
118	W-VV4-PEM	RPWWD	PEM	Lewis	38.863280	-80.525705	0.0082	-	133	-	Pipeline ROW	Temporary	-	Field	2-101
118	W-VV4-PFO	RPWWD	PFO	Lewis	38.863238	-80.525813	-	0.0954†	462†	-	Pipeline ROW	Temporary	Kincheloe	Field	2-101
118	**S-VV9 & W-VV4 Total**		**-**	**-**	**-**	**-**	**0.0265**	**0.0954**	**891**	**-**	**-**	**-**	**-**	**Field**	
119	S-VV2	RPW	R5UB1	Braxton	38.862730	-80.525128	0.0412	-	664	-	Pipeline ROW	Temporary	-	Field	2-101
119	W-VV3-PEM	RPWWD	PEM	Lewis	38.862795	-80.525190	0.0447	-	721	-	Pipeline ROW	Temporary	-	Field	2-101
119	W-VV3-PFO	RPWWD	PFO	Braxton	38.862691	-80.525163	-	0.0160†	259†	-	Pipeline ROW	Temporary	Kincheloe	Field	2-101
119	S-VV3	NRPW	R6	Braxton	38.862706	-80.525247	0.0032	-	16	-	Pipeline ROW	Temporary	-	Field	2-101
119	**S-VV2 & W-VV3 Total**		**-**	**-**	**-**	**-**	**0.0891**	**0.0160**	**1660**	**-**	**-**	**-**	**-**	**Field**	
120	**W-UU9**	**NRPWW**	**PEM**	**Lewis**	**38.857677**	**-80.532592**	**0.0005**	**-**	**2**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-99**
121	S-OP4	RPW	R6	Braxton	38.843155	-80.517643	0.0004	-	2	-	Temporary Access Road	Temporary	-	Field	2-104
121	S-OP4	RPW	R6	Braxton	38.843150	-80.517662	-	0.0014	-	5	Permanent Access Road	Permanent	Kincheloe	Field	2-104
121	S-OP4	RPW	R6	Braxton	38.843121	-80.517772	0.0004	-	2	-	Temporary Access Road	Temporary	-	Field	2-104
121	**S-OP4 Total**		**-**	**-**	**-**	**-**	**0.0008**	**0.0014**	**4**	**5**	**-**	**-**	**-**	**Field**	
122	**S-L51**	**RPW**	**R2UB1**	**Braxton**	**38.839355**	**-80.519693**	**0.0472**	**-**	**761**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-104**
123	**S-J37**	**RPW**	**R4SB3**	**Braxton**	**38.839133**	**-80.519716**	**0.0061**	**-**	**98**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-105**
124	**W-L33**	**NRPWW**	**PEM**	**Braxton**	**38.828587**	**-80.525834**	**0.0205**	**-**	**99**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-108**
125	**S-L60**	**RPW**	**R2UB1**	**Braxton**	**38.824034**	**-80.524988**	**0.0520**	**-**	**838**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-108**
126	**S-LL1**	**RPW**	**R2UB1**	**Braxton**	**38.823595**	**-80.525342**	**0.0607**	**-**	**980**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-108**
127	**W-IJ25**	**RPWWN**	**PEM**	**Braxton**	**38.810321**	**-80.540558**	**0.0015**	**-**	**7**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-111**
128	**S-IJ28**	**RPW**	**R3RB1**	**Braxton**	**38.810203**	**-80.550597**	**-**	**0.0052**	**-**	**17**	**Permanent Access Road**	**Permanent**	**Kincheloe**	**Field**	**2-112**
129	S-IJ31	RPW	R4SB3	Braxton	38.810139	-80.540925	0.0021	-	10	-	Temporary Access Road	Temporary	-	Field	2-111
129	S-IJ31	RPW	R4SB3	Braxton	38.810006	-80.540995	-	0.0079	-	39	Permanent Access Road	Permanent	Kincheloe	Field	2-111
129	S-IJ31	RPW	R4SB3	Braxton	38.809980	-80.541009	0.0022	-	11	-	Temporary Access Road	Temporary	-	Field	2-111

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
129	S-IJ31-Braid	NRPW	R6	Braxton	38.809757	-80.541302	0.0021	-	10	-	Temporary Access Road	Temporary	-	Field	2-111
129	S-IJ31-Braid	NRPW	R6	Braxton	38.809680	-80.541408	-	0.0037	-	21	Permanent Access Road	Permanent	Kincheloe	Field	2-111
129	**S-IJ31/IJ31-Braid Total**		**-**	**-**	**-**	**-**	**0.0064**	**0.0115**	**31**	**60**	**-**	**-**	**-**	**Field**	
130	S-IJ27	RPW	R2UB1	Braxton	38.809628	-80.541520	0.0094	-	46	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.809619	-80.541463	-	0.0117	-	57	Permanent Access Road	Permanent	Kincheloe	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.809608	-80.541406	0.0093	-	45	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.809102	-80.542914	0.0198	-	96	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808958	-80.543128	-	0.0538	-	261	Permanent Access Road	Permanent	Kincheloe	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808835	-80.543309	0.0093	-	45	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808636	-80.547362	0.0121	-	58	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808539	-80.547202	-	0.0223	-	108	Permanent Access Road	Permanent	Kincheloe	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808519	-80.547171	0.0180	-	87	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808316	-80.544286	0.0206	-	100	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808297	-80.546907	0.0120	-	58	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808242	-80.546896	-	0.0136	-	66	Permanent Access Road	Permanent	Kincheloe	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808197	-80.544673	-	0.1034	-	500	Permanent Access Road	Permanent	Kincheloe	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808190	-80.546886	0.0104	-	50	-	Temporary Access Road	Temporary	-	Field	2-112
130	S-IJ27	RPW	R2UB1	Braxton	38.808024	-80.545026	0.0144	-	70	-	Temporary Access Road	Temporary	-	Field	2-112
130	**S-IJ27 Total**		**-**	**-**	**-**	**-**	**0.1353**	**0.2048**	**655**	**992**	**-**	**-**	**-**	**Field**	
131	S-IJ32	NRPW	R6	Braxton	38.809467	-80.537419	0.0009	-	4	-	Temporary Access Road	Temporary	-	Field	2-111
131	S-IJ32	NRPW	R6	Braxton	38.809457	-80.537428	-	0.0030	-	10	Permanent Access Road	Permanent	Kincheloe	Field	2-111
131	S-IJ32	NRPW	R6	Braxton	38.809384	-80.537473	0.0010	-	5	-	Temporary Access Road	Temporary	-	Field	2-111
131	**S-IJ32 Total**		**-**	**-**	**-**	**-**	**0.0019**	**0.0030**	**9**	**10**	**-**	**-**	**-**	**Field**	
132	W-IJ26	RPWWN	PEM	Braxton	38.809174	-80.542584	-	0.0039	-	19	Permanent Access Road	Permanent	Kincheloe	Field	2-112
132	W-IJ26	RPWWN	PEM	Braxton	38.809149	-80.542548	0.0024	-	11	-	Temporary Access Road	Temporary	-	Field	2-112
132	**W-IJ26 Total**		**-**	**-**	**-**	**-**	**0.0024**	**0.0039**	**11**	**19**	**-**	**-**	**-**	**Field**	
133	**S-IJ30**	**NRPW**	**R6**	**Braxton**	**38.808309**	**-80.543963**	**0.0003**	**-**	**2**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-112**
134	**W-EF9**	**RPWWN**	**PFO**	**Braxton**	**38.808212**	**-80.544270**	**-**	**0.0201†**	**97†**	**-**	**Temporary Access Road**	**Temporary**	**Kincheloe**	**Field**	**2-112**
135	**S-QR30**	**RPW**	**R3UB1**	**Braxton**	**38.807940**	**-80.535715**	**0.0274**	**-**	**442**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-111**
136	**W-EF10**	**ISOLATE**	**PEM**	**Braxton**	**38.805312**	**-80.537286**	**0.0729**	**-**	**353**	**-**	**Pipeline ROW/Temporary Access Road**	**Temporary**	**-**	**Field**	**2-111**
137	**S-JJ1**	**RPW**	**R3UB2**	**Braxton**	**38.786930**	**-80.530028**	**0.0265**	**-**	**427**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-115**
138	**S-I60**	**RPW**	**R4SB4**	**Braxton**	**38.781068**	**-80.524577**	**0.0069**	**-**	**111**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-117**
139	S-J70	RPW	R2UB1	Braxton	38.780824	-80.527848	0.0277	-	134	-	Temporary Access Road	Temporary	-	Field	2-117
139	S-J70	RPW	R2UB1	Braxton	38.779616	-80.526217	0.0458	-	222	-	Temporary Access Road	Temporary	-	Field	2-117

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
139	S-J70	RPW	R2UB1	Braxton	38.778955	-80.525862	0.0530	-	854	-	Pipeline ROW	Temporary	-	Field	2-117
139	**S-J70 Total**		-	-	-	-	**0.1265**	-	**1210**	-	-	-	-	**Field**	
140	**W-I12**	**RPWWD**	**PEM**	**Braxton**	**38.779865**	**-80.524136**	**0.0002**	-	**1**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-117**
141	**W-K25**	**NRPWW**	**PEM**	**Braxton**	**38.775374**	**-80.526492**	**0.0549**	-	**886**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-117**
142	**W-KK4**	**RPWWN**	**PEM**	**Braxton**	**38.768899**	**-80.514468**	**0.0215**	-	**104**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-119**
143	S-K34	RPW	R4SB3	Braxton	38.766123	-80.520308	0.0086	-	139	-	Pipeline ROW	Temporary	-	Field	2-121
143	W-K24	RPWWD	PSS	Braxton	38.766065	-80.520414	-	0.0074†	36†	-	Pipeline ROW	Temporary	Kincheloe	Field	2-121
143	S-K33	NRPW	R6	Braxton	38.765714	-80.520032	0.0037	-	60	-	Pipeline ROW	Temporary	-	Field	2-121
143	S-K33	NRPW	R6	Braxton	38.765534	-80.519889	0.0119	-	192	-	ATWS	Temporary	-	Field	2-121
143	**S-K34, S-K33 & W-K24 Total**		-	-	-	-	**0.0243**	**0.0074**	**427**	-	-	-	-	**Field**	
144	**S-H122**	**RPW**	**R4SB4**	**Braxton**	**38.762850**	**-80.514650**	**0.0016**	-	**8**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-121**
145	S-H123	RPW	R3UB2	Braxton	38.761197	-80.514887	0.0113	-	183	-	Pipeline ROW	Temporary	-	Field	2-122
145	S-H123	RPW	R3UB2	Braxton	38.760426	-80.513624	0.0113	-	182	-	Pipeline ROW	Temporary	-	Field	2-122
145	W-H90	RPWWD	PEM	Braxton	38.760419	-80.513602	0.0388	-	627	-	Pipeline ROW	Temporary	-	Field	2-122
145	**S-H123 & W-H90 Total**		-	-	-	-	**0.0614**	-	**992**	-	-	-	-	**Field**	
146	**S-H124**	**RPW**	**R3UB2**	**Braxton**	**38.761100**	**-80.514934**	**0.0036**	-	**17**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-122**
147	**S-H125**	**RPW**	**R3UB2**	**Braxton**	**38.760442**	**-80.513764**	**0.0004**	-	**2**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-122**
148	**S-H127**	**RPW**	**R4SB3**	**Braxton**	**38.755029**	**-80.513692**	**0.0076**	-	**122**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-123**
149	W-H93	RPWWD	PEM	Braxton	38.753968	-80.515672	0.0133	-	64	-	Temporary Access Road/ATWS	Temporary	-	Field	2-123
149	S-L50	RPW	R6	Braxton	38.753948	-80.515649	0.0116	-	56	-	ATWS/Temporary Access Road	Temporary	-	Field	2-123
149	S-L50	RPW	R6	Braxton	38.751904	-80.514702	0.0039	-	19	-	Pipeline ROW	Temporary	-	Field	2-123
149	**S-L50 & W-H93 Total**		-	-	-	-	**0.0288**	-	**139**	-	-	-	-	**Field**	
150	**W-H92**	**RPWWN**	**PEM**	**Braxton**	**38.753114**	**-80.512182**	**0.0113**	-	**55**	-	**Temporary Access Road/ATWS**	**Temporary**	-	**Field**	**2-123**
151	S-L49	RPW	R2UB1	Braxton	38.751592	-80.514533	0.0253	-	122	-	Temporary Access Road	Temporary	-	Field	2-123
151	S-L49	RPW	R2UB1	Braxton	38.751537	-80.514789	0.0208	-	100	-	Pipeline ROW	Temporary	-	Field	2-123
151	**S-L49 Total**		-	-	-	-	**0.0461**	-	**223**	-	-	-	-	**Field**	
152	S-H132	RPW	R2UB2	Braxton	38.751499	-80.514919	0.3336	-	5383	-	Pipeline ROW	Temporary	-	Field	2-123
152	S-L47	RPW	R2UB1	Braxton	38.744087	-80.509745	0.1622	-	785	-	Temporary Access Road	Temporary	-	Field	2-127
152	S-H132b-Braid	NRPW	R6	Braxton	38.743164	-80.527213	0.0047	-	23	-	Temporary Access Road	Temporary	-	Field	2-125
152	S-H132b	RPW	R2UB1	Braxton	38.743033	-80.527236	0.2085	-	1009	-	Temporary Access Road	Temporary	-	Field	2-125
152	**S-H132 & S-L47 Total**		-	-	-	-	**0.7091**	-	**7200**	-	-	-	-	**Field**	
153	**W-QR13**	**RPWWN**	**PEM**	**Braxton**	**38.751445**	**-80.516905**	**0.0618**	-	**299**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-123**
154	**W-H94**	**RPWWN**	**PEM**	**Braxton**	**38.750690**	**-80.514837**	**0.0091**	-	**44**	-	**Pipeline ROW/Temporary Access Road**	**Temporary**	-	**Field**	**2-123**
155	**W-QR12**	**RPWWN**	**PEM**	**Braxton**	**38.749364**	**-80.522081**	**0.0881**	-	**426**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-124**
156	**S-H129**	**RPW**	**R4SB5**	**Braxton**	**38.749321**	**-80.514337**	**0.0037**	-	**60**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-126**
157	**S-H131**	**NRPW**	**R6**	**Braxton**	**38.749215**	**-80.514370**	**0.0030**	-	**48**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-126**
158	**S-H130**	**NRPW**	**R6**	**Braxton**	**38.748751**	**-80.515247**	**0.0011**	-	**5**	-	**Pipeline ROW**	**Temporary**	-	**Field**	**2-126**
159	**W-QR11**	**RPWWN**	**PEM**	**Braxton**	**38.747846**	**-80.521602**	**0.0559**	-	**271**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-124**
160	**S-L48**	**RPW**	**R2UB1**	**Braxton**	**38.746690**	**-80.510952**	**0.0203**	-	**98**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-126**
161	**S-QR26**	**RPW**	**R3UB1**	**Braxton**	**38.745016**	**-80.520304**	**0.0186**	-	**90**	-	**Temporary Access Road**	**Temporary**	-	**Field**	**2-125**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
162	S-QR23	RPW	R4SB3	Braxton	38.743946	-80.521742	0.0040	-	19	-	Temporary Access Road	Temporary	-	Field	2-125
162	S-QR23	RPW	R4SB3	Braxton	38.743737	-80.522117	0.0011	-	5	-	Temporary Access Road	Temporary	-	Field	2-125
162	**S-QR23 Total**		**-**	**-**	**-**	**-**	**0.0051**	**-**	**24**	**-**	**-**	**-**	**-**	**Field**	
163	**S-QR25**	**NRPW**	**R6**	**Braxton**	**38.743848**	**-80.521838**	**0.0064**	**-**	**31**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-125**
164	**S-QR24**	**RPW**	**R4SB5**	**Braxton**	**38.743495**	**-80.522793**	**0.0091**	**-**	**44**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-125**
165	S-H117	RPW	R2UB1	Braxton	38.731388	-80.505907	0.0195	-	94	-	Temporary Access Road	Temporary	-	Field	2-131
165	S-H117	RPW	R2UB1	Braxton	38.731020	-80.506280	0.0283	-	456	-	Pipeline ROW	Temporary	-	Field	2-131
165	**S-H117 Total**		**-**	**-**	**-**	**-**	**0.0478**	**-**	**550**	**-**	**-**	**-**	**-**	**Field**	
166	**W-H89**	**RPWWD**	**PEM**	**Braxton**	**38.728893**	**-80.506315**	**0.0065**	**-**	**32**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-131**
167	S-AA12-EPH	NRPW	R6	Braxton	38.723574	-80.502080	0.0014	-	7	-	Station	Temporary	-	Field	2-132
167	S-AA15	RPW	R4SB5	Braxton	38.722646	-80.505148	-	0.0054	-	26	Station	Permanent	Kincheloe	Field	2-113
167	S-AA15	RPW	R4SB5	Braxton	38.722537	-80.505181	0.0031	-	15	-	Station	Temporary	-	Field	2-113
167	**Harris Crossing S-AA15 & S-**		**-**	**-**	**-**	**-**	**0.0045**	**0.0054**	**22**	**26**	**-**	**-**	**-**	**Field**	
168	**S-L46**	**RPW**	**R3UB1**	**Braxton**	**38.721880**	**-80.499258**	**0.0267**	**-**	**431**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-133**
169	**S-L44**	**RPW**	**R3UB1**	**Braxton**	**38.716945**	**-80.494589**	**0.0185**	**-**	**298**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-136**
170	**S-I53**	**NRPW**	**R6**	**Braxton**	**38.713940**	**-80.491855**	**0.0004**	**-**	**2**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-136**
171	**S-UV13**	**NRPW**	**R6**	**Braxton**	**38.709858**	**-80.664829**	**0.0101**	**-**	**49**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-468**
172	**S-UV14**	**NRPW**	**R6**	**Braxton**	**38.709425**	**-80.664231**	**0.0179**	**-**	**86**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-468**
173	**W-I11b**	**ISOLATE**	**PEM**	**Braxton**	**38.708869**	**-80.489369**	**0.0098**	**-**	**47**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-137**
174	**S-UV15**	**RPW**	**R4SB3**	**Braxton**	**38.708821**	**-80.664122**	**0.0083**	**-**	**40**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-468**
175	**S-I57**	**RPW**	**R3UB1**	**Braxton**	**38.697413**	**-80.489560**	**0.0528**	**-**	**852**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-139**
176	**S-A96/A103**	**NRPW**	**R6**	**Webster**	**38.688706**	**-80.478590**	**0.0114**	**-**	**185**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-141**
177	**S-A97**	**RPW**	**R4SB3**	**Webster**	**38.688329**	**-80.478406**	**0.0229**	**-**	**370**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-141**
178	**S-A99**	**NRPW**	**R6**	**Webster**	**38.688120**	**-80.478371**	**0.0039**	**-**	**19**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-141**
179	**S-A98**	**RPW**	**R4SB4**	**Webster**	**38.687906**	**-80.478024**	**0.0629**	**-**	**1015**	**-**	**Pipeline ROW/Temporary Access Road**	**Temporary**	**-**	**Field**	**2-141**
180	**S-A101**	**NRPW**	**R6**	**Webster**	**38.686679**	**-80.479058**	**0.0032**	**-**	**16**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-141**
181	**S-A102**	**NRPW**	**R6**	**Webster**	**38.685865**	**-80.479868**	**0.0098**	**-**	**47**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-141**
182	**S-E83a**	**RPW**	**R4SB4**	**Webster**	**38.677346**	**-80.475023**	**0.0011**	**-**	**5**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-143**
183	**S-A100**	**RPW**	**R2UB1**	**Webster**	**38.676643**	**-80.477940**	**0.1469**	**-**	**2370**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-143**
184	**S-E78/E82/R1**	**RPW**	**R4SB3**	**Webster**	**38.676223**	**-80.477663**	**0.0094**	**-**	**151**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-143**
185	**S-E76**	**NRPW**	**R6**	**Webster**	**38.674988**	**-80.477360**	**0.0035**	**-**	**57**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-143**
186	**S-KK1**	**NRPW**	**R6**	**Webster**	**38.672719**	**-80.476227**	**0.0005**	**-**	**3**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-143**
187	**S-KK2**	**NRPW**	**R6**	**Webster**	**38.672226**	**-80.476315**	**0.0052**	**-**	**84**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-143**
188	**S-KK3b**	**NRPW**	**R6**	**Webster**	**38.672110**	**-80.476515**	**0.0069**	**-**	**111**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-144**
189	**S-KK4b**	**NRPW**	**R6**	**Webster**	**38.671976**	**-80.476825**	**0.0061**	**-**	**98**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-144**
190	**S-E74**	**RPW**	**R3UB2**	**Webster**	**38.671971**	**-80.476990**	**0.0062**	**-**	**30**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-144**
191	S-E72-Braid	RPW	R3RB2	Webster	38.667986	-80.478369	0.0030	-	14	-	Temporary Access Road	Temporary	-	Field	2-144
191	S-E72	RPW	R3RB2	Webster	38.667954	-80.478366	0.0041	-	20	-	Temporary Access Road	Temporary	-	Field	2-144
191	**S-E72 Total**		**-**	**-**	**-**	**-**	**0.0071**	**-**	**34**	**-**	**-**	**-**	**-**	**Field**	
192	**S-F40**	**RPW**	**R2RB1**	**Webster**	**38.667943**	**-80.479023**	**0.0499**	**-**	**805**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-144**
193	S-S1	NRPW	R6	Webster	38.667251	-80.480186	0.0020	-	9	-	Temporary Access Road	Temporary	-	Field	2-144
193	S-S1	NRPW	R6	Webster	38.667020	-80.478624	0.0010	-	5	-	Pipeline ROW	Temporary	-	Field	2-144
193	W-R2	RPWWD	PEM	Webster	38.667178	-80.480225	0.0620	-	300	-	Temporary Access Road	Temporary	-	Field	2-144

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
193	W-KK3	RPWWD	PEM	Webster	38.667027	-80.478547	0.0222	-	357	-	Pipeline ROW	Temporary	-	Field	2-144
193	**S-S1, W-R2 &W-KK3 Total**		**-**	**-**	**-**	**-**	**0.0872**	**-**	**671**	**-**	**-**	**-**	**-**	**Field**	
194	**W-R3**	**NRPWW**	**PEM**	**Webster**	**38.666869**	**-80.480889**	**0.0155**	**-**	**75**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-144**
195	**S-S2**	**RPW**	**R4SB3**	**Webster**	**38.666810**	**-80.481345**	**0.0037**	**-**	**18**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-147**
196	**S-S3**	**NRPW**	**R6**	**Webster**	**38.665757**	**-80.482481**	**0.0036**	**-**	**17**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-147**
197	**W-F45**	**RPWWN**	**PEM**	**Webster**	**38.664402**	**-80.478856**	**0.0022**	**-**	**11**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-145**
198	**S-S4**	**NRPW**	**R6**	**Webster**	**38.664389**	**-80.484709**	**0.0021**	**-**	**10**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-147**
199	**W-F46**	**RPWWN**	**PEM**	**Webster**	**38.664132**	**-80.479008**	**0.0039**	**-**	**19**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-145**
200	**W-R4**	**NRPWW**	**PEM**	**Webster**	**38.664021**	**-80.483434**	**0.0432**	**-**	**209**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-147**
201	**S-F43**	**RPW**	**R3UB1**	**Webster**	**38.663706**	**-80.478644**	**0.0232**	**-**	**375**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-145**
202	S-R5	RPW	R3UB1	Webster	38.652757	-80.495715	0.0083	-	40	-	ATWS/Temporary Access Road	Temporary	-	Field	2-149
202	S-R5	RPW	R3UB1	Webster	38.652689	-80.495898	0.0059	-	28	-	Permanent Access Road	Temporary	-	Field	2-149
202	**S-R5 Total**		**-**	**-**	**-**	**-**	**0.0142**	**-**	**68**	**-**	**-**	**-**	**-**	**Field**	
203	**S-E67**	**RPW**	**R2UB1**	**Webster**	**38.648021**	**-80.489704**	**0.1803**	**-**	**2910**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-151**
204	**S-B62**	**RPW**	**R2RB1**	**Webster**	**38.643910**	**-80.485213**	**0.0255**	**-**	**123**	**-**	**Permanent Access Road**	**Temporary**	**-**	**Field**	**2-160**
205	**W-B44**	**RPWWN**	**PEM**	**Webster**	**38.633084**	**-80.486943**	**0.0056**	**-**	**27**	**-**	**Permanent Access Road**	**Temporary**	**-**	**Field**	**2-159**
206	**W-B42**	**NRPWW**	**PEM**	**Webster**	**38.623424**	**-80.486240**	**0.0185**	**-**	**89**	**-**	**Permanent Access Road**	**Temporary**	**-**	**Field**	**2-158**
207	**S-E68**	**TNW**	**R2UB1**	**Webster**	**38.615060**	**-80.506121**	**0.6425**	**-**	**10366**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-163**
208	**S-E71**	**RPW**	**R4SB3**	**Webster**	**38.614405**	**-80.506004**	**0.0046**	**-**	**73**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-163**
209	S-H111	RPW	R4SB3	Webster	38.613367	-80.504620	0.0138	-	223	-	Pipeline ROW	Temporary	-	Field	2-163
209	S-H111	RPW	R4SB3	Webster	38.613341	-80.504620	0.0140	-	226	-	Pipeline ROW	Temporary	-	Field	2-163
209	**S-H111 Total**		**-**	**-**	**-**	**-**	**0.0278**	**-**	**449**	**-**	**-**	**-**	**-**	**Field**	
210	**S-H114**	**NRPW**	**R6**	**Webster**	**38.613259**	**-80.504243**	**0.0051**	**-**	**82**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-163**
211	**S-H112**	**RPW**	**R4SB4**	**Webster**	**38.613163**	**-80.504012**	**0.0032**	**-**	**51**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-163**
212	S-H113	RPW	R3RB2	Webster	38.612982	-80.503647	0.0203	-	327	-	Pipeline ROW	Temporary	-	Field	2-163
212	S-H113	RPW	R3RB2	Webster	38.612878	-80.503687	0.0026	-	42	-	Pipeline ROW	Temporary	-	Field	2-163
212	S-H113	RPW	R3RB2	Webster	38.612874	-80.503682	0.0026	-	41	-	Pipeline ROW	Temporary	-	Field	2-163
212	**S-H113 Total**		**-**	**-**	**-**	**-**	**0.0255**	**-**	**410**	**-**	**-**	**-**	**-**	**Field**	
213	**TTWV-S-214**	**RPW**	**R4**	**Webster**	**38.611039**	**-80.550604**	**0.0585**	**-**	**283**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-176**
214	**W-H75**	**RPWWN**	**PEM**	**Webster**	**38.607280**	**-80.504722**	**0.0108**	**-**	**174**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-164**
215	**W-H79**	**NRPWW**	**PEM**	**Webster**	**38.602069**	**-80.508493**	**0.0077**	**-**	**125**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-165**
216	**W-H81**	**ISOLATE**	**PEM**	**Webster**	**38.599491**	**-80.506376**	**0.0258**	**-**	**125**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-165**
217	**W-H82**	**ISOLATE**	**PEM**	**Webster**	**38.598415**	**-80.505238**	**0.0128**	**-**	**62**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-166**
218	**W-T5**	**RPWWD**	**PEM**	**Webster**	**38.591863**	**-80.526411**	**0.0166**	**-**	**80**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-172**
219	**W-H86**	**NRPWW**	**PEM**	**Webster**	**38.591803**	**-80.508481**	**0.0013**	**-**	**6**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-167**
220	**W-H83**	**NRPWW**	**PEM**	**Webster**	**38.591372**	**-80.508904**	**0.0177**	**-**	**86**	**-**	**Pipeline ROW/Temporary Access Road**	**Temporary**	**-**	**Field**	**2-167**
221	**S-H110**	**NRPW**	**R6**	**Webster**	**38.587200**	**-80.509634**	**0.0402**	**-**	**649**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-167**
222	**W-T4**	**NRPWW**	**PEM**	**Webster**	**38.586855**	**-80.518697**	**0.0403**	**-**	**195**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-169**
223	**W-H85**	**NRPWW**	**PEM**	**Webster**	**38.586644**	**-80.510350**	**0.0069**	**-**	**33**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-167**
224	W-A20-PFO	ISOLATE	PFO	Webster	38.566923	-80.529968	-	0.0725†	1169†	-	Pipeline ROW	Temporary	Beverly	Field	2-178
224	W-A20-PEM	ISOLATE	PEM	Webster	38.566910	-80.530098	0.0117	-	57	-	Pipeline ROW	Temporary	-	Field	2-178
224	**W-A20**		**-**	**-**	**-**	**-**	**0.0117**	**0.0725**	**1226**	**-**	**-**	**-**	**-**	**Field**	
225	W-KK2	ISOLATE	PEM	Webster	38.558192	-80.524167	0.0161	-	78	-	Temporary Access Road	Temporary	-	Field	2-184

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
225	W-KK2	ISOLATE	PEM	Webster	38.558182	-80.524141	-	0.0085	-	41	Permanent Access Road	Permanent	Beverly	Field	2-184
225	**W-KK2 Total**		**-**	**-**	**-**	**-**	**0.0161**	**0.0085**	**78**	**41**	**-**	**-**	**-**	**Field**	
226	W-H69	NRPWW	PEM	Webster	38.557523	-80.525222	0.0078	-	38	-	Temporary Access Road	Temporary	-	Field	2-184
226	W-H69	NRPWW	PEM	Webster	38.557502	-80.525163	-	0.0060	-	29	Permanent Access Road	Permanent	Beverly	Field	2-184
226	**W-H69 Total**		**-**	**-**	**-**	**-**	**0.0078**	**0.0060**	**38**	**29**	**-**	**-**	**-**	**Field**	
227	**W-H68**	**ISOLATE**	**PEM**	**Webster**	**38.557425**	**-80.525181**	**0.0002**	**-**	**1**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-184**
228	S-A83/A91	RPW	R3UB1	Webster	38.557293	-80.538966	0.0653	-	316	-	Temporary Access Road	Temporary	-	Field	2-181
228	S-A83/A91	RPW	R3UB1	Webster	38.557237	-80.541093	0.0283	-	137	-	Temporary Access Road	Temporary	-	Field	2-181
228	S-A83/A91	RPW	R3UB1	Webster	38.557064	-80.535592	0.0518	-	835	-	Pipeline ROW	Temporary	-	Field	2-181
228	W-A19	RPWWD	PEM	Webster	38.557156	-80.538578	0.0265	-	128	-	Temporary Access Road	Temporary	-	Field	2-181
228	**S-A83/A91 & W-A19 Total**		**-**	**-**	**-**	**-**	**0.1719**	**-**	**1416**	**-**	**-**	**-**	**-**	**Field**	
229	W-H70	ISOLATE	PEM	Webster	38.557097	-80.526293	-	0.0057	-	28	Permanent Access Road	Permanent	Beverly	Field	2-184
229	W-H70	ISOLATE	PEM	Webster	38.557075	-80.526280	0.0021	-	10	-	Temporary Access Road	Temporary	-	Field	2-184
229	**W-H70 Total**		**-**	**-**	**-**	**-**	**0.0021**	**0.0057**	**10**	**28**	**-**	**-**	**-**	**Field**	
230	**S-A89**	**RPW**	**R4SB5**	**Webster**	**38.556980**	**-80.537011**	**0.0063**	**-**	**30**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-181**
231	S-A92	NRPW	R6	Webster	38.556961	-80.536397	0.0411	-	199	-	Temporary Access Road	Temporary	-	Field	2-181
231	S-A92	NRPW	R6	Webster	38.556658	-80.535607	0.0175	-	282	-	Pipeline ROW	Temporary	-	Field	2-181
231	**S-A92 Total**		**-**	**-**	**-**	**-**	**0.0586**	**-**	**481**	**-**	**-**	**-**	**-**	**Field**	
232	**S-A88**	**RPW**	**R4SB3**	**Webster**	**38.556958**	**-80.537675**	**0.0142**	**-**	**69**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-181**
233	**S-A90**	**RPW**	**R4SB3**	**Webster**	**38.556951**	**-80.536556**	**0.0135**	**-**	**65**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-181**
234	**S-A86/A87**	**RPW**	**R4SB3**	**Webster**	**38.556948**	**-80.537406**	**0.0573**	**-**	**277**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-181**
235	S-A93	NRPW	R6	Webster	38.556823	-80.535751	0.0025	-	12	-	Temporary Access Road	Temporary	-	Field	2-181
235	S-A93	NRPW	R6	Webster	38.556682	-80.535572	0.0193	-	312	-	Pipeline ROW	Temporary	-	Field	2-181
235	**S-A93 Total**		**-**	**-**	**-**	**-**	**0.0218**	**-**	**324**	**-**	**-**	**-**	**-**	**Field**	
236	W-H71	ISOLATE	PEM	Webster	38.556481	-80.526853	0.0055	-	26	-	Temporary Access Road	Temporary	-	Field	2-184
236	W-H71	ISOLATE	PEM	Webster	38.556454	-80.526913	-	0.0205	-	99	Permanent Access Road	Permanent	Beverly	Field	2-184
236	**W-H71 Total**		**-**	**-**	**-**	**-**	**0.0055**	**0.0205**	**26**	**99**	**-**	**-**	**-**	**Field**	
237	**W-H72**	**ISOLATE**	**PEM**	**Webster**	**38.553783**	**-80.527760**	**-**	**0.0064**	**-**	**31**	**Permanent Access Road**	**Permanent**	**Beverly**	**Field**	**2-182**
238	**W-O17**	**ISOLATE**	**PEM**	**Webster**	**38.553578**	**-80.508257**	**0.0012**	**-**	**6**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-186**
239	W-H73	ISOLATE	PEM	Webster	38.553085	-80.528148	-	0.0061	-	29	Permanent Access Road	Permanent	Spanishburg	Field	2-182
239	W-H73	ISOLATE	PEM	Webster	38.553074	-80.528114	0.0020	-	10	-	Temporary Access Road	Temporary	-	Field	2-182
239	**W-H73 Total**		**-**	**-**	**-**	**-**	**0.0020**	**0.0061**	**10**	**29**	**-**	**-**	**-**	**Field**	
240	**W-H74**	**ISOLATE**	**PEM**	**Webster**	**38.552748**	**-80.533585**	**-**	**0.0115**	**-**	**56**	**Permanent Access Road**	**Permanent**	**Beverly**	**Field**	**2-182**
241	S-H108	RPW	R3UB1	Webster	38.549358	-80.539260	0.0251	-	405	-	Pipeline ROW	Temporary	-	Field	2-182
241	W-H67	RPWWD	PFO	Webster	38.549313	-80.539242	-	0.0908†	1465†	-	Pipeline ROW/Temporary Access Road	Temporary	Beverly	Field	2-182
241	**S-H108 & W-H67 Total**		**-**	**-**	**-**	**-**	**0.0251**	**0.0908**	**1870**	**-**	**-**	**-**	**-**	**Field**	

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
242	S-H105	RPW	R3UB2	Webster	38.548824	-80.539644	0.0083	-	135	-	Pipeline ROW	Temporary	-	Field	2-182
242	W-H66	RPWWD	PFO	Webster	38.548873	-80.539592	-	0.2496†	4026†	-	Pipeline ROW	Temporary	Beverly	Field	2-182
242	**S-H105 & W-H66 Total**		**-**	**-**	**-**	**-**	**0.0083**	**0.2496**	**4161**	**-**	**-**	**-**	**-**	**Field**	
243	S-H107	RPW	R4SB5	Webster	38.548467	-80.540073	0.0003	-	5	-	Pipeline ROW	Temporary	-	Field	2-182
243	S-H107	RPW	R4SB5	Webster	38.548463	-80.540050	-	0.0010	-	3	Permanent Access Road	Permanent	Indian Creek	Field	2-182
243	S-H107	RPW	R4SB5	Webster	38.548378	-80.539980	0.0031	-	50	-	Pipeline ROW	Temporary	-	Field	2-182
243	**S-H107 Total**		**-**	**-**	**-**	**-**	**0.0034**	**0.0010**	**55**	**3**	**-**	**-**	**-**	**Field**	
244	W-H64-PEM	RPWWD	PEM	Webster	38.548175	-80.540709	0.0276	-	133	-	Pipeline ROW	Temporary	-	Field	2-182
244	W-H64-PSS	RPWWD	PSS	Webster	38.548099	-80.540896	-	0.0422†	681†	-	Pipeline ROW	Temporary	Beverly	Field	2-182
244	W-H64-PEM-2	RPWWD	PEM	Webster	38.548058	-80.540847	0.0289	-	466	-	Pipeline ROW	Temporary	-	Field	2-182
244	**W-H64 Total**		**-**	**-**	**-**	**-**	**0.0565**	**0.0422**	**1280**	**-**	**-**	**-**	**-**	**Field**	
245	**S-H104**	**RPW**	**R2UB1**	**Webster**	**38.548121**	**-80.540431**	**0.0360**	**-**	**580**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-182**
246	S-H103	RPW	R4SB3	Webster	38.545817	-80.542972	0.0034	-	16	-	Pipeline ROW	Temporary	-	Field	2-194
246	W-H56	RPWWD	PEM	Webster	38.545807	-80.542983	0.0206	-	100	-	Pipeline ROW	Temporary	-	Field	2-194
246	**S-H103 & W-H56 Total**		**-**	**-**	**-**	**-**	**0.0240**	**-**	**116**	**-**	**-**	**-**	**-**	**Field**	
247	**W-O15**	**NRPWW**	**PEM**	**Webster**	**38.536021**	**-80.511990**	**0.0247**	**-**	**120**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-190**
248	W-O13	RPWWN	PEM	Webster	38.533730	-80.513482	0.0278	-	135	-	Temporary Access Road	Temporary	-	Field	2-190
248	W-O13	RPWWN	PEM	Webster	38.533655	-80.513682	-	0.0405	-	196	Permanent Access Road	Permanent	Spanishburg	Field	2-190
248	**W-O13 Total**		**-**	**-**	**-**	**-**	**0.0278**	**0.0405**	**135**	**196**	**-**	**-**	**-**	**Field**	
249	**W-H58**	**ISOLATE**	**PEM**	**Webster**	**38.523642**	**-80.546324**	**0.0299**	**-**	**145**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-198**
250	**W-H59-PEM**	**NRPWW**	**PEM**	**Webster**	**38.521027**	**-80.546343**	**0.0074**	**-**	**36**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-198**
251	**W-KL8**	**ISOLATE**	**PEM**	**Webster**	**38.519565**	**-80.545076**	**0.0976**	**-**	**472**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-198**
252	**W-H60**	**NRPWW**	**PEM**	**Webster**	**38.517850**	**-80.544693**	**0.0869**	**-**	**1401**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-199**
253	**W-H61**	**ISOLATE**	**PEM**	**Webster**	**38.517345**	**-80.545025**	**0.0094**	**-**	**151**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-199**
254	**W-H62**	**ISOLATE**	**PEM**	**Webster**	**38.517147**	**-80.545591**	**0.0335**	**-**	**162**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-199**
255	**W-B39**	**NRPWW**	**PEM**	**Webster**	**38.508151**	**-80.559329**	**0.0906**	**-**	**1462**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-201**
256	**W-B38**	**RPWWN**	**PEM**	**Webster**	**38.495397**	**-80.559910**	**0.0519**	**-**	**251**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-203**
257	**S-B48**	**NRPW**	**R6**	**Webster**	**38.495356**	**-80.560429**	**0.0047**	**-**	**23**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-203**
258	**W-B31**	**RPWWD**	**PEM**	**Webster**	**38.494322**	**-80.561155**	**0.0320**	**-**	**517**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-203**
259	**S-B34**	**RPW**	**R2UB1**	**Webster**	**38.493956**	**-80.560990**	**0.0561**	**-**	**904**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-203**
260	**S-B35**	**RPW**	**R4SB4**	**Webster**	**38.493884**	**-80.560969**	**0.0037**	**-**	**59**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-203**
261	**S-B36**	**NRPW**	**R6**	**Webster**	**38.493819**	**-80.560919**	**0.0033**	**-**	**53**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-203**
262	S-B37	RPW	R4SB3	Webster	38.493750	-80.560898	0.0038	-	61	-	Pipeline ROW	Temporary	-	Field	2-203
262	W-B35	RPWWD	PSS	Webster	38.493757	-80.560962	-	0.0108†	174†	-	Pipeline ROW	Temporary	Beverly	Field	2-203
262	S-B38	NRPW	R6	Webster	38.493723	-80.560843	0.0020	-	32	-	Pipeline ROW	Temporary	-	Field	2-203
262	S-B42	NRPW	R6	Webster	38.493645	-80.560892	0.0046	-	75	-	Pipeline ROW	Temporary	-	Field	2-203
262	**S-B37, S-B38, S-B42 & W-B35 Total**		**-**	**-**	**-**	**-**	**0.0104**	**0.0108**	**342**	**-**	**-**	**-**	**-**	**Field**	
263	S-B39b	NRPW	R6	Webster	38.493532	-80.560792	0.0008	-	13	-	Pipeline ROW	Temporary	-	Field	2-203
263	S-B39b	NRPW	R6	Webster	38.493352	-80.560574	0.0000	-	0	-	Pipeline ROW	Temporary	-	Field	2-203
263	**S-B39b Total**		**-**	**-**	**-**	**-**	**0.0008**	**-**	**13**	**-**	**-**	**-**	**-**	**Field**	
264	**S-B45**	**NRPW**	**R6**	**Webster**	**38.493394**	**-80.560786**	**0.0122**	**-**	**196**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-203**
265	S-B39a/B46	NRPW	R6	Webster	38.493363	-80.560657	0.0076	-	122	-	Pipeline ROW	Temporary	-	Field	2-203
265	S-B39a/B46	NRPW	R6	Webster	38.493227	-80.560529	0.0007	-	12	-	Pipeline ROW	Temporary	-	Field	2-203
265	**S-B39a/B46 Total**		**-**	**-**	**-**	**-**	**0.0083**	**-**	**134**	**-**	**-**	**-**	**-**	**Field**	
266	**S-B43**	**NRPW**	**R6**	**Webster**	**38.492227**	**-80.560443**	**0.0036**	**-**	**17**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-203**
267	**S-O4**	**RPW**	**R2RB1**	**Webster**	**38.483002**	**-80.556464**	**0.0379**	**-**	**612**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-206**
268	**S-O5**	**NRPW**	**R6**	**Webster**	**38.482251**	**-80.555499**	**0.0035**	**-**	**56**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-206**
269	**W-A18**	**RPWWD**	**PEM**	**Webster**	**38.481237**	**-80.555783**	**0.2038**	**-**	**986**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-206**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
270	S-A79	RPW	R2UB1	Webster	38.480782	-80.554682	0.1563	-	2521	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-206
271	S-A81	NRPW	R6	Webster	38.481219	-80.554668	0.0037	-	18	-	Temporary Access Road	Temporary	-	Field	2-206
272	S-A80	RPW	R4SB5	Webster	38.480687	-80.554061	0.0096	-	46	-	Temporary Access Road	Temporary	-	Field	2-206
273	S-E58	RPW	R2UB3	Webster	38.443669	-80.551989	0.0187	-	302	-	Pipeline ROW	Temporary	-	Field	2-212
274	W-E28	RPWWD	PSS	Webster	38.443010	-80.551309	-	0.0084	-	40	Permanent Access Road	Permanent	Beverly	Field	2-212
275	S-E55	NRPW	R6	Webster	38.440270	-80.559955	0.0022	-	35	-	Pipeline ROW	Temporary	-	Field	2-213
276	W-F18	NRPWW	PEM	Webster	38.438835	-80.577826	0.0012	-	6	-	Temporary Access Road	Temporary	-	Field	2-216
277	W-F19	RPWWN	PEM	Webster	38.438588	-80.577142	0.0085	-	41	-	Temporary Access Road	Temporary	-	Field	2-216
278	S-F22	RPW	R3UB1	Webster	38.438157	-80.575929	0.1279	-	619	-	Temporary Access Road	Temporary	-	Field	2-216
278	W-F20	RPWWD	PEM	Webster	38.437197	-80.575137	0.0168	-	81	-	Temporary Access Road	Temporary	-	Field	2-216
278	S-F22 & W-F20		-	-	-	-	0.1447	-	700	-	-	-	-	Field	
279	S-F25/F26	RPW	R4SB3	Webster	38.434116	-80.569027	0.0023	-	11	-	Temporary Access Road	Temporary	-	Field	2-215
280	S-F32	RPW	R4SB3	Webster	38.434034	-80.567225	0.0017	-	8	-	Temporary Access Road	Temporary	-	Field	2-215
281	S-F33	NRPW	R6	Webster	38.433946	-80.566631	0.0298	-	144	-	Temporary Access Road	Temporary	-	Field	2-215
282	S-F31	RPW	R4SB5	Webster	38.433907	-80.567319	0.0088	-	42	-	Temporary Access Road	Temporary	-	Field	2-215
283	S-F28	RPW	R4SB5	Webster	38.433103	-80.568130	0.0104	-	51	-	Temporary Access Road	Temporary	-	Field	2-215
284	S-F27/F29	RPW	R4SB5	Webster	38.432824	-80.567852	0.0313	-	152	-	Temporary Access Road	Temporary	-	Field	2-215
285	W-F26	NRPWW	PEM	Webster	38.428623	-80.567054	0.0045	-	22	-	Pipeline ROW	Temporary	-	Field	2-219
286	S-F35	RPW	R3UB3	Webster	38.424082	-80.570710	0.0006	-	3	-	Pipeline ROW	Temporary	-	Field	2-220
287	S-F34	RPW	R3UB3	Webster	38.423988	-80.570680	0.0099	-	160	-	Pipeline ROW	Temporary	-	Field	2-220
287	W-F29	RPWWD	PEM	Webster	38.424050	-80.570711	0.0054	-	26	-	Pipeline ROW	Temporary	-	Field	2-220
287	W-F28	RPWWD	PEM	Webster	38.423890	-80.570659	0.0037	-	18	-	Pipeline ROW	Temporary	-	Field	2-220
287	S-F34, W-F29 & W-F28 Total		-	-	-	-	0.0190	-	204	-	-	-	-	Field	
288	S-F36a	RPW	R3UB1	Webster	38.422056	-80.569457	0.0006	-	11	-	Temporary Access Road	Temporary	-	Field	2-220
288	S-F36a	RPW	R3UB1	Webster	38.421474	-80.570012	0.0027	-	13	-	Temporary Access Road	Temporary	-	Field	2-220
288	S-F36a	RPW	R3UB1	Webster	38.418662	-80.573898	0.0027	-	13	-	Temporary Access Road	Temporary	-	Field	2-220
288	S-F36a	RPW	R3UB1	Webster	38.418122	-80.574566	0.0023	-	3	-	Temporary Access Road	Temporary	-	Field	2-220
288	W-F40	RPWWD	PSS	Webster	38.421461	-80.570007	-	0.0188†	91†	-	Temporary Access Road	Temporary	Beverly	Field	2-220
288	W-F37	RPWWD	PEM	Webster	38.420097	-80.572466	0.0007	-	4	-	Temporary Access Road	Temporary	-	Field	2-220
288	W-F36	RPWWD	PEM	Webster	38.420084	-80.572603	0.0005	-	3	-	Temporary Access Road	Temporary	-	Field	2-220
288	W-F32	RPWWD	PEM	Webster	38.418041	-80.575053	0.0002	-	1	-	Temporary Access Road	Temporary	-	Field	2-221
288	W-F31	RPWWD	PEM	Webster	38.417806	-80.576227	0.0223	-	108	-	Temporary Access Road	Temporary	-	Field	2-221
288	S-F36a, W-F40, W-F37, W-F36, W-F32 & W-F31 Total		-	-	-	-	0.0320	0.0188	247	-	-	-	-	Field	
289	S-F38	RPW	R3UB3	Webster	38.419895	-80.572765	0.0037	-	18	-	Temporary Access Road	Temporary	-	Field	2-220

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
290	**W-F33**	**RPWWN**	**PEM**	**Webster**	**38.418139**	**-80.574370**	**0.0005**	**-**	**2**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-221**
291	S-F36b	RPW	R3UB1	Webster	38.417934	-80.576775	0.0300	-	145	-	Temporary Access Road	Temporary	-	Field	2-221
291	S-F36b	RPW	R3UB1	Webster	38.417774	-80.576635	0.0359	-	580	-	Pipeline ROW	Temporary	-	Field	2-221
291	S-F36b	RPW	R3UB1	Webster	38.417693	-80.576495	0.0074	-	36	-	Temporary Access Road	Temporary	-	Field	2-221
291	**S-F36b Total**		**-**	**-**	**-**	**-**	**0.0733**	**-**	**761**	**-**	**-**	**-**	**-**	**Field**	
292	**W-F42**	**RPWWN**	**PEM**	**Webster**	**38.417838**	**-80.575730**	**0.0065**	**-**	**31**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-221**
293	S-F37	RPW	R3UB3	Webster	38.417651	-80.576431	0.0018	-	9	-	Temporary Access Road	Temporary	-	Field	2-221
293	W-F41	RPWWD	PEM	Webster	38.417599	-80.576458	0.0002	-	1	-	Temporary Access Road	Temporary	-	Field	2-221
293	**S-F37 & W-F41 Total**		**-**	**-**	**-**	**-**	**0.0020**	**-**	**10**	**-**	**-**	**-**	**-**	**Field**	
294	**S-C49**	**NRPW**	**R6**	**Webster**	**38.416587**	**-80.577890**	**0.0022**	**-**	**11**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-221**
295	**S-B33**	**RPW**	**R4SB3**	**Webster**	**38.408941**	**-80.589063**	**0.0038**	**-**	**18**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-223**
296	S-B32-Braid	RPW	R3UB3	Webster	38.405871	-80.591069	0.0063	-	31	-	Pipeline ROW	Temporary	-	Field	2-223
296	S-B32	RPW	R3UB3	Webster	38.405683	-80.591116	0.0237	-	383	-	Pipeline ROW	Temporary	-	Field	2-223
296	W-B30	RPWWD	PEM	Webster	38.405713	-80.591171	0.0485	-	783	-	Pipeline ROW	Temporary	-	Field	2-223
296	**S-B32 & W-B30 Total**		**-**	**-**	**-**	**-**	**0.0785**	**-**	**1197**	**-**	**-**	**-**	**-**	**Field**	
297	S-B29	RPW	R2UB3	Webster	38.399618	-80.597332	0.0136	-	220	-	Pipeline ROW	Temporary	-	Field	2-224
297	W-EF29	RPWWD	PEM	Webster	38.401209	-80.597852	0.1733	-	839	-	Anode Bed	Temporary	-	Field	2-224
297	W-B28	RPWWD	PEM	Webster	38.399940	-80.597527	0.2983	-	4812	-	Pipeline ROW/Anode Bed	Temporary	-	Field	2-224
297	**S-B29, W-EF29 & W-B28 Total**		**-**	**-**	**-**	**-**	**0.4852**	**-**	**5871**	**-**	**-**	**-**	**-**	**Field**	
298	**S-EF40**	**RPW**	**R4SB5**	**Webster**	**38.400883**	**-80.597787**	**0.0084**	**-**	**41**	**-**	**Anode Bed**	**Temporary**	**-**	**Field**	**2-224**
299	**S-B30**	**NRPW**	**R6**	**Webster**	**38.399733**	**-80.597536**	**0.0024**	**-**	**12**	**-**	**Anode Bed**	**Temporary**	**-**	**Field**	**2-224**
300	S-E50	RPW	R3UB1	Webster	38.370597	-80.611921	0.0085	-	138	-	Pipeline ROW	Temporary	-	Field	2-231
300	W-E21	RPWWD	PEM	Webster	38.370595	-80.611923	0.0389	-	627	-	Pipeline ROW	Temporary	-	Field	2-230
300	**S-E50 & W-E21 Total**		**-**	**-**	**-**	**-**	**0.0474**	**-**	**765**	**-**	**-**	**-**	**-**	**Field**	
301	**S-E52**	**RPW**	**R4SB5**	**Webster**	**38.369110**	**-80.611761**	**0.0025**	**-**	**12**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-231**
302	**W-IJ43**	**ISOLATE**	**PEM**	**Nicholas**	**38.368775**	**-80.822726**	**0.0144**	**-**	**70**	**-**	**Temporary Ancillary Site**	**Temporary**	**-**	**Field**	**2-471**
303	W-E18-PEM	RPWWD	PEM	Webster	38.367359	-80.612334	0.0208	-	101	-	Pipeline ROW	Temporary	-	Field	2-231
303	W-E18-PSS	RPWWD	PSS	Webster	38.367284	-80.612248	-	0.0538†	868†	-	Pipeline ROW	Temporary	ILF	Field	2-231
303	S-E50	RPW	R3UB1	Webster	38.367280	-80.612317	0.0075	-	122	-	Pipeline ROW	Temporary	-	Field	2-231
303	**S-E50 & W-E18Total**		**-**	**-**	**-**	**-**	**0.0283**	**0.0538**	**1091**	**-**	**-**	**-**	**-**	**Field**	
304	**S-E49**	**NRPW**	**R6**	**Nicholas**	**38.365574**	**-80.613141**	**0.0020**	**-**	**33**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-231**
305	**W-E16**	**NRPWW**	**PEM**	**Nicholas**	**38.364427**	**-80.614459**	**0.0124**	**-**	**200**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-232**
306	**W-E13**	**RPWWN**	**PFO**	**Webster**	**38.364017**	**-80.616570**	**-**	**0.0107†**	**52†**	**-**	**Pipeline ROW**	**Temporary**	**Spanishburg**	**Field**	**2-232**
307	**S-E46**	**RPW**	**R2UB1**	**Webster**	**38.363374**	**-80.617277**	**0.0594**	**-**	**958**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-232**
308	**W-F13**	**RPWWN**	**PEM**	**Nicholas**	**38.356737**	**-80.631888**	**0.0354**	**-**	**171**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-234**
309	S-F21	RPW	R3UB3	Nicholas	38.355859	-80.633328	0.0016	-	8	-	Pipeline ROW	Temporary	-	Field	2-234
309	S-F20	RPW	R3UB3	Nicholas	38.355800	-80.633223	0.0176	-	284	-	Pipeline ROW	Temporary	-	Field	2-234
309	W-F12	RPWWD	PEM	Nicholas	38.356528	-80.632264	0.1068	-	1723	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-234
309	W-F11	RPWWN	PEM	Nicholas	38.355680	-80.633383	0.1542	-	2488	-	Pipeline ROW	Temporary	-	Field	2-234
309	**S-F20, S-F21, W-F11 & W-F12 Total**		**-**	**-**	**-**	**-**	**0.2803**	**-**	**4504**	**-**	**-**	**-**	**-**	**Field**	
310	W-K23	RPWWN	PEM	Nicholas	38.355273	-80.633811	0.0294	-	474	-	Pipeline ROW	Temporary	-	Field	2-234
310	W-K23	RPWWN	PEM	Nicholas	38.355237	-80.633777	-	0.0195	-	95	Permanent Access Road	Permanent	ILF	Field	2-234
310	**W-K23 Total**		**-**	**-**	**-**	**-**	**0.0294**	**0.0195**	**474**	**95**	**-**	**-**	**-**	**Field**	

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
311	**W-K20**	**RPWWD**	**PEM**	**Nicholas**	**38.354644**	**-80.634586**	**0.0100**	**-**	**48**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-234**
312	W-IJ51	RPWWD	PEM	Nicholas	38.352366	-80.636369	0.0410	-	662	-	Pipeline ROW	Temporary	-	Field	2-234
312	S-IJ57	RPW	R3UB1	Nicholas	38.352362	-80.636401	0.0094	-	152	-	Pipeline ROW	Temporary	-	Field	2-234
312	**S-IJ57 & W-IJ51 Total**		**-**	**-**	**-**	**-**	**0.0504**	**-**	**814**	**-**	**-**	**-**	**-**	**Field**	
313	**W-IJ50**	**RPWWN**	**PEM**	**Nicholas**	**38.350787**	**-80.637226**	**0.0528**	**-**	**852**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-235**
314	**S-IJ59**	**NRPW**	**R6**	**Nicholas**	**38.348372**	**-80.641152**	**0.0096**	**-**	**46**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-236**
315	**S-IJ60**	**RPW**	**R3RB1**	**Nicholas**	**38.343699**	**-80.644721**	**0.0141**	**-**	**227**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-237**
316	**W-IJ55**	**RPWWN**	**PEM**	**Nicholas**	**38.343568**	**-80.646491**	**0.0218**	**-**	**352**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-237**
317	**S-IJ62**	**RPW**	**R4SB3**	**Nicholas**	**38.343547**	**-80.647035**	**0.0054**	**-**	**88**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-237**
318	S-B28	RPW	R2UB3	Nicholas	38.340083	-80.655413	0.0315	-	508	-	Pipeline ROW	Temporary	-	Field	2-239
318	W-B27	RPWWD	PEM	Nicholas	38.339713	-80.655364	0.0515	-	249	-	Pipeline ROW	Temporary	-	Field	2-240
318	**S-B28 & W-B27 Total**		**-**	**-**	**-**	**-**	**0.0830**	**-**	**757**	**-**	**-**	**-**	**-**	**Field**	
319	S-B26	RPW	R4SB5	Nicholas	38.339012	-80.659609	0.0039	-	19	-	Temporary Access Road	Temporary	-	Field	2-240
319	W-B26-PEM-1	RPWWD	PEM	Nicholas	38.339034	-80.659282	0.0273	-	132	-	Temporary Access Road	Temporary	-	Field	2-240
319	W-B26-PEM-2	RPWWD	PEM	Nicholas	38.338935	-80.659254	0.0060	-	29	-	Temporary Access Road	Temporary	-	Field	2-240
319	**S-B26 & W-B26 Total**		**-**	**-**	**-**	**-**	**0.0372**	**-**	**180**	**-**	**-**	**-**	**-**	**Field**	
320	W-FF6-PSS	RPWWN	PSS	Nicholas	38.337803	-80.658933	-	0.0987†	1592†	-	Pipeline ROW	Temporary	ILF	Field	2-240
320	W-FF6-PEM	RPWWN	PEM	Nicholas	38.337774	-80.658995	0.1780	-	2872	-	Pipeline ROW	Temporary	-	Field	2-240
320	**W-FF6 Total**		**-**	**-**	**-**	**-**	**0.1780**	**0.0987**	**4464**	**-**	**-**	**-**	**-**	**Field**	
321	**W-FF3**	**RPWWN**	**PEM**	**Nicholas**	**38.332776**	**-80.669068**	**0.0444**	**-**	**716**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-242**
322	S-J32	RPW	R2UB1	Nicholas	38.331763	-80.670342	0.0625	-	1008	-	Pipeline ROW	Temporary	-	Field	2-242
322	S-A65	RPW	R2RB2	Nicholas	38.308183	-80.675347	0.1240	-	2000	-	Pipeline ROW	Temporary	-	Field	2-245
322	**S-J32 & S-A65 Total**		**-**	**-**	**-**	**-**	**0.1865**	**-**	**3008**	**-**	**-**	**-**	**-**	**Field**	
323	S-A76	RPW	R3UB3	Nicholas	38.329126	-80.671211	0.0106	-	172	-	Pipeline ROW	Temporary	-	Field	2-242
323	W-FF4	RPWWD	PEM	Nicholas	38.329122	-80.671098	0.0037	-	18	-	Pipeline ROW	Temporary	-	Field	2-242
323	**S-A76 & W-FF4 Total**		**-**	**-**	**-**	**-**	**0.0143**	**-**	**190**	**-**	**-**	**-**	**-**	**Field**	
324	**W-A17**	**NRPWW**	**PEM**	**Nicholas**	**38.327813**	**-80.670776**	**0.1300**	**-**	**2098**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-242**
325	**S-A75**	**RPW**	**R3UB2**	**Nicholas**	**38.326001**	**-80.670358**	**0.0193**	**-**	**311**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-243**
326	**S-A74**	**NRPW**	**R6**	**Nicholas**	**38.325540**	**-80.670150**	**0.0069**	**-**	**112**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-243**
327	S-A73	RPW	R4SB5	Nicholas	38.323815	-80.670069	0.0114	-	184	-	Pipeline ROW	Temporary	-	Field	2-243
327	W-A15	RPWWD	PSS	Nicholas	38.323735	-80.670118	-	0.0891†	1437†	-	Pipeline ROW	Temporary	ILF	Field	2-243
327	**S-A73 & W-A15 Total**		**-**	**-**	**-**	**-**	**0.0114**	**0.0891**	**1621**	**-**	**-**	**-**	**-**	**Field**	
328	S-A72	NRPW	R6	Nicholas	38.321687	-80.670952	0.0039	-	19	-	Pipeline ROW	Temporary	-	Field	2-243
328	W-A14	RPWWD	PFO	Nicholas	38.321643	-80.670901	-	0.0972†	1569†	-	Pipeline ROW	Temporary	ILF	Field	2-243
328	S-A71	RPW	R3RB2	Nicholas	38.321572	-80.670958	0.0089	-	144	-	Pipeline ROW	Temporary	-	Field	2-243
328	S-A71-Braid	RPW	R4SB2	Nicholas	38.321548	-80.670969	0.0163	-	263	-	Pipeline ROW	Temporary	-	Field	2-243
328	**S-A72, S-A71 & W-A14 Total**		**-**	**-**	**-**	**-**	**0.0292**	**0.0972**	**1995**	**-**	**-**	**-**	**-**	**Field**	
329	**S-A67**	**RPW**	**R3UB1**	**Nicholas**	**38.317575**	**-80.671553**	**0.0121**	**-**	**196**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-244**
330	S-A69	RPW	R4SB3	Nicholas	38.317217	-80.671495	0.0113	-	183	-	Pipeline ROW	Temporary	-	Field	2-244
330	S-A69	RPW	R4SB3	Nicholas	38.317089	-80.671565	0.0022	-	36	-	Pipeline ROW	Temporary	-	Field	2-244
330	**S-A69 Total**		**-**	**-**	**-**	**-**	**0.0135**	**-**	**219**	**-**	**-**	**-**	**-**	**Field**	
331	**S-H100**	**RPW**	**R3UB1**	**Nicholas**	**38.313275**	**-80.673645**	**0.0071**	**-**	**114**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-245**
332	S-H99	RPW	R3UB2	Nicholas	38.313105	-80.673751	0.0087	-	140	-	Pipeline ROW	Temporary	-	Field	2-245
332	W-H52	RPWWD	PEM	Nicholas	38.313104	-80.673749	0.0638	-	1030	-	Pipeline ROW	Temporary	-	Field	2-245
332	**S-H99 & W-H52 Total**		**-**	**-**	**-**	**-**	**0.0725**	**-**	**1170**	**-**	**-**	**-**	**-**	**Field**	
333	**S-H96**	**RPW**	**R4SB3**	**Nicholas**	**38.309759**	**-80.675706**	**0.0018**	**-**	**9**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-245**
334	**S-H95**	**NRPW**	**R6**	**Nicholas**	**38.309738**	**-80.675733**	**0.0178**	**-**	**86**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-245**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
335	**W-H50**	**NRPWW**	**PEM**	**Nicholas**	**38.309707**	**-80.676585**	**0.0114**	**-**	**55**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-245**
336	**S-A64**	**NRPW**	**R6**	**Nicholas**	**38.304538**	**-80.673827**	**0.0086**	**-**	**139**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-247**
337	W-N25	RPWWD	PEM	Nicholas	38.302028	-80.674533	0.0104	-	50	-	Pipeline ROW	Temporary	-	Field	2-247
337	S-N15	RPW	R4SB1	Nicholas	38.301571	-80.674776	0.0234	-	377	-	Pipeline ROW	Temporary	-	Field	2-247
337	**S-N15 & W-N25 Total**		**-**	**-**	**-**	**-**	**0.0338**	**-**	**427**	**-**	**-**	**-**	**-**	**Field**	
338	**W-N24**	**RPWWN**	**PEM**	**Nicholas**	**38.299148**	**-80.675928**	**0.0031**	**-**	**15**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-248**
339	S-N14	RPW	R2UB2	Nicholas	38.297014	-80.676341	0.0171	-	275	-	Pipeline ROW	Temporary	-	Field	2-248
339	S-N14	RPW	R2UB2	Nicholas	38.296646	-80.676258	0.0030	-	48	-	Pipeline ROW	Temporary	-	Field	2-248
339	**S-N14 Total**		**-**	**-**	**-**	**-**	**0.0201**	**-**	**323**	**-**	**-**	**-**	**-**	**Field**	
340	**W-N22**	**RPWWN**	**PEM**	**Nicholas**	**38.296941**	**-80.676479**	**0.0030**	**-**	**14**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-248**
341	S-I43	RPW	R4SB5	Nicholas	38.293473	-80.677158	0.0180	-	291	-	Pipeline ROW	Temporary	-	Field	2-249
341	W-I7	RPWWD	PFO	Nicholas	38.293453	-80.677084	-	0.0391†	630†	-	Pipeline ROW	Temporary	ILF	Field	2-249
341	**S-I43 & W-I7 Total**		**-**	**-**	**-**	**-**	**0.0180**	**0.0391**	**921**	**-**	**-**	**-**	**-**	**Field**	
342	**S-I44**	**RPW**	**R2UB2**	**Nicholas**	**38.291332**	**-80.679265**	**0.0146**	**-**	**236**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-249 & 2-250**
343	**S-I45**	**RPW**	**R3UB3**	**Nicholas**	**38.290061**	**-80.680304**	**0.0140**	**-**	**226**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-250**
344	**S-I47**	**RPW**	**R4SB5**	**Nicholas**	**38.284291**	**-80.685885**	**0.0037**	**-**	**59**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-251**
345	**S-I48**	**RPW**	**R3UB1**	**Nicholas**	**38.280116**	**-80.687738**	**0.0199**	**-**	**321**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-251**
346	**S-J29**	**TNW**	**R2UB1**	**Nicholas**	**38.274498**	**-80.691389**	**2.1556**	**-**	**34776**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-253**
347	**S-EF28**	**RPW**	**R4SB2**	**Nicholas**	**38.268989**	**-80.680189**	**0.0088**	**-**	**43**	**-**	**Permanent Access Road**	**Temporary**	**-**	**Field**	**2-254**
348	S-J26	RPW	R3RB2	Nicholas	38.268317	-80.682864	0.0249	-	120	-	Temporary Access Road	Temporary	-	Field	2-254
348	S-J26	RPW	R3RB2	Nicholas	38.268267	-80.68288	-	0.0207	-	100	Permanent Access Road	Permanent	Spanishburg	Field	2-254
348	S-J26	RPW	R3RB2	Nicholas	38.268218	-80.682896	0.0242	-	117	-	Temporary Access Road	Temporary	-	Field	2-254
348	S-MN9	RPW	R3UB1	Nicholas	38.261759	-80.684644	0.0264	-	128	-	Temporary Access Road	Temporary	-	Field	2-258
348	**S-J26 & S-MN9 Total**		**-**	**-**	**-**	**-**	**0.0755**	**0.0207**	**365**	**100**	**-**	**-**	**-**	**Field**	
349	**W-EF8**	**RPWWN**	**PEM**	**Nicholas**	**38.267034**	**-80.670429**	**0.0053**	**-**	**26**	**-**	**Permanent Access Road**	**Temporary**	**-**	**Field**	**2-255**
350	**S-MN8**	**RPW**	**R3UB1**	**Nicholas**	**38.266362**	**-80.683559**	**0.0030**	**-**	**14**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-257**
351	S-J28	RPW	R4SB3	Nicholas	38.263235	-80.687908	0.0091	-	147	-	Pipeline ROW	Temporary	-	Field	2-256
351	W-J8	RPWWD	PFO	Nicholas	38.263168	-80.687930	-	0.0533†	860†	-	Pipeline ROW	Temporary	ILF	Field	2-256
351	**S-J28 & W-J8 Total**		**-**	**-**	**-**	**-**	**0.0091**	**0.0533**	**1007**	**-**	**-**	**-**	**-**	**Field**	
352	S-J25	NRPW	R6	Nicholas	38.256724	-80.687047	0.0047	-	23	-	Temporary Access Road	Temporary	-	Field	2-258
352	S-J25	NRPW	R6	Nicholas	38.256682	-80.687348	0.0089	-	143	-	Pipeline ROW	Temporary	-	Field	2-258
352	**S-J25 Total**		**-**	**-**	**-**	**-**	**0.0136**	**-**	**166**	**-**	**-**	**-**	**-**	**Field**	
353	S-J24	RPW	R3UB1	Nicholas	38.256302	-80.687350	0.0261	-	422	-	Pipeline ROW	Temporary	-	Field	2-258
353	S-J24	RPW	R3UB1	Nicholas	38.256248	-80.687358	0.0261	-	421	-	Pipeline ROW	Temporary	-	Field	2-258
353	**S-J24 Total**		**-**	**-**	**-**	**-**	**0.0522**	**-**	**843**	**-**	**-**	**-**	**-**	**Field**	
354	**W-W5**	**RPWWN**	**PEM**	**Nicholas**	**38.243285**	**-80.741101**	**0.0058**	**-**	**28**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-275**
355	**W-W4**	**RPWWN**	**PEM**	**Nicholas**	**38.243122**	**-80.740672**	**0.0241**	**-**	**117**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-275**
356	**S-J23-EPH**	**NRPW**	**R6**	**Nicholas**	**38.234331**	**-80.707513**	**0.0025**	**-**	**41**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-266**
357	W-J7	RPWWD	PFO	Nicholas	38.233731	-80.708250	-	0.0693†	1119†	-	Pipeline ROW	Temporary	ILF	Field	2-266
357	S-J22	RPW	R4SB5	Nicholas	38.233718	-80.708268	0.0058	-	94	-	Pipeline ROW	Temporary	-	Field	2-266
357	**S-J22 & W-J7 Total**		**-**	**-**	**-**	**-**	**0.0058**	**0.0693**	**1212**	**-**	**-**	**-**	**-**	**Field**	
358	S-N10	RPW	R2UB3	Nicholas	38.231025	-80.710633	0.0071	-	115	-	Pipeline ROW	Temporary	-	Field	2-267
358	S-N10-Braid	RPW	R4SB5	Nicholas	38.230934	-80.710804	0.0069	-	112	-	Pipeline ROW	Temporary	-	Field	2-267
358	**S-N10 Total**		**-**	**-**	**-**	**-**	**0.0140**	**-**	**227**	**-**	**-**	**-**	**-**	**Field**	

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
359	**S-EE1**	**NRPW**	**R6**	**Nicholas**	**38.228924**	**-80.713076**	**0.0074**	**-**	**120**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-267**
360	S-N13-Braid	RPW	R4SB2	Nicholas	38.226869	-80.715487	0.0050	-	24	-	Pipeline ROW	Temporary	-	Field	2-268
360	S-N13	RPW	R4SB5	Nicholas	38.226851	-80.715393	0.0041	-	66	-	Pipeline ROW	Temporary	-	Field	2-268
360	**S-N13 Total**		**-**	**-**	**-**	**-**	**0.0091**	**-**	**90**	**-**	**-**	**-**	**-**	**Field**	
361	**W-U3**	**RPWWN**	**PEM**	**Nicholas**	**38.226324**	**-80.687293**	**0.0099**	**-**	**48**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-263**
362	**W-N18**	**NRPWW**	**PEM**	**Nicholas**	**38.224246**	**-80.716448**	**0.0075**	**-**	**36**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-268**
363	**S-L42**	**RPW**	**R4SB3**	**Nicholas**	**38.221567**	**-80.718197**	**0.0075**	**-**	**37**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-268**
364	**S-L41**	**RPW**	**R2UB1**	**Nicholas**	**38.220793**	**-80.717100**	**0.0349**	**-**	**564**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-268**
365	**S-L38**	**RPW**	**R3UB3**	**Nicholas**	**38.205534**	**-80.718246**	**0.0052**	**-**	**83**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-281**
366	S-L35	RPW	R2UB3	Nicholas	38.203887	-80.719122	0.0079	-	128	-	Pipeline ROW	Temporary	-	Field	2-281
366	S-L35	RPW	R2UB3	Nicholas	38.203097	-80.719248	0.0080	-	129	-	Pipeline ROW	Temporary	-	Field	2-281
366	S-L35	RPW	R2UB3	Nicholas	38.200338	-80.717177	0.0072	-	117	-	Pipeline ROW	Temporary	-	Field	2-281
366	W-L28	RPWWD	PEM	Nicholas	38.203621	-80.719372	0.0064	-	31	-	Pipeline ROW	Temporary	-	Field	2-281
366	**S-L35 & W-L28 Total**		**-**	**-**	**-**	**-**	**0.0295**	**-**	**405**	**-**	**-**	**-**	**-**	**Field**	
367	**S-L37**	**RPW**	**R4SB5**	**Nicholas**	**38.203873**	**-80.718989**	**0.0008**	**-**	**4**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-281**
368	**W-L27**	**RPWWN**	**PEM**	**Nicholas**	**38.202610**	**-80.718505**	**0.0029**	**-**	**14**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-281**
369	**S-I37**	**NRPW**	**R6**	**Nicholas**	**38.196644**	**-80.718856**	**0.0056**	**-**	**27**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-282**
370	**S-I38**	**RPW**	**R4SB5**	**Nicholas**	**38.194221**	**-80.719357**	**0.0089**	**-**	**143**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-282**
371	**S-I39**	**RPW**	**R4SB3**	**Nicholas**	**38.194025**	**-80.719298**	**0.0126**	**-**	**204**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-282**
372	**S-I40**	**RPW**	**R4SB5**	**Nicholas**	**38.187582**	**-80.723025**	**0.0133**	**-**	**214**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-283**
373	W-I11a	RPWWD	PEM	Nicholas	38.179434	-80.729511	0.0579	-	934	-	Pipeline ROW	Temporary	-	Field	2-286
373	S-I41	RPW	R4SB5	Nicholas	38.179384	-80.729497	0.0143	-	231	-	Pipeline ROW	Temporary	-	Field	2-286
373	**S-I41 & W-I11a Total**		**-**	**-**	**-**	**-**	**0.0722**	**-**	**1165**	**-**	**-**	**-**	**-**	**Field**	
374	**S-I36**	**RPW**	**R2RB2**	**Nicholas**	**38.178889**	**-80.729790**	**0.0976**	**-**	**1575**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-286**
375	**W-U7**	**RPWWN**	**PEM**	**Nicholas**	**38.178298**	**-80.729744**	**0.0666**	**-**	**322**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-286**
376	**W-I5**	**RPWWN**	**PEM**	**Nicholas**	**38.175595**	**-80.730736**	**0.0082**	**-**	**133**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-286**
377	**S-I31**	**NRPW**	**R6**	**Nicholas**	**38.163802**	**-80.730743**	**0.0033**	**-**	**54**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-294**
378	**S-N8a**	**RPW**	**R3UB3**	**Nicholas**	**38.162363**	**-80.733602**	**0.0172**	**-**	**277**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-294**
379	S-VV1	RPW	R4SB3	Nicholas	38.161085	-80.734282	0.0041	-	20	-	Temporary Access Road	Temporary	-	Field	2-295
379	S-VV1	RPW	R4SB3	Nicholas	38.161064	-80.735022	0.0073	-	118	-	Pipeline ROW	Temporary	-	Field	2-295
379	W-VV2	RPWWD	PEM	Nicholas	38.161072	-80.735000	0.0229	-	369	-	Pipeline ROW	Temporary	-	Field	2-286
379	**S-VV1 & W-VV2Total**		**-**	**-**	**-**	**-**	**0.0343**	**-**	**507**	**-**	**-**	**-**	**-**	**Field**	
380	**W-N16**	**NRPWW**	**PEM**	**Nicholas**	**38.157063**	**-80.738304**	**0.0348**	**-**	**561**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-295**
381	**W-H48**	**RPWWD**	**PEM**	**Nicholas**	**38.138565**	**-80.727192**	**0.0078**	**-**	**38**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-299**
382	**W-H49**	**RPWWD**	**PEM**	**Nicholas**	**38.138550**	**-80.725571**	**0.0012**	**-**	**6**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-299**
383	W-H46	RPWWD	PEM	Nicholas	38.137490	-80.728993	0.0061	-	30	-	Temporary Access Road	Temporary	-	Field	2-299
383	S-H90	RPW	R4SB5	Nicholas	38.137462	-80.729246	0.0006	-	3	-	Temporary Access Road	Temporary	-	Field	2-298
383	**S-H90 & W-H46Total**		**-**	**-**	**-**	**-**	**0.0067**	**-**	**33**	**-**	**-**	**-**	**-**	**Field**	
384	W-H45-PFO	RPWWD	PFO	Nicholas	38.137212	-80.729564	-	0.0211†	102†	-	Temporary Access Road	Temporary	ILF	Field	2-298
384	W-H45-PEM	RPWWD	PEM	Nicholas	38.137146	-80.729716	0.0115	-	56	-	Temporary Access Road	Temporary	-	Field	2-298
384	S-H88	RPW	R2RB2	Nicholas	38.136744	-80.730560	0.0697	-	1125	-	Pipeline ROW	Temporary	-	Field	2-298 & 2-299
384	**S-H88 & W-H45Total**		**-**	**-**	**-**	**-**	**0.0812**	**0.0211**	**1283**	**-**	**-**	**-**	**-**	**Field**	
385	S-H80	RPW	R4SB5	Nicholas	38.128044	-80.733815	0.0009	-	4	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-301
385	W-H41	RPWWN	PEM	Nicholas	38.127873	-80.733868	0.0151	-	73	-	Pipeline ROW	Temporary	-	Field	2-301

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
385	**S-H80 & W-H41Total**		**-**	**-**	**-**	**-**	**0.0160**	**-**	**77**	**-**	**-**	**-**	**-**	**Field**	
386	W-H38	RPWWD	PEM	Nicholas	38.127800	-80.734855	0.0067	-	33	-	Temporary Access Road	Temporary	-	Field	2-301
386	W-H40	RPWWD	PEM	Nicholas	38.127525	-80.734781	0.0043	-	21	-	Temporary Access Road	Temporary	-	Field	2-301
386	**W-H38 & W-H40 Total**		**-**	**-**	**-**	**-**	**0.0110**	**-**	**54**	**-**	**-**	**-**	**-**	**Field**	
387	W-H33	RPWWD	PEM	Nicholas	38.124326	-80.735761	0.0590	-	952	-	Pipeline ROW	Temporary	-	Field	2-301
387	S-H71	RPW	R3UB2	Nicholas	38.124315	-80.735783	0.0257	-	415	-	Pipeline ROW	Temporary	-	Field	2-301
387	**S-H71 & W-H33 Total**		**-**	**-**	**-**	**-**	**0.0847**	**-**	**1367**	**-**	**-**	**-**	**-**	**Field**	
388	**W-H35**	**RPWWN**	**PEM**	**Nicholas**	**38.124117**	**-80.736018**	**0.0177**	**-**	**285**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-301**
389	**S-H67**	**RPW**	**R3UB2**	**Nicholas**	**38.120580**	**-80.736772**	**0.0235**	**-**	**379**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-302**
390	**S-H66**	**RPW**	**R4SB5**	**Nicholas**	**38.120088**	**-80.737022**	**0.0023**	**-**	**11**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-302**
391	**W-H31**	**RPWWN**	**PEM**	**Nicholas**	**38.116376**	**-80.735285**	**0.0139**	**-**	**67**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-303**
392	**S-H64**	**RPW**	**R4SB5**	**Nicholas**	**38.116279**	**-80.735319**	**0.0060**	**-**	**96**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-303**
393	**W-V4**	**RPWWN**	**PSS**	**Nicholas**	**38.115834**	**-80.731137**	**-**	**0.0031†**	**15†**	**-**	**Pipeline ROW**	**Temporary**	**ILF**	**Field**	**2-304**
394	**S-V3**	**RPW**	**R3UB1**	**Nicholas**	**38.115823**	**-80.730960**	**0.0219**	**-**	**354**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-304**
395	S-EF41	RPW	R4SB5	Nicholas	38.107549	-80.726284	0.0038	-	61	-	Pipeline ROW	Temporary	-	Field	2-305
395	W-EF31	RPWWD	PEM	Nicholas	38.107483	-80.726303	0.0208	-	336	-	Pipeline ROW/ATWS	Temporary	-	Field	2-305
395	**S-EF41 & W-EF31 Total**		**-**	**-**	**-**	**-**	**0.0246**	**-**	**397**	**-**	**-**	**-**	**-**	**Field**	
396	**W-M15**	**ISOLATE**	**PEM**	**Greenbrier**	**38.068055**	**-80.718035**	**0.0027**	**-**	**13**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-311**
397	**W-M16**	**ISOLATE**	**PEM**	**Greenbrier**	**38.067873**	**-80.718034**	**0.0037**	**-**	**18**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-311**
398	**W-M17**	**ISOLATE**	**PEM**	**Greenbrier**	**38.067698**	**-80.718179**	**0.0042**	**-**	**20**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-311**
399	**W-M18**	**ISOLATE**	**PEM**	**Greenbrier**	**38.061194**	**-80.720732**	**0.0415**	**-**	**669**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-312**
400	**W-M20**	**NRPWW**	**PEM**	**Greenbrier**	**38.060869**	**-80.723064**	**0.0031**	**-**	**15**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-312**
401	**W-M23**	**NRPWW**	**PEM**	**Greenbrier**	**38.060683**	**-80.722348**	**0.0616**	**-**	**994**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-312**
402	**W-M22**	**NRPWW**	**PSS**	**Greenbrier**	**38.060661**	**-80.722616**	**-**	**0.0039†**	**19†**	**-**	**Pipeline ROW**	**Temporary**	**ILF**	**Field**	**2-312**
403	**W-QR4**	**RPWWD**	**PEM**	**Greenbrier**	**38.057094**	**-80.729024**	**0.0370**	**-**	**179**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-314**
404	**W-J6**	**RPWWD**	**PFO**	**Greenbrier**	**38.053361**	**-80.732198**	**-**	**0.0744†**	**1,201†**	**-**	**Pipeline ROW**	**Temporary**	**ILF**	**Field**	**2-315**
405	**S-J31**	**NRPW**	**R6**	**Greenbrier**	**38.041774**	**-80.745842**	**0.0070**	**-**	**34**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-323**
406	**W-J9**	**NRPWW**	**PEM**	**Greenbrier**	**38.039366**	**-80.747651**	**0.0179**	**-**	**86**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-322**
407	W-KL37	RPWWD	PEM	Greenbrier	38.033817	-80.731491	0.0126	-	61	-	Temporary Access Road	Temporary	-	Field	2-328
407	W-KL38	RPWWD	PEM	Greenbrier	38.033422	-80.732880	0.0098	-	47	-	Temporary Access Road	Temporary	-	Field	2-328
407	W-IJ58-PEM-5	RPWWD	PEM	Greenbrier	38.030548	-80.736023	0.0004	-	2	-	Temporary Access Road	Temporary	-	Field	2-326
407	W-KL40	RPWWD	PEM	Greenbrier	38.029060	-80.736807	0.0312	-	151	-	Temporary Access Road	Temporary	-	Field	2-327
407	W-IJ61	RPWWD	PEM	Greenbrier	38.026898	-80.738411	0.0214	-	103	-	Temporary Access Road	Temporary	-	Field	2-327
407	W-IJ58-PEM-4	RPWWD	PEM	Greenbrier	38.024068	-80.739750	0.0024	-	12	-	Temporary Access Road	Temporary	-	Field	2-326
407	W-IJ58-PEM-2	RPWWD	PEM	Greenbrier	38.022593	-80.741917	0.0031	-	15	-	Temporary Access Road	Temporary	-	Field	2-326
407	W-IJ58-PEM-3	RPWWD	PEM	Greenbrier	38.021808	-80.743351	0.0056	-	27	-	Temporary Access Road	Temporary	-	Field	2-326
407	W-IJ58-PEM-1	RPWWD	PEM	Greenbrier	38.021745	-80.744012	0.0015	-	7	-	Temporary Access Road	Temporary	-	Field	2-326

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
407	W-KL37, W-KL38, W-IJ58, W-KL40 & W-IJ61 Total		-	-	-	-	0.0880	-	425	-	-	-	-	Field	
408	W-ST27	ISOLATE	PEM	Greenbrier	38.029124	-80.742585	0.0075	-	36	-	Temporary Access Road	Temporary	-	Field	2-321
409	W-J5	NRPWW	PSS	Greenbrier	38.028817	-80.743566	-	0.0052†	25†	-	Pipeline ROW	Temporary	ILF	Field	2-321
410	W-ST28	ISOLATE	PEM	Greenbrier	38.028800	-80.743155	0.0310	-	150	-	Temporary Access Road	Temporary	-	Field	2-321
411	S-J19	NRPW	R6	Greenbrier	38.028599	-80.743623	0.0044	-	71	-	Pipeline ROW	Temporary	-	Field	2-321
412	W-IJ60	RPWWN	PEM	Greenbrier	38.024335	-80.739643	0.0174	-	84	-	Temporary Access Road	Temporary	-	Field	2-326
413	S-J20	RPW	R3UB3	Greenbrier	38.023801	-80.747266	0.0592	-	955	-	Pipeline ROW	Temporary	-	Field	2-324
414	S-IJ66	RPW	R4SB3	Greenbrier	38.022216	-80.746495	0.0116	-	56	-	Temporary Access Road	Temporary	-	Field	2-325
415	W-IJ59	RPWWN	PEM	Greenbrier	38.022031	-80.743027	0.0024	-	12	-	Temporary Access Road	Temporary	-	Field	2-326
416	W-IJ57	RPWWD	PEM	Greenbrier	38.021723	-80.745579	0.0017	-	8	-	Temporary Access Road	Temporary	-	Field	2-325
417	S-I25	RPW	R4SB3	Greenbrier	38.020430	-80.753194	0.0086	-	139	-	Pipeline ROW	Temporary	-	Field	2-329
418	S-I26	RPW	R4SB5	Greenbrier	38.019129	-80.755220	0.0090	-	145	-	Pipeline ROW	Temporary	-	Field	2-329
419	S-I27	RPW	R4SB5	Greenbrier	38.018031	-80.755999	0.0091	-	147	-	Pipeline ROW	Temporary	-	Field	2-329
420	W-V6	RPWWN	PEM	Greenbrier	37.993269	-80.756363	0.0422	-	204	-	Temporary Access Road	Temporary	-	Field	2-333
421	W-M5	RPWWD	PEM	Greenbrier	37.987898	-80.764724	0.0058	-	28	-	Temporary Access Road	Temporary	-	Field	2-335
422	W-M6	NRPWW	PEM	Greenbrier	37.987344	-80.761908	0.0192	-	93	-	Temporary Access Road	Temporary	-	Field	2-335
423	W-QR2	RPWWD	PEM	Greenbrier	37.983978	-80.756817	-	0.0010	-	5	Permanent Access Road	Permanent	ILF	Field	2-336
423	W-QR2	RPWWD	PEM	Greenbrier	37.983212	-80.756099	0.2435	-	3929	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-336
423	S-I29	RPW	R4SB5	Greenbrier	37.982531	-80.755275	0.0117	-	57	-	ATWS	Temporary	-	Field	2-336
423	S-I29 & W-QR2 Total		-	-	-	-	0.2552	0.0010	3986	5	-	-	-	Field	
424	S-I28	RPW	R2UB3	Greenbrier	37.982078	-80.755369	0.0861	-	1389	-	Pipeline ROW	Temporary	-	Field	2-336
425	S-L26	RPW	R3UB	Greenbrier	37.981900	-80.755213	0.0079	-	127	-	Pipeline ROW	Temporary	-	Field	2-336
425	S-L26	RPW	R3UB	Greenbrier	37.980598	-80.754872	0.0114	-	184	-	Pipeline ROW	Temporary	-	Field	2-336
425	W-L16	RPWWD	PEM	Greenbrier	37.980653	-80.754908	0.0247	-	398	-	Pipeline ROW	Temporary	-	Field	2-336
425	S-L26 & W-L16 Total		-	-	-	-	0.0440	-	709	-	-	-	-	Field	
426	W-PP7	ISOLATE	PEM	Greenbrier	37.966818	-80.738483	0.0255	-	124	-	Pipeline ROW	Temporary	-	Field	2-339
427	S-EF38	RPW	R4SB5	Greenbrier	37.963259	-80.733162	0.0028	-	46	-	Pipeline ROW	Temporary	-	Field	2-339
428	S-L24	RPW	R4SB5	Greenbrier	37.963068	-80.733141	0.0065	-	106	-	Pipeline ROW	Temporary	-	Field	2-340
429	W-L20	NRPWW	PEM	Greenbrier	37.962843	-80.732518	0.0172	-	83	-	ATWS	Temporary	-	Field	2-340
430	W-L22	NRPWW	PEM	Greenbrier	37.962713	-80.732241	0.0131	-	63	-	ATWS	Temporary	-	Field	2-340

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
431	**W-L21**	**NRPWW**	**PEM**	**Greenbrier**	**37.962682**	**-80.732475**	**0.0266**	**-**	**129**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-340**
432	**S-L27**	**RPW**	**R4SB3**	**Greenbrier**	**37.960725**	**-80.732852**	**0.0035**	**-**	**56**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-340**
433	S-L30	RPW	R4SB5	Greenbrier	37.954276	-80.739708	0.0093	-	151	-	Pipeline ROW	Temporary	-	Field	2-341
433	W-L19	RPWWD	PEM	Greenbrier	37.954250	-80.739757	0.1060	-	1711	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-341
433	**S-L30 & W-L19 Total**		**-**	**-**	**-**	**-**	**0.1153**	**-**	**1861**	**-**	**-**	**-**	**-**	**Field**	
434	**S-L22**	**RPW**	**R2UB1**	**Greenbrier**	**37.954035**	**-80.739868**	**0.0517**	**-**	**834**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-341**
435	**W-L13**	**RPWWN**	**PEM**	**Greenbrier**	**37.953825**	**-80.740037**	**0.0316**	**-**	**509**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-341**
436	**W-L12**	**RPWWN**	**PEM**	**Greenbrier**	**37.953736**	**-80.739892**	**0.0075**	**-**	**36**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-341**
437	S-L20	RPW	R3UB3	Greenbrier	37.949579	-80.742646	0.0111	-	179	-	Pipeline ROW	Temporary	-	Field	2-342
437	W-L11	RPWWD	PEM	Greenbrier	37.949563	-80.742715	0.0194	-	94	-	Pipeline ROW	Temporary	-	Field	2-342
437	**S-L20 & W-L11 Total**		**-**	**-**	**-**	**-**	**0.0305**	**-**	**273**	**-**	**-**	**-**	**-**	**Field**	
438	**W-L8**	**RPWWN**	**PEM**	**Greenbrier**	**37.939016**	**-80.745277**	**0.0001**	**-**	**0**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-344**
439	**W-L4**	**RPWWN**	**PEM**	**Greenbrier**	**37.938675**	**-80.746774**	**0.0404**	**-**	**196**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-344**
440	S-L10	RPW	R3UB1	Greenbrier	37.938606	-80.746051	0.0013	-	6	-	Temporary Access Road	Temporary	-	Field	2-344
440	S-L10	RPW	R3UB1	Greenbrier	37.938308	-80.747009	0.0071	-	115	-	Pipeline ROW	Temporary	-	Field	2-344
440	W-L2	RPWWD	PEM	Greenbrier	37.938326	-80.746878	0.0393	-	635	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-344
440	**S-L10 & W-L2 Total**		**-**	**-**	**-**	**-**	**0.0477**	**-**	**756**	**-**	**-**	**-**	**-**	**Field**	
441	**W-L3**	**RPWWN**	**PEM**	**Greenbrier**	**37.938569**	**-80.746480**	**0.0136**	**-**	**66**	**-**	**Temporary Access Road/ATWS**	**Temporary**	**-**	**Field**	**2-344**
442	**S-L11**	**RPW**	**R4SB4**	**Greenbrier**	**37.938229**	**-80.746912**	**0.0018**	**-**	**9**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-344**
443	W-L7	RPWWD	PEM	Greenbrier	37.934077	-80.744896	-	0.0015	-	7	Permanent Access Road	Permanent	ILF	Field	2-345
443	W-L7	RPWWD	PEM	Greenbrier	37.934074	-80.744879	0.0021	-	10	-	Temporary Access Road	Temporary	-	Field	2-345
443	**W-L7 Total**		**-**	**-**	**-**	**-**	**0.0021**	**0.0015**	**10**	**7**	**-**	**-**	**-**	**Field**	
444	W-L6	RPWWD	PEM	Greenbrier	37.933862	-80.745240	0.0223	-	108	-	Temporary Access Road	Temporary	-	Field	2-345
444	W-L6	RPWWD	PEM	Greenbrier	37.933720	-80.745329	-	0.0188	-	91	Permanent Access Road	Permanent	ILF	Field	2-345
444	S-L13	RPW	R4SB5	Greenbrier	37.933655	-80.745327	-	0.0008	-	3	Permanent Access Road	Permanent	Spanishburg	Field	2-345
444	**S-L13 & W-L6 Total**		**-**	**-**	**-**	**-**	**0.0223**	**0.0196**	**108**	**94**	**-**	**-**	**-**	**Field**	
445	**W-EF28**	**NRPWW**	**PFO**	**Greenbrier**	**37.923033**	**-80.740465**	**-**	**0.0095†**	**46†**	**-**	**Anode Bed**	**Temporary**	**ILF**	**Field**	**2-347**
446	**S-EF39**	**NRPW**	**R6**	**Greenbrier**	**37.922828**	**-80.740670**	**0.0202**	**-**	**98**	**-**	**Anode Bed**	**Temporary**	**-**	**Field**	**2-347**
447	S-I21	RPW	R3UB1	Greenbrier	37.918228	-80.736774	0.0034	-	55	-	Pipeline ROW	Temporary	-	Field	2-348
447	S-I21	RPW	R3UB1	Greenbrier	37.918164	-80.736852	0.0089	-	143	-	Pipeline ROW	Temporary	-	Field	2-348
447	**S-I21 Total**		**-**	**-**	**-**	**-**	**0.0123**	**-**	**198**	**-**	**-**	**-**	**-**	**Field**	

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
448	**S-I22**	**RPW**	**R4SB3**	**Greenbrier**	**37.918041**	**-80.736833**	**0.0043**	**-**	**70**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-348**
449	**S-I23a**	**RPW**	**R4SB3**	**Greenbrier**	**37.917347**	**-80.738534**	**-**	**0.0030**	**-**	**10**	**Permanent Access Road**	**Permanent**	**Spanishburg**	**Field**	**2-348**
450	W-KL30	RPWWD	PEM	Greenbrier	37.917261	-80.745506	0.0664	-	322	-	Permanent Access Road	Temporary	-	Field	2-349
450	W-KL29-PEM	RPWWD	PEM	Greenbrier	37.916791	-80.744943	0.1438	-	696	-	Permanent Access Road	Temporary	-	Field	2-349
450	W-IJ47-PEM	RPWWD	PEM	Greenbrier	37.916423	-80.743551	-	0.0113	-	55	Permanent Access Road	Permanent	ILF	Field	2-349
450	W-IJ47-PEM	RPWWD	PEM	Greenbrier	37.916255	-80.743867	-	0.0520	-	252	Permanent Access Road	Permanent	ILF	Field	2-349
450	**W-KL30, W-KL29 & W-IJ47 Total**		**-**	**-**	**-**	**-**	**0.2102**	**0.0633**	**1018**	**307**	**-**	**-**	**-**	**Field**	
451	S-IJ54	NRPW	R6	Greenbrier	37.917146	-80.742478	0.0010	-	5	-	Temporary Access Road	Temporary	-	Field	2-349
451	S-IJ54	NRPW	R6	Greenbrier	37.917125	-80.742425	-	0.0036	-	12	Permanent Access Road	Permanent	Spanishburg	Field	2-349
451	**S-IJ54 Total**		**-**	**-**	**-**	**-**	**0.0010**	**0.0036**	**5**	**12**	**-**	**-**	**-**	**Field**	
452	W-W11	RPWWD	PEM	Greenbrier	37.911778	-80.729952	0.0016	-	8	-	Temporary Access Road	Temporary	-	Field	2-350
452	W-W11	RPWWD	PEM	Greenbrier	37.911778	-80.729952	-	0.0044	-	21	Permanent Access Road	Permanent	ILF	Field	2-350
452	S-W23	RPW	R4SB	Greenbrier	37.911730	-80.729941	0.0006	-	3	-	Temporary Access Road	Temporary	-	Field	2-350
452	**S-W23 & W-W11 Total**		**-**	**-**	**-**	**-**	**0.0022**	**0.0044**	**11**	**21**	**-**	**-**	**-**	**Field**	
453	W-W10	NRPWW	PEM	Greenbrier	37.911495	-80.727880	-	0.0439	-	212	Permanent Access Road	Permanent	ILF	Field	2-351
453	W-W10	NRPWW	PEM	Greenbrier	37.911495	-80.727880	0.0050	-	24	-	Temporary Access Raod	Temporary	-	Field	2-351
453	**W-W10 Total**		**-**	**-**	**-**	**-**	**0.0050**	**0.0439**	**24**	**212**	**-**	**-**	**-**	**Field**	
454	S-W22	NRPW	R6	Greenbrier	37.911127	-80.727485	-	0.0005	-	2	Permanent Access Road	Permanent	Spanishburg	Field	2-351
454	S-W22	NRPW	R6	Greenbrier	37.911104	-80.727487	0.0005	-	2	-	Temporary Access Road	Temporary	-	Field	2-351
454	**S-W22 Total**		**-**	**-**	**-**	**-**	**0.0005**	**0.0005**	**2**	**2**	**-**	**-**	**-**	**Field**	
455	W-W9	RPWWN	PEM	Greenbrier	37.910671	-80.728841	-	0.0087	-	42	Permanent Access Road	Permanent	ILF	Field	2-351
455	W-W9	RPWWN	PEM	Greenbrier	37.910671	-80.728841	0.0089	-	43	-	Temporary Access Road/ATWS	Temporary	-	Field	2-351
455	**W-W9 Total**		**-**	**-**	**-**	**-**	**0.0089**	**0.0087**	**43**	**42**	**-**	**-**	**-**	**Field**	
456	**W-FF1**	**RPWWN**	**PEM**	**Greenbrier**	**37.908821**	**-80.733706**	**0.0320**	**-**	**516**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-352**
457	**W-W13**	**RPWWD**	**PEM**	**Greenbrier**	**37.908489**	**-80.734405**	**0.0019**	**-**	**9**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-352**
458	**W-U8**	**NRPWW**	**PEM**	**Greenbrier**	**37.884175**	**-80.746490**	**0.0014**	**-**	**7**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-356**
459	**S-K30**	**RPW**	**R4SB5**	**Fayette**	**37.870431**	**-80.754175**	**0.0003**	**-**	**1**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-358**
460	W-EE6	NRPWW	PEM	Fayette	37.869071	-80.759476	-	0.0026	-	12	Station	Permanent	ILF	Field	2-358
460	W-EE7	NRPWW	PEM	Fayette	37.868952	-80.759689	-	0.0045	-	22	Station	Permanent	ILF	Field	2-358
460	S-A104	NRPW	R6	Fayette	37.869012	-80.757538	0.0211	-	102	-	Station	Temporary	-	Field	2-358
460	S-A104	NRPW	R6	Fayette	37.868771	-80.757108	-	0.0395	-	191	Station	Permanent	Spanishburg	Field	2-358
460	S-QR4	RPW	R4SB5	Fayette	37.865963	-80.762036	-	0.0135	-	65	Station	Permanent	Spanishburg	Field	2-359
460	S-QR4	RPW	R4SB5	Fayette	37.865903	-80.761885	0.0050	-	24	-	Station	Temporary	-	Field	2-359
460	**Stallworth Crossing W-EE6, W-EE7, S-A104 & SQR4 Total**		**-**	**-**	**-**	**-**	**0.0261**	**0.0601**	**126**	**290**	**-**	**-**	**-**	**Field**	
461	**S-K27**	**RPW**	**R4SB5**	**Fayette**	**37.866124**	**-80.757723**	**0.0011**	**-**	**5**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-360**

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
462	**S-K26**	**RPW**	**R4SB5**	**Fayette**	**37.866124**	**-80.757808**	**0.0012**	**-**	**19**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-360**
463	**W-KL25**	**RPWWN**	**PEM**	**Greenbrier**	**37.865552**	**-80.762049**	**0.1183**	**-**	**573**	**-**	**Temporary Ancillary Site**	**Temporary**	**-**	**Field**	**2-359**
464	**W-KL26**	**ISOLATE**	**PEM**	**Greenbrier**	**37.865505**	**-80.762470**	**0.0121**	**-**	**59**	**-**	**Temporary Ancillary Site**	**Temporary**	**-**	**Field**	**2-359**
465	**W-KL22**	**RPWWN**	**PEM**	**Greenbrier**	**37.865324**	**-80.761812**	**0.0694**	**-**	**336**	**-**	**Temporary Ancillary Site**	**Temporary**	**-**	**Field**	**2-359**
466	**W-KL23**	**RPWWN**	**PEM**	**Greenbrier**	**37.864995**	**-80.761621**	**0.4982**	**-**	**2412**	**-**	**Temporary Ancillary Site**	**Temporary**	**-**	**Field**	**2-359**
467	**W-K7**	**RPWWN**	**PEM**	**Greenbrier**	**37.863527**	**-80.757286**	**0.3206**	**-**	**5173**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-360**
468	S-K17	RPW	R3UB3	Greenbrier	37.863065	-80.757391	0.0432	-	698	-	Pipeline ROW	Temporary	-	Field	2-359
468	W-IJ30	RPWWD	PEM	Greenbrier	37.862357	-80.757476	0.3236	-	5221	-	Pipeline ROW	Temporary	-	Field	2-360
468	**S-K17 & W-IJ30 Total**		**-**	**-**	**-**	**-**	**0.3668**	**-**	**5919**	**-**	**-**	**-**	**-**	**Field**	
469	**W-IJ28**	**RPWWN**	**PEM**	**Greenbrier**	**37.862331**	**-80.758500**	**2.2955**	**-**	**11110**	**-**	**Temporary Access Road/ATWS**	**Temporary**	**-**	**Field**	**2-360**
470	**W-UV9**	**RPWWN**	**PEM**	**Greenbrier**	**37.862309**	**-80.757756**	**0.4361**	**-**	**2111**	**-**	**Pipeline ROW/ATWS**	**Temporary**	**-**	**Field**	**2-360**
471	**W-UV11**	**RPWWN**	**PEM**	**Greenbrier**	**37.861173**	**-80.757726**	**0.0285**	**-**	**138**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-360**
472	W-UV10	RPWWN	PEM	Greenbrier	37.861078	-80.757968	0.0092	-	45	-	ATWS	Temporary	-	Field	2-360
472	W-UV10	RPWWN	PEM	Greenbrier	37.861066	-80.757954	0.0035	-	17	-	Pipeline ROW	Temporary	-	Field	2-360
472	**W-UV10 Total**		**-**	**-**	**-**	**-**	**0.0127**	**-**	**62**	**-**	**-**	**-**	**-**	**Field**	
473	W-K9-PEM-1	RPWWD	PEM	Greenbrier	37.860916	-80.757817	0.0354	-	572	-	Pipeline ROW	Temporary	-	Field	2-360
473	S-K19	RPW	R4SB5	Greenbrier	37.860940	-80.757825	0.0107	-	172	-	Pipeline ROW	Temporary	-	Field	2-360
473	**S-K19 & W-K9 Total**		**-**	**-**	**-**	**-**	**0.0461**	**-**	**744**	**-**	**-**	**-**	**-**	**Field**	
474	**W-IJ38**	**RPWWN**	**PEM**	**Greenbrier**	**37.860502**	**-80.759420**	**0.0638**	**-**	**309**	**-**	**Temporary Access Road/ATWS**	**Temporary**	**-**	**Field**	**2-360**
475	**W-IJ29**	**RPWWN**	**PEM**	**Greenbrier**	**37.859892**	**-80.759247**	**0.0302**	**-**	**146**	**-**	**ATWS**	**Temporary**	**-**	**Field**	**2-360**
476	**W-K10**	**RPWWN**	**PEM**	**Greenbrier**	**37.858743**	**-80.755724**	**0.0068**	**-**	**33**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-361**
477	**S-K21**	**RPW**	**R3UB1**	**Greenbrier**	**37.858566**	**-80.755584**	**0.0189**	**-**	**304**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-361**
478	**S-K22**	**RPW**	**R3UB1**	**Greenbrier**	**37.858315**	**-80.755546**	**0.0125**	**-**	**202**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-361**
479	**W-K12**	**RPWWN**	**PEM**	**Greenbrier**	**37.857129**	**-80.755257**	**0.0024**	**-**	**12**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-361**
480	W-UV4	RPWWD	PSS	Greenbrier	37.854391	-80.755038	-	0.0885†	1427†	-	Pipeline ROW	Temporary	ILF	Field	2-361
480	S-UV6	RPW	R5RB	Greenbrier	37.854386	-80.754981	0.0161	-	260	-	Pipeline ROW	Temporary	-	Field	2-361
480	**S-UV6 & W-UV4 Total**		**-**	**-**	**-**	**-**	**0.0161**	**0.0885**	**1687**	**-**	**-**	**-**	**-**	**Field**	
481	W-UV8	RPWWD	PEM	Greenbrier	37.851590	-80.752937	0.4913	-	7926	-	Pipeline ROW	Temporary	-	Field	2-362
481	S-UV2	RPW	R5UB2	Greenbrier	37.851099	-80.752978	0.0324	-	523	-	Pipeline ROW	Temporary	-	Field	2-362
481	**S-UV2 & W-UV8 Total**		**-**	**-**	**-**	**-**	**0.5237**	**-**	**8449**	**-**	**-**	**-**	**-**	**Field**	
482	**S-U22**	**RPW**	**R4SB2**	**Greenbrier**	**37.839558**	**-80.748496**	**0.0221**	**-**	**356**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-364**
483	**S-FF1**	**NRPW**	**R6**	**Greenbrier**	**37.837519**	**-80.751898**	**0.0029**	**-**	**14**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-364**
484	S-EE4	RPW	R4SB5	Summers	37.813881	-80.748817	0.0079	-	127	-	Pipeline ROW	Temporary	-	Field	2-368

Aquatic Resource Crossing Table
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Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
484	W-EE4	RPWWD	PEM	Summers	37.813845	-80.748769	0.0453	-	730	-	Pipeline ROW	Temporary	-	Field	2-368
484	**S-EE4 & W-EE4 Total**		**-**	**-**	**-**	**-**	**0.0532**	**-**	**857**	**-**	**-**	**-**	**-**	**Field**	
485	S-M6	RPW	R4SB6	Summers	37.807929	-80.746327	0.0118	-	190	-	Pipeline ROW	Temporary	-	Field	2-369
485	W-M2	RPWWD	PEM	Summers	37.807878	-80.746307	0.0381	-	614	-	Pipeline ROW	Temporary	-	Field	2-369
485	S-M6	RPW	R4SB6	Summers	37.807733	-80.746267	0.0023	-	36	-	Pipeline ROW	Temporary	-	Field	2-369
485	**S-M6 & W-M2 Total**		**-**	**-**	**-**	**-**	**0.0522**	**-**	**840**	**-**	**-**	**-**	**-**	**Field**	
486	S-J13	NRPW	R6	Summers	37.797484	-80.733605	0.0085	-	137	-	Pipeline ROW	Temporary	-	Field	2-371
486	S-J13	NRPW	R6	Summers	37.796572	-80.732397	0.0088	-	142	-	Pipeline ROW	Temporary	-	Field	2-371
486	S-J13	NRPW	R6	Summers	37.795915	-80.731850	0.0114	-	183	-	Pipeline ROW	Temporary	-	Field	2-371
486	**S-J13 Total**		**-**	**-**	**-**	**-**	**0.0287**	**-**	**462**	**-**	**-**	**-**	**-**	**Field**	
487	**S-M5**	**NRPW**	**R6**	**Summers**	**37.792243**	**-80.728802**	**0.0136**	**-**	**219**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-372**
488	**S-M4**	**NRPW**	**R6**	**Summers**	**37.786834**	**-80.728719**	**0.0032**	**-**	**16**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-373**
489	**S-J12**	**NRPW**	**R6**	**Summers**	**37.784725**	**-80.733873**	**0.0051**	**-**	**25**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-374**
490	W-I10	NRPWW	PEM	Summers	37.783907	-80.718899	-	0.0550	-	266	Permanent Access Road	Permanent	Spanishburg	Field	2-376
490	W-I10	NRPWW	PEM	Summers	37.783879	-80.718903	0.0190	-	92	-	Temporary Access Road	Temporary	-	Field	2-376
490	**W-I10 Total**		**-**	**-**	**-**	**-**	**0.0190**	**0.0550**	**92**	**266**	**-**	**-**	**-**	**Field**	
491	**S-I13**	**RPW**	**R4SB5**	**Summers**	**37.782534**	**-80.719085**	**0.0296**	**-**	**478**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-376**
492	**S-I14**	**RPW**	**R4SB5**	**Summers**	**37.781099**	**-80.719318**	**0.0141**	**-**	**227**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-376**
493	**S-I15**	**RPW**	**R4SB5**	**Summers**	**37.779878**	**-80.720470**	**0.0180**	**-**	**290**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-379**
494	**S-I16**	**RPW**	**R4SB5**	**Summers**	**37.779381**	**-80.721388**	**0.0076**	**-**	**123**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-379**
495	**TTWV-S-205**	**RPW**	**R4**	**Summers**	**37.776921**	**-80.764974**	**0.0053**	**-**	**26**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-384**
496	TTWV-S-51	RPW	R2	Summers	37.776902	-80.763594	0.0007	-	3	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.776661	-80.761885	0.0265	-	128	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.776522	-80.761101	0.0348	-	168	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.776437	-80.760375	0.0086	-	42	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.776293	-80.767901	0.0217	-	105	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.775930	-80.757289	0.0021	-	10	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.775895	-80.757821	0.0503	-	243	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.775622	-80.756384	0.0148	-	72	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-W-55	RPWWD	PFO	Summers	37.775376	-80.755362	0.3435	-	1663	-	Temporary Access Road	Temporary	ILF	Desktop	2-383
496	TTWV-S-51	RPW	R2	Summers	37.774948	-80.743137	0.0141	-	68	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	TTWV-S-51	RPW	R2	Summers	37.774722	-80.740492	0.0275	-	133	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
496	TTWV-S-51	RPW	R2	Summers	37.774625	-80.748093	0.0165	-	80	-	Temporary Access Road	Temporary	-	Desktop	2-381, 2-382, 2-383, 2-384
496	S-I12	RPW	R4SB3	Summers	37.775891	-80.710797	-	0.0035	-	11	Permanent Access Road	Permanent	Spanishburg	Field	2-377
496	S-I19	RPW	R2UB1	Summers	37.772089	-80.732901	0.0265	-	428	-	Pipeline ROW	Temporary	-	Field	2-380
496	TTWV-W-54	RPWWD	PFO	Summers	37.774952	-80.742788	0.1820	-	881	-	Temporary Access Road	Temporary	Spanishburg	Desktop	2-382
496	**TTWV-S-51, S-I12, S-I19, TTWV-W-55 & TTWV-W-54 Total**			**-**	**-**		**0.7696**	**0.0035**	**4024**	**11**					
497	**TTWV-S-204**	**RPW**	**R4**	**Summers**	**37.776568**	**-80.761285**	**0.0043**	**-**	**21**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-383**
498	TTWV-S-52	RPW	R4	Summers	37.776305	-80.760156	0.0124	-	60	-	Temporary Access Road	Temporary	-	Desktop	2-383
498	TTWV-W-56 PFO	RPWWD	PFO	Summers	37.775814	-80.75768	-	0.0015†	7†	-	†Temporary Access Road	Temporary	Spanishburg	Desktop	2-383
498	TTWV-W-56 PEM	RPWWD	PEM	Summers	37.775722	-80.757056	0.1401	-	678	-	Temporary Access Road	Temporary	-	Desktop	2-383
498	**TTWV-S-52 & TTWV-W-56 Total**			**-**	**-**		**0.1525**	**0.0015**	**745**	**-**					
499	**S-I17**	**NRPW**	**R6**	**Summers**	**37.775160**	**-80.728058**	**0.0045**	**-**	**72**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-380**
500	**TTWV-S-47**	**RPW**	**R3**	**Summers**	**37.774865**	**-80.740009**	**0.0179**	**-**	**87**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-381**
501	**TTWV-S-206**	**NRPW**	**R6**	**Summers**	**37.774806**	**-80.746459**	**0.0047**	**-**	**23**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-382**
502	**S-I10**	**RPW**	**R4SB4**	**Summers**	**37.772437**	**-80.713781**	**-**	**0.0018**	**-**	**9**	**Permanent Access Road**	**Permanent**	**Spanishburg**	**Field**	**2-378**
503	**S-I18**	**RPW**	**R3UB1**	**Summers**	**37.772353**	**-80.732996**	**0.0110**	**-**	**53**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-380**
504	**S-I20**	**RPW**	**R3UB1**	**Summers**	**37.771406**	**-80.733241**	**0.0212**	**-**	**342**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-380**
505	**S-J10**	**NRPW**	**R6**	**Summers**	**37.748657**	**-80.755523**	**0.0009**	**-**	**4**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-389**
506	**S-L8**	**RPW**	**R4RB1**	**Summers**	**37.748131**	**-80.755911**	**0.0001**	**-**	**1**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-389**
507	**S-J9**	**NRPW**	**R6**	**Summers**	**37.746997**	**-80.756919**	**0.0014**	**-**	**7**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-390**
508	**S-L7**	**RPW**	**R4SB3**	**Summers**	**37.746624**	**-80.757288**	**0.0008**	**-**	**4**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-390**
509	TTWV-S-56	NRPW	R6	Summers	37.740078	-80.752948	0.0009	-	4	-	Temporary Access Road	Temporary	-	Desktop	2-392
509	TTWV-S-56	NRPW	R6	Summers	37.740028	-80.752946	-	0.0032	-	16	Permanent Access Road	Permanent	Spanishburg	Desktop	2-392
509	TTWV-S-56	NRPW	R6	Summers	37.739978	-80.752943	0.0009	-	4	-	Temporary Access Road	Temporary	-	Desktop	2-392
509	**TTWV-S-56 Total**			**-**	**-**		**0.0018**	**0.0032**	**8**	**16**					
510	TTWV-S-54	NRPW	R6	Summers	37.739982	-80.752693	0.0009	-	4	-	Temporary Access Road	Temporary	-	Desktop	2-392
510	TTWV-S-54	NRPW	R6	Summers	37.739944	-80.752724	-	0.0029	-	14	Permanent Access Road	Permanent	Spanishburg	Desktop	2-392
510	TTWV-S-54	NRPW	R6	Summers	37.739906	-80.752755	0.0009	-	4	-	Temporary Access Road	Temporary	-	Desktop	2-392
510	**TTWV-S-54 Total**			**-**	**-**		**0.0018**	**0.0029**	**8**	**14**					
511	TTWV-S-57	NRPW	R6	Summers	37.739755	-80.752133	0.0011	-	5	-	Temporary Access Road	Temporary	-	Desktop	2-392
511	TTWV-S-57	NRPW	R6	Summers	37.739725	-80.752181	-	0.0037	-	18	Permanent Access Road	Permanent	Spanishburg	Desktop	2-392

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
511	TTWV-S-57	NRPW	R6	Summers	37.739696	-80.75223	0.0012	-	6	-	Temporary Access Road	Temporary	-	Desktop	2-392
511	**TTWV-S-57 Total**			**-**	**-**		**0.0023**	**0.0037**	**11**	**18**					
512	TTWV-S-202	RPW	R4	Summers	37.739597	-80.754326	0.0016	-	8	-	Temporary Access Road	Temporary	-	Desktop	2-392, 2-393
512	TTWV-S-202	RPW	R4	Summers	37.73954	-80.75432	-	0.0051	-	25	Permanent Access Road	Permanent	Spanishburg	Desktop	2-392, 2-393
512	TTWV-S-202	RPW	R4	Summers	37.739483	-80.754315	0.0016	-	8	-	Temporary Access Road	Temporary	-	Desktop	2-392, 2-393
512	**TTWV-S-202 Total**			**-**	**-**		**0.0032**	**0.0051**	**16**	**25**					
513	TTWV-S-60	NRPW	R6	Summers	37.736275	-80.75974	0.0026	-	13	-	Temporary Access Road	Temporary	-	Desktop	2-393
513	TTWV-S-60	NRPW	R6	Summers	37.736223	-80.759806	-	0.0048	-	23	Permanent Access Road	Permanent	Spanishburg	Desktop	2-393
513	TTWV-S-60	NRPW	R6	Summers	37.736175	-80.759857	0.0014	-	7	-	Temporary Access Road	Temporary	-	Desktop	2-393
513	**TTWV-S-60 Total**			**-**	**-**		**0.0040**	**0.0048**	**20**	**23**					
514	TTWV-S-59	NRPW	R6	Summers	37.736221	-80.760079	0.0019	-	9	-	Temporary Access Road	Temporary	-	Desktop	2-393
514	TTWV-S-59	NRPW	R6	Summers	37.73616	-80.760133	-	0.0055	-	27	Permanent Access Road	Permanent	Spanishburg	Desktop	2-393
514	TTWV-S-59	NRPW	R6	Summers	37.7361	-80.760181	0.0017	-	8	-	Temporary Access Road	Temporary	-	Desktop	2-393
514	**TTWV-S-59 Total**			**-**	**-**		**0.0036**	**0.0055**	**17**	**27**					
515	**S-N5**	**RPW**	**R3UB3**	**Summers**	**37.704240**	**-80.744827**	**0.0040**	**-**	**65**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-398**
516	**S-K14**	**NRPW**	**R6**	**Summers**	**37.696788**	**-80.739242**	**0.0089**	**-**	**143**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-399**
517	**S-N3**	**NRPW**	**R6**	**Summers**	**37.694776**	**-80.736952**	**0.0164**	**-**	**265**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-400**
518	S-N2	RPW	R2UB1	Summers	37.694507	-80.736682	0.0362	-	584	-	Pipeline ROW	Temporary	-	Field	2-400
518	S-M3	RPW	R3UB1	Summers	37.692868	-80.734247	0.0183	-	295	-	Pipeline ROW	Temporary	-	Field	2-400
518	**S-N2 & S-M3 Total**		**-**	**-**	**-**	**-**	**0.0545**	**-**	**879**	**-**	**-**	**-**	**-**	**Field**	
519	**S-CD23**	**NRPW**	**R6**	**Summers**	**37.694228**	**-80.736099**	**0.0181**	**-**	**88**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-400**
520	S-N4	NRPW	R6	Summers	37.693961	-80.735841	0.0115	-	186	-	Pipeline ROW	Temporary	-	Field	2-400
520	W-EF40	RPWWD	PEM	Summers	37.693888	-80.735663	0.0568	-	916	-	Pipeline ROW	Temporary	-	Field	2-400
520	**S-N4 & W-EF40 Total**		**-**	**-**	**-**	**-**	**0.0683**	**-**	**1102**	**-**	**-**	**-**	**-**	**Field**	
521	**S-KL29**	**RPW**	**R2UB1**	**Summers**	**37.692932**	**-80.733839**	**0.0863**	**-**	**1392**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-400**
522	TTWV-W-MM20	RPWWD	PFO	Summers	37.681648	-80.730271	0.1407	-	2270	-	Pipeline ROW	Temporary	ILF	Desktop	2-403
522	TTWV-W-MM20	RPWWD	PFO	Summers	37.681037	-80.730074	0.2458	-	1190	-	Temporary Access Road	Temporary	ILF	Desktop	2-403
522	S-I8	TNW	R2RB2	Summers	37.680131	-80.731502	0.0934	-	1507^	-	Pipeline ROW	Temporary	-	Field	2-403 & 2-404
522	**TTWV-W-MM20 & S-I8Total**		**-**	**-**	**-**	**-**	**0.4799**	**-**	**4967**	**-**	**-**	**-**	**-**		
523	**S-EF53**	**RPW**	**R4SB5**	**Summers**	**37.681323**	**-80.729672**	**0.0095**	**-**	**46**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-403**
524	**S-I9**	**RPW**	**R4SB5**	**Summers**	**37.675977**	**-80.732822**	**0.0195**	**-**	**314**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-404**
525	**W-EF36**	**RPWWN**	**PEM**	**Summers**	**37.675423**	**-80.732001**	**0.0047**	**-**	**76**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-404**
526	S-K10	RPW	R4SB5	Summers	37.675079	-80.734384	0.0013	-	6	-	Temporary Access Road	Temporary	-	Field	2-404
526	S-K10	RPW	R4SB5	Summers	37.675070	-80.734447	-	0.0043	-	21	Permanent Access Road	Permanent	Spanishburg	Field	2-404
526	S-K10	RPW	R4SB5	Summers	37.675058	-80.734522	0.0013	-	6	-	Temporary Access Road	Temporary	-	Field	2-404
526	**S-K10 Total**		**-**	**-**	**-**	**-**	**0.0026**	**0.0043**	**12**	**21**	**-**	**-**	**-**	**Field**	
527	**S-L4**	**RPW**	**R3UB1**	**Summers**	**37.673213**	**-80.729772**	**0.0176**	**-**	**284**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-404**
528	**S-L2**	**RPW**	**R4SB3**	**Summers**	**37.671392**	**-80.728311**	**0.0081**	**-**	**130**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-406**
529	W-K2-PEM	RPWWD	PEM	Summers	37.668130	-80.723493	0.0140	-	225	-	Pipeline ROW	Temporary	-	Field	2-407

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
529	S-L1	RPW	R3UB1	Summers	37.668076	-80.723470	0.0104	-	168	-	Pipeline ROW	Temporary	-	Field	2-407
529	**S-L1 & W-K2 Total**		**-**	**-**	**-**	**-**	**0.0244**	**-**	**393**	**-**	**-**	**-**	**-**	**Field**	
530	S-K5	NRPW	R6	Summers	37.667876	-80.726202	0.0028	-	14	-	Temporary Access Road	Temporary	-	Field	2-407
530	S-K5	NRPW	R6	Summers	37.665862	-80.725660	0.0003	-	1	-	Temporary Access Road	Temporary	-	Field	2-407
530	**S-K5 Total**		**-**	**-**	**-**	**-**	**0.0031**	**-**	**15**	**-**	**-**	**-**	**-**	**Field**	
531	**S-J5**	**RPW**	**R2UB1**	**Summers**	**37.666864**	**-80.721794**	**0.0471**	**-**	**759**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-407**
532	**S-J4**	**RPW**	**R4SB3**	**Summers**	**37.663926**	**-80.715460**	**0.0106**	**-**	**171**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-408**
533	S-G47	NRPW	R6	Summers	37.654112	-80.702579	0.0037	-	60	-	Pipeline ROW	Temporary	-	Field	2-410
533	W-G7	NRPWW	PEM	Summers	37.654106	-80.702592	0.0191	-	309	-	Pipeline ROW	Temporary	-	Field	2-410
533	**S-G47 & W-G7 Total**		**-**	**-**	**-**	**-**	**0.0228**	**-**	**369**	**-**	**-**	**-**	**-**	**Field**	
534	**S-Q19**	**RPW**	**R3UB3**	**Monroe**	**37.629373**	**-80.711725**	-	**0.0028**	-	**9**	**Permanent Access Road**	**Permanent**	**Spanishburg**	**Field**	**2-420**
535	**S-G52**	**NRPW**	**R6**	**Monroe**	**37.627537**	**-80.695593**	**0.0066**	**-**	**106**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-418**
536	**S-G49**	**RPW**	**R3RB1**	**Monroe**	**37.627381**	**-80.695679**	**0.0397**	**-**	**640**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-418**
537	**S-G48**	**RPW**	**R2RB2**	**Monroe**	**37.627308**	**-80.695759**	**0.0360**	**-**	**580**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-418**
538	**S-PP13**	**NRPW**	**R6**	**Monroe**	**37.623457**	**-80.693530**	**0.0106**	**-**	**51**	**-**	**Temporary Access Road/ATWS**	**Temporary**	**-**	**Field**	**2-418**
539	S-H61a	RPW	R3RB1	Monroe	37.619090	-80.699994	0.0189	-	91	-	Temporary Access Road	Temporary	-	Field	2-422
539	S-H61a	RPW	R3RB1	Monroe	37.618454	-80.702473	0.0139	-	67	-	Temporary Access Road	Temporary	-	Field	2-422
539	S-H61	RPW	R3RS2	Monroe	37.618426	-80.699138	0.0434	-	700	-	Pipeline ROW	Temporary	-	Field	2-422
539	S-H61a	RPW	R3RB1	Monroe	37.618410	-80.704037	0.0143	-	69	-	Temporary Access Road	Temporary	-	Field	2-422
539	**S-H61 & S-H61a Total**		**-**	**-**	**-**	**-**	**0.0905**	**-**	**927**	**-**	**-**	**-**	**-**	**Field**	
540	W-OP1	RPWWD	PEM	Monroe	37.600067	-80.700400	0.1359	-	2193	-	Pipeline ROW	Temporary	-	Field	2-426
540	S-OP1	RPW	R2UB3	Monroe	37.600003	-80.700509	0.0090	-	145	-	Pipeline ROW	Temporary	-	Field	2-426
540	W-CD37	RPWWD	PEM	Monroe	37.598471	-80.699393	0.0176	-	85	-	Temporary Access Road	Temporary	-	Field	2-426
540	**S-OP1, W-OP1 &W-CD37 Total**		**-**	**-**	**-**	**-**	**0.1625**	**-**	**2423**	**-**	**-**	**-**	**-**	**Field**	
541	**W-CD40**	**RPWWN**	**PEM**	**Monroe**	**37.598069**	**-80.699728**	**0.0112**	**-**	**54**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-426**
542	**W-CD39**	**RPWWD**	**PEM**	**Monroe**	**37.598051**	**-80.700150**	**0.0024**	**-**	**11**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Field**	**2-426**
543	S-IJ65	NRPW	R6	Monroe	37.592083	-80.705700	0.0013	-	6	-	Pipeline ROW	Temporary	-	Field	2-427
543	S-IJ65	NRPW	R6	Monroe	37.591837	-80.705747	0.0044	-	21	-	Pipeline ROW	Temporary	-	Field	2-427
543	**S-IJ65 Total**		**-**	**-**	**-**	**-**	**0.0057**	**-**	**27**	**-**	**-**	**-**	**-**	**Field**	
544	**S-IJ64**	**NRPW**	**R6**	**Monroe**	**37.591822**	**-80.705874**	**0.0104**	**-**	**168**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-427**
545	S-A63	RPW	R2UB1	Monroe	37.560460	-80.710233	0.0203	-	327	-	Pipeline ROW	Temporary	-	Field	2-431
545	S-A60	RPW	R2UB1	Monroe	37.558698	-80.709966	0.0358	-	578	-	Pipeline ROW	Temporary	-	Field	2-431 & 2-432
545	**S-A63 & S-A60 Total**		**-**	**-**	**-**	**-**	**0.0561**	**-**	**905**	**-**	**-**	**-**	**-**	**Field**	
546	W-A13	RPWWD	PEM	Monroe	37.559410	-80.710082	0.2991	-	4826	-	Pipeline ROW/Temporary Access Road	Temporary	-	Field	2-432
546	W-A13	RPWWD	PEM	Monroe	37.559332	-80.709734	-	0.0228	-	110	Permanent Access Road	Permanent	Spanishburg	Field	2-432
546	S-A61	NRPW	R6	Monroe	37.559351	-80.709683	0.0012	-	6	-	Temporary Access Road	Temporary	-	Field	2-432
546	S-A61	NRPW	R6	Monroe	37.559334	-80.709736	-	0.0041	-	14	Permanent Access Road	Permanent	Spanishburg	Field	2-432
546	S-A61	NRPW	R6	Monroe	37.559328	-80.709792	0.0013	-	6	-	Temporary Access Road	Temporary	-	Field	2-432
546	S-A61	NRPW	R6	Monroe	37.559320	-80.710037	0.0131	-	211	-	Pipeline ROW	Temporary	-	Field	2-432

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
546	**S-A61 & W-A13 Total**		**-**	**-**	**-**	**-**	**0.3147**	**0.0269**	**5049**	**124**	**-**	**-**	**-**	**Field**	
547	TTWV-S-203	RPW	R4	Monroe	37.556386	-80.708859	0.0009	-	4	-	Temporary Access Road	Temporary	-	Desktop	2-432
547	TTWV-S-203	RPW	R4	Monroe	37.556366	-80.708912	-	0.0030	-	14	Permanent Access Road	Permanent	Spanishburg	Desktop	2-432
547	TTWV-S-203	RPW	R4	Monroe	37.556345	-80.708966	0.0009	-	4	-	Temporary Access Road	Temporary	-	Desktop	2-432
547	**TTWV-S-203 Total**						**0.0018**	**0.0030**	**8**	**14**					
548	**S-D31**	**RPW**	**R2UB3**	**Monroe**	**37.554163**	**-80.710853**	**0.1120**	**-**	**1807**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-432**
549	**S-D29**	**RPW**	**R4SB3**	**Monroe**	**37.547394**	**-80.712099**	**0.0004**	**-**	**2**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-433**
550	**TTWV-W-29**	**RPWWN**	**PEM**	**Monroe**	**37.540583**	**-80.725577**	**0.0280**	**-**	**135**	**-**	**ATWS**	**Temporary**	**-**	**Desktop**	**2-436**
551	TTWV-W-21	RPWWD	PEM	Monroe	37.540505	-80.723946	0.1613	-	781	-	Temporary Access Road	Temporary	-	Desktop	2-436
551	TTWV-W-21	RPWWD	PEM	Monroe	37.540366	-80.723439	-	0.0342	-	165	Permanent Access Road	Permanent	Spanishburg	Desktop	2-436
551	**TTWV-W-21 Total**		**-**	**-**	**-**	**-**	**0.1613**	**0.0342**	**781**	**165**	**-**	**-**	**-**	**Desktop**	
552	**TTWV-S-102**	**RPW**	**R4**	**Monroe**	**37.540254**	**-80.723104**	**-**	**0.0018**	**-**	**9**	**Permanent Access Road**	**Permanent**	**Spanishburg**	**Desktop**	**2-436**
553	TTWV-W-20	RPWWD	PEM	Monroe	37.539873	-80.722782	0.0878	-	425	-	Temporary Access Road	Temporary	-	Desktop	2-436
553	TTWV-W-20	RPWWD	PEM	Monroe	37.539856	-80.722691	-	0.0631	-	306	Permanent Access Road	Permanent	Spanishburg	Desktop	2-436
553	**TTWV-W-20 Total**		**-**	**-**	**-**	**-**	**0.0878**	**0.0631**	**425**	**306**	**-**	**-**	**-**	**Desktop**	
554	**S-D25**	**RPW**	**R4SB3**	**Monroe**	**37.538768**	**-80.718855**	**0.0079**	**-**	**127**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-435**
555	**TTWV-S-101**	**NRPW**	**R6**	**Monroe**	**37.538403**	**-80.719633**	**-**	**0.0017**	**-**	**8**	**Permanent Access Road**	**Permanent**	**Spanishburg**	**Desktop**	**2-435**
556	**S-F18**	**RPW**	**R3RB1**	**Monroe**	**37.536872**	**-80.716923**	**0.0612**	**-**	**988**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-435**
557	**S-Z5**	**NRPW**	**R6**	**Monroe**	**37.524333**	**-80.711450**	**0.0034**	**-**	**56**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-438**
558	**S-Z4**	**NRPW**	**R6**	**Monroe**	**37.524302**	**-80.711444**	**0.0043**	**-**	**69**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-438**
559	TTWV-S-201	RPW	R4	Monroe	37.520159	-80.707386	0.0050	-	24	-	Pipeline ROW/Temporary Access Road/ATWS	Temporary	-	Desktop	2-439
559	TTWV-W-200	RPWWD	PEM	Monroe	37.520155	-80.707392	0.0324	-	157	-	Temporary Access Road/ATWS	Temporary	-	Desktop	2-439
559	S-MN2	RPW	R3RB1	Monroe	37.520028	-80.707404	0.0014	-	7	-	Pipeline ROW	Temporary	-	Field	2-439
559	TTWV-S-MN2	RPW	R3RB1	Monroe	37.519990	-80.707537	0.0161	-	260	-	Pipeline ROW	Temporary	-	Desktop	2-439
559	**S-MN2, TTWV-S-MN2, TTWV-S-201 & TTWV-W-200 Total**		**-**	**-**	**-**	**-**	**0.0550**	**-**	**448**	**-**	**-**	**-**	**-**	**Desktop**	
560	**TTWV-S-109**	**RPW**	**R3**	**Monroe**	**37.501647**	**-80.690488**	**0.0113**	**-**	**55**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-446**
561	TTWV-S-108	RPW	R2	Monroe	37.501612	-80.690263	0.0479	-	772	-	Temporary Access Road	Temporary	-	Desktop	2-444
561	TTWV-S-108	RPW	R2	Monroe	37.500277	-80.691489	0.0286	-	461	-	Pipeline ROW	Temporary	-	Desktop	2-444
561	TTWV-W-32	RPWWD	PFO	Monroe	37.501271	-80.690426	0.3927	-	6335	-	Pipeline ROW/Temporary Access Road	Temporary	Spanishburg	Desktop	2-444
561	**TTWV-S-108 & TTWV-W-32 Total**						**0.4692**	**-**	**7568**	**-**					
562	**TTWV-S-145**	**NRPW**	**R6**	**Monroe**	**37.498632**	**-80.688114**	**0.0006**	**-**	**3**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-446**
563	**TTWV-S-146**	**RPW**	**R4**	**Monroe**	**37.492867**	**-80.683093**	**0.0005**	**-**	**2**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-447**
564	TTWV-W-34	NRPWW	PEM	Monroe	37.492285	-80.682884	-	0.0006	-	3	Permanent Access Road	Permanent	Spanishburg	Desktop	2-447
564	TTWV-W-34	NRPWW	PEM	Monroe	37.492164	-80.682924	0.0511	-	247	-	Pipeline ROW/Temporary Access Road	Temporary	-	Desktop	2-447

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
564	**TTWV-W-34 Total**		**-**	**-**	**-**	**-**	**0.0511**	**0.0006**	**247**	**3**	**-**	**-**	**-**	**Desktop**	
565	**TTWV-S-147**	**NRPW**	**R6**	**Monroe**	**37.490491**	**-80.684896**	**0.0006**	**-**	**3**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-447**
566	TTWV-S-112	RPW	R4	Monroe	37.487727	-80.681853	0.0151	-	243	-	Pipeline ROW	Temporary	-	Desktop	2-449
566	TTWV-W-35	RPWWD	PFO	Monroe	37.487575	-80.681867	-	0.2570†	4146	-	Pipeline ROW	Temporary	Spanishburg	Desktop	2-449
566	TTWV-S-111	RPW	R4	Monroe	37.487499	-80.681885	0.0118	-	191	-	Pipeline ROW	Temporary	-	Desktop	2-449
566	**TTWV-S-112, TTWV-W-35 & TTWV-S-111 Total**		**-**	**-**	**-**	**-**	**0.0269**	**0.2570**	**4580**	**-**	**-**	**-**	**-**	Desktop	
567	TTWV-W-9	RPWWD	PFO	Monroe	37.486843	-80.690214	0.0142	-	69	-	Temporary Access Road	Temporary	Spanishburg	Desktop	2-448
567	TTWV-W-9	RPWWD	PFO	Monroe	37.48678	-80.690297	-	0.0120	-	58	Permanent Access Road	Permanent	Spanishburg	Desktop	2-448
567	**TTWV-W-9 Total**		**-**	**-**	**-**	**-**	**0.0142**	**0.0120**	**69**	**58**	**-**	**-**	**-**	Desktop	
568	**TTWV-S-212**	**NRPW**	**R6**	**Monroe**	**37.479224**	**-80.676747**	**0.0002**	**-**	**1**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-450**
569	**S-G44**	**NRPW**	**R6**	**Monroe**	**37.474870**	**-80.676267**	**0.0079**	**-**	**128**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-450 & 2-451**
570	W-MN1	RPWWD	PEM	Monroe	37.473153	-80.675740	0.0342	-	553	-	Pipeline ROW	Temporary	-	Field	2-451
570	S-G43	NRPW	R6	Monroe	37.473139	-80.675738	0.0095	-	154	-	Pipeline ROW	Temporary	-	Field	2-450 & 2-451
570	**S-G43 & W-MN1 Total**		**-**	**-**	**-**	**-**	**0.0437**	**-**	**707**	**-**	**-**	**-**	**-**	Desktop	
571	S-G42	RPW	R4SB3	Monroe	37.472602	-80.675456	0.0055	-	88	-	Pipeline ROW	Temporary	-	Field	2-451
571	W-G6	RPWWD	PEM	Monroe	37.472534	-80.675718	0.0684	-	1103	-	Pipeline ROW	Temporary	-	Field	2-451
571	W-G6	RPWWD	PEM	Monroe	37.472502	-80.676002	0.0842	-	407	-	Permanent Access Road	Temporary	-	Field	2-451
571	**S-G42 & W-G6 Total**		**-**	**-**	**-**	**-**	**0.1581**	**-**	**1598**	**-**	**-**	**-**	**-**	Desktop	
572	TTWV-S-124	RPW	R3	Monroe	37.465809	-80.660684	0.0015	-	7	-	Temporary Access Road	Temporary	-	Desktop	2-453
572	TTWV-W-37	RPWWD	PEM	Monroe	37.46571	-80.660611	0.0044	-	21	-	Temporary Access Road	Temporary	-	Desktop	2-453
572	**TTWV-S-124 & TTWV-W-37 Total**		**-**	**-**	**-**	**-**	**0.0059**	**-**	**28**	**-**	**-**	**-**	**-**	Desktop	
573	TTWV-S-125	RPW	R4	Monroe	37.465786	-80.661202	0.0137	-	66	-	Temporary Access Road	Temporary	-	Desktop	2-453
573	TTWV-W-36	RPWWD	PSS	Monroe	37.465668	-80.662252	0.0058	-	28	-	Temporary Access Road	Temporary	Spanishburg	Desktop	2-453
573	**TTWV-S-125 & TTWV-W-36 Total**		**-**	**-**	**-**	**-**	**0.0195**	**-**	**94**	**-**	**-**	**-**	**-**	Desktop	
574	TTWV-S-123	RPW	R3	Monroe	37.464474	-80.665269	0.0078	-	38	-	Temporary Access Road	Temporary	-	Desktop	2-453
574	TTWV-S-123	RPW	R3	Monroe	37.463796	-80.667350	0.0019	-	9	-	Temporary Access Road	Temporary	-	Desktop	2-453
574	**TTWV-S-123 Total**						**0.0097**	**-**	**47**	**-**					
575	**TTWV-S-126**	**NRPW**	**R6**	**Monroe**	**37.465202**	**-80.663681**	**0.0049**	**-**	**24**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-453**
576	**TTWV-S-127**	**NRPW**	**R6**	**Monroe**	**37.464463**	**-80.665418**	**0.0022**	**-**	**10**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-453**
577	**TTWV-S-122**	**NRPW**	**R6**	**Monroe**	**37.464026**	**-80.666227**	**0.0020**	**-**	**10**	**-**	**Temporary Access Road**	**Temporary**	**-**	**Desktop**	**2-453**
578	**TTWV-S-121**	**RPW**	**R2**	**Monroe**	**37.462815**	**-80.669597**	**0.0172**	**-**	**278**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-452**
579	**TTWV-S-120**	**RPW**	**R4**	**Monroe**	**37.462794**	**-80.670256**	**0.0087**	**-**	**141**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-452**
580	**TTWV-W-7**	**RPWWN**	**PEM**	**Monroe**	**37.458675**	**-80.664933**	**0.1518**	**-**	**2448**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-454**
581	**S-E43**	**NRPW**	**R6**	**Monroe**	**37.453834**	**-80.664417**	**0.0147**	**-**	**237**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-455**
582	S-E45	NRPW	R6	Monroe	37.453798	-80.664266	0.0069	-	112	-	Pipeline ROW	Temporary	-	Field	2-455

Aquatic Resource Crossing Table
Mountain Valley Pipeline Project

Cross-ing #	Feature Name	Water Type	Cowardin Class[1]	County	Latitude[2]	Longitude[2]	Temporary Impacts within Construction Limits (acres)[3]	Permanent Impacts within Construction Limits (acres)[3]	Amount of Temporary Discharge (cubic yards)[4]	Amount of Permanent Discharge (cubic yards)[4]	Type of Impact	Impact Duration (Discharge)	Mitigation (Bank and/or ILF)	Delineation Type	Figure
582	S-E45	NRPW	R6	Monroe	37.453718	-80.664097	0.0005	-	8	-	Pipeline ROW	Temporary	-	Field	2-455
582	**S-E45 Total**		**-**	**-**	**-**	**-**	**0.0074**	**-**	**120**	**-**	**-**	**-**	**-**	Field	
583	S-E40	RPW	R2UB1	Monroe	37.451003	-80.667795	0.0117	-	57	-	Temporary Access Road	Temporary	-	Field	2-455 & 2-456
583	S-E40	RPW	R2UB1	Monroe	37.450757	-80.667719	0.0227	-	366	-	Pipeline ROW	Temporary	-	Field	2-455 & 2-456
583	**S-E40 Total**		**-**	**-**	**-**	**-**	**0.0344**	**-**	**423**	**-**	**-**	**-**	**-**	Field	
584	S-E41	RPW	R4SB5	Monroe	37.450692	-80.667650	0.0010	-	5	-	Pipeline ROW	Temporary	-	Field	2-456
584	W-E12	RPWWD	PEM	Monroe	37.450761	-80.667516	0.0041	-	20	-	Pipeline ROW	Temporary	-	Field	2-456
584	**S-E41 & W-E12 Total**		**-**	**-**	**-**	**-**	**0.0051**	**-**	**25**	**-**	**-**	**-**	**-**	Field	
585	**W-C14**	**RPWWN**	**PEM**	**Monroe**	**37.427083**	**-80.694569**	**0.0113**	**-**	**55**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-461**
586	S-C38	RPW	R4SB5	Monroe	37.427033	-80.694254	0.0041	-	66	-	Pipeline ROW	Temporary	-	Field	2-461
586	S-C38	RPW	R4SB5	Monroe	37.426915	-80.694499	0.0143	-	231	-	Pipeline ROW	Temporary	-	Field	2-461
586	W-C13	RPWWD	PEM	Monroe	37.426734	-80.694534	0.2172	-	3503	-	Pipeline ROW	Temporary	-	Field	2-461
586	S-C39	RPW	R2UB1	Monroe	37.426686	-80.694499	0.0125	-	202	-	Pipeline ROW	Temporary	-	Field	2-461
586	**S-C38, S-C39 & W-C13 Total**		**-**	**-**	**-**	**-**	**0.2481**	**-**	**4002**	**-**	**-**	**-**	**-**	Field	
587	**S-C41**	**RPW**	**R4SB3**	**Monroe**	**37.426161**	**-80.694592**	**0.0041**	**-**	**66**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Field**	**2-461**
588	**TTWV-S-131**	**RPW**	**R4**	**Monroe**	**37.426069**	**-80.694762**	**0.0465**	**-**	**225**	**-**	**Pipeline ROW**	**Temporary**	**-**	**Desktop**	**2-461**
589	W-C17	RPWWD	PEM	Monroe	37.425547	-80.693481	0.0306	-	148	-	Temporary Access Road	Temporary	-	Field	2-461
589	S-C40	RPW	R3UB1	Monroe	37.425372	-80.693417	0.0053	-	26	-	Temporary Access Road	Temporary	-	Field	2-461
589	**S-C40 & W-C17 Total**		**-**	**-**	**-**	**-**	**0.0359**	**-**	**174**	**-**	**-**	**-**	**-**	Field	
590	TTWV-S-200	RPW	R4	Monroe	37.418765	-80.694621	0.0311	-	502	-	Pipeline ROW	Temporary	-	Desktop	2-462
590	TTWV-W-203	RPWWD	PEM	Monroe	37.418745	-80.694581	0.1382	-	2229	-	Pipeline ROW/ATWS	Temporary	-	Desktop	2-462
590	**TTWV-S-200 & TTWV-W-203 Total**		**-**	**-**	**-**	**-**	**0.1693**	**-**	**2731**	**-**	**-**	**-**	**-**	Field	

Notes:

1 - Field classification based on Cowardin et al. 1979. See wetland delineation report for more details.

2 - in decimal degrees

3 - Includes 1) temporary impacts to PEM wetlands in the temporary limit-of-disturbance, 2) permanent conversion impacts to PSS and PFO impacts in the temporary and permanent limit-of-disturbance, and 3) permanent impacts to PEM within permanent access road limit-of-disturbance, 4) temporary and permanent impacts to streams in the temporary and permanent limit-of-disturbance.

4 - Includes 1) temporary fill associated with construction activities and timber mat crossings. PSS and PFO conversion impacts are categorized as having temporary fill impacts, to account for the placement of timber mats in these wetlands during construction activities, and 2) permanent fill associated with the construction of permanent access road and facilities.

† - PFO and PSS wetlands that occur within the pipeline ROW, a temporary access road, or ATWS will incur impacts from temporary fill in addition to permenant impacts resulting from conversion to a PEM Cowardin Class. No impacts from permanent fill are anticipated at these locations.

^ - cubic yards of S-I8 impact updated to correct previously submitted incorrect value

Permit Number: LRH-2015-592-GBR

Name of Permittee: Mountain Valley Pipeline, LLC (MVP)

Date of Issuance: 22 December 2017

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

Huntington District
U. S. Army Corps of Engineers
502 8th Street
Huntington, West Virginia 25701-2070
Attn: RD-E

Please note that your permitted activity is subject to a compliance inspection by an U. S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee _____ Date _____

PM - CARSON

NATIONWIDE PERMITS FOR THE STATE OF WEST VIRGINIA

U.S. ARMY CORPS OF ENGINEERS (CORPS) REGULATORY PROGRAM REISSUANCE AND ISSUANCE OF NATIONWIDE PERMITS WITH WVDEP WATER QUALITY CERTIFICATION

NWP 12

Utility Line Activities. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in

waters of the United States with impervious materials. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 6: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 7: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 8: For NWP 12 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Corps NWP 12 Specific Regional Conditions:

a. PCN in accordance with NWP General Condition 32 is required for all permanent conversion of scrub/shrub and forested wetlands and greater than 1/10 of an acre of temporary discharge of dredged or fill material into all wetlands.

b. For all horizontal directional drilling activities requiring authorization from the Corps pursuant to Section 10 of the Rivers and Harbors Act of 1899, the PCN must include a drilling mud clean-up plan as a contingency for an inadvertent return of drilling mud to the surface.

c. The PCN must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.

d. Anti-seep collars or clay plugs must be utilized for trenching activities conducted in a perennial or intermittent stream or a wetland.

e. Should an inadvertent return of drilling mud occur during a directional drilling activity, and the clean-up of drilling muds necessitates the use of NWP 12 the permittee must report to the Corps the location and circumstances of the clean-up after the work has been conducted unless a PCN is otherwise required.

NWP 12 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for

i. Pipelines equal to or greater than 36 inches in diameter;
ii. Pipelines crossing a Section 10 river (unless the bore is greater than 100 feet below the stream bed on the Ohio River mainstem, or greater than 50 feet below the stream bed on all other Section 10 waters);
iii. Pipelines transporting hazardous materials/substances as defined by the Toxic Substances Control Act;
iv. Utility lines within wetlands that would use or consider the use of herbicides for right-of-way maintenance;
v. Cumulative permanent impacts totaling greater than 200 linear feet, on one side, of any stream identified in Condition 18 A, B, and C herein;
vi. Cumulative permanent impacts on any one perennial or intermittent stream totaling greater than 300 linear feet;
vii. Pipelines carrying separated natural gas liquids, unless installed with an automated system which will indicate a sudden loss of pressure.

B. Points of ingress and egress to streams for equipment shall be within the permitted area of disturbance.

C. Individual stream crossings must be completed in a continuous, progressive manner and within 72 hours during seasonal normal or below normal stream flow conditions. Crossings on the Ohio River, Kanawha River, New River , Monongahela River, and the

Little Kanawha River, below the confluence with Hughes Rivers, are exempt from the 72-hour requirements. All stream activities shall be completed as rapidly as possible.

D. Equipment tracking in wetlands will utilize protective mats when practical. Restoration of the disturbed areas will be completed within 72 hours of the completion of pipeline installation across the watercourse.

E. Surface disturbance will not extend beyond the right-of-way limits and construction easements. Stream crossings will be conducted as close to a right angle to the watercourse as practical and the area of disturbance will be limited to reduce in stream activity.

F. Dredging for backfill material is not allowed.

G. Submarine pipeline stream crossings (including horizontal directional drilling) must be designed and constructed to prevent flotation and the possibility of leakage or rupture and the top of pipelines must be buried a minimum of three (3) feet below the stream bottom.

H. Horizontal directional drilling for underwater crossings requires an Inadvertent Return Contingency Plan certified by a West Virginia Professional Engineer to be kept on site and made available upon request.

I. Where it is apparent that small boats, inner tubes, swimmers, etc. could be using the stream in the work area, easily seen warning signs must be placed a minimum of 50 feet upstream and downstream of the stream crossings construction site to advise stream users of the potential danger.

J. Prior written notification to West Virginia Department of Environmental Protection, Division of Water and Waste Management (WV DEP DWWM) is required when this permit is being used for vented low water crossings.

K. Forty-five-day advance notification prior to withdrawal must be provided to WV DEP DWWM when this permit is being used for water withdrawal, allowing for a determination of whether the water withdrawal will have more than minimal impacts on aquatic resources, thus necessitating further review or an individual certification. Information to be provided is as follows:

i. the maximum water withdrawal rate;
ii. designs to minimize impingement and entrainment of aquatic life, and
iii. a description of how the intake rate will affect streamflow, or be varied, during periods of seasonal low flow and/or drought.

L. No structure authorized by this permit shall impede or prevent fish movement upstream or downstream.

M. At each stream crossing, substrate in the channel is to be removed and stockpiled separately from other excavated material. This native material must be reused in restoration of the stream channel and, upon final stream bed restoration, the stream must have similar substrate pattern, profile, dimension and embeddedness of the original stream

channel. At each wetland crossing, the top 12 inches of soil are to be removed and stockpiled separately from other excavated material. This native material must be reused in restoration of the wetland.

N. Waterbody banks are to be returned as close as practicable to preconstruction contours. Riparian areas shall be revegetated with native species of conservation grasses, legumes, and woody species (of low determinate growth), similar in density to adjacent undisturbed lands. Routine mowing or clearing adjacent to waterbodies shall be limited to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Seeding recommendations can be found in West Virginia Division of Natural Resources' publication, "Enhancing Wildlife Habitat on Oil & Gas Infrastructure."

1. **Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas. A**ctivities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

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.

8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. **Removal of Temporary Fills.** Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. **Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. **Wild and Scenic Rivers.** (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. **Tribal Rights.** No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. **Endangered Species.** (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate

compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA

section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. **Migratory Birds and Bald and Golden Eagles.** The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. **Historic Properties**. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral

history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. **Discovery of Previously Unknown Remains and Artifacts.** If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. **Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. **Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than 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).

(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 individual and cumulative adverse environmental effects are no more than minimal.

(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 environmental effects of the proposed activity are no more than minimal, and provides an activity-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 only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored 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 restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting 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 minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(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 (see 33 CFR 332.4(c)(1)(ii)).

(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 NWP activity 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 an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible 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.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert 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 environmental effects of the activity to the no more than minimal level.

24. **Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. **Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. **Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. **Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. **Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. **Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

_____

(Date)

30. **Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the

permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. **Activities Affecting Structures or Works Built by the United States.** If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. **Pre-Construction Notification.** (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that

listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be

used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN 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 or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity

are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

Nationwide Permits Regional General Conditions

1. ***Full Agency Pre-Construction Notification (PCN):*** To the extent possible, applicants are encouraged to submit a complete compact disc (CD) copy for any PCN package greater than 15 pages and/or includes maps, drawings, spreadsheets or other similar materials which are larger than 8.5 inches by 11 inches. All files saved on CDs should be in .pdf format. A hard copy of any oversized maps, drawings, spreadsheets etc. in the PCN package should be submitted and accompany the complete CD. An index or table of contents should be provided and correspond with each file saved on the CD and/or within the PCN hard copy.

2. ***United States Fish & Wildlife Service (USFWS):*** Due to the potential presence of federally listed endangered and threatened (T&E) species or their habitats, including critical habitat, within the state of West Virginia, PCN in accordance with Nationwide Permit Condition 32 is required for any activity in the waterways listed in Appendix A. Sufficient information must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 18. Applicants are encouraged to contact the USFWS, West Virginia Field Office, Ecological Services by phone at (304) 636-6586 or by writing to 694 Beverly Pike, Elkins, West Virginia, 26241 prior to the submittal of a PCN. The USFWS can provide information to assist in complying with NWP General Condition 18 pertaining to endangered species and NWP General Condition 19 pertaining to migratory birds and bald and golden eagles. All relevant information obtained from the USFWS should be submitted with the PCN. The current list of waterways supporting federally listed T&E species in West Virginia is provided as Appendix A. Perspective applicants are encouraged to contact the USFWS West Virginia Field Office to obtain the most updated information regarding potential locations known to inhabit T&E species.

3. All regulated activities located in the waterways listed below require PCN in accordance with NWP General Condition 32:

    - New River;
    - Bluestone River from the upstream boundary of Pipestem Park to Bluestone Reservoir;
    - Meadow River from an area near the US 19 Bridge to its junction with the Gauley River;
    - All streams within the Monongahela National Forest designated as National Wild

and Scenic Study Rivers;

- All streams and other bodies of water in State and National Forests and Recreation Areas (included are streams and bodies of water located within the Spruce Knob, Seneca Rocks and Gauley River National Recreation Areas); and
- Streams and their tributaries as contained within the boundaries of the designated National Wilderness Areas or the headwaters of such rivers and their tributaries; Cranberry River, Red Creek, Laurel Fork and Otter Creek.

The Corps will consult with National Park Service and/or the United States Forest Service upon receipt of the PCN.

4. Due to the ecological significance of the following waterways, all regulated activities located in these waterways require PCN in accordance with NWP General Condition 32:

- Greenbrier River from its confluence with Knapps Creek to its confluence with the New River;
- Anthony Creek from its headwaters to its confluence with the Greenbrier River;
- Cranberry River from its headwaters to its confluence with the Gauley River;
- Birch River from Cora Brown Bridge in Nicholas County to its confluence with the Elk River; and
- New River from its confluence with the Greenbrier River to its confluence with the Gauley River.

5. ***Historic Properties:*** Sufficient information must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 20. To ensure compliance with NWP General Condition 20, the following project information should be provided:

- A detailed description of the project site in its current condition (i.e. prior to construction activities) including information on the terrain and topography of the site, the acreage of the site, the proximity of the site to major waterways, and any known disturbances within the site. Photographs and mapping are also needed which show the site conditions and all buildings or structures within the project site and on adjacent parcels.

- A detailed description of past land uses in the project site. Photographs and maps supporting past land uses should be provided as available.

- A detailed description of the construction activities proposed to take place on the site and a description of how the site will look after completion of the project compared to how it looked before the project.

- Information regarding any past cultural resource studies or coordination pertinent to the project area, if available.

- Any other data the applicant deems pertinent.

The applicant is encouraged to consult with professionals meeting the Professional Qualification Standards as set forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) during this data gathering process. These professionals can assist with compiling the project information discussed above and should provide recommendations as to whether the proposal has the potential to affect historic properties and if further effort is needed to identify or assess potential effects to historic properties. These professionals can also compile preliminary review information to submit to the district engineer. A preliminary review encompasses a search radius of 2 miles from the project area, and consists of the following:

- United States Geological Survey (USGS) 7.5' series topographic maps;
- West Virginia Division of Culture and history files including:
- Historic Property Inventory (HPI) Form;
- Archaeological Site Forms;
- Cemetery Inventory Forms;
- National Register of Historic Places (NRHP) nomination forms including Historic Districts; and
- County atlases, histories and historic USGS 15' series topographic map(s).

As an alternative to submitting the information described above, the applicant may choose to request comments from the West Virginia Division of Culture and History (State Historic Preservation Office) and the District Engineer on specific requirements appropriate to the particular circumstances of the project. Be advised, undertaking identification efforts prior to consideration of the potential of the proposed activity to affect historic properties by the Corps is not without risk. It is possible that previous efforts could be determined insufficient or even potentially unnecessary once reviewed by the Corps and other consulting parties.

Upon receipt and review of the information listed above, the Corps will evaluate the submittal. If the Corps determines the proposed activity has the potential to cause effects to a historic property, the Corps will seek consulting parties. In consultation with those parties, the Corps will scope appropriate historic property identification efforts and take into account the effect of the proposed activity on historic properties.

Appendix A

Aquatic Habitats Supporting Federally listed Endangered and Threatened Species, and Proposed Endangered Species in West Virginia

There are seventeen federally listed endangered and threatened or proposed endangered species that are associated with specific aquatic habitats in West Virginia. These include ten endangered freshwater mussels - clubshell (*Pleurobema clava*), fanshell (*Cyprogenia stegaria*), James spinymussel (*Pleurobema collina*), northern riffleshell (*Epioblasma torulosa rangiana*), pink mucket pearlymussel (*Lampsilis abrupta*), rayed bean (*Villosa fabilis*), sheepnose (*Plethobasus cyphyus*), snuffbox (*Epioblasma triquetra*), spectaclecase (*Cumberlandia monodonta*), and tubercled-blossum pearlymussel (*Epioblasma torulosa*

torulosa); two endangered plants - Harperella (*Ptilimnium nodosum*) and northeastern bulrush (*Scirpus ancistrochaetus*); one threatened plant - Virginia spiraea (*Spiraea virginiana*); two threatened crustaceans – Madison Cave isopod (*Antrolana lira*) and Big Sandy crayfish (*Cambarus callainus*); one endangered crustacean –Guyandotte River crayfish (*Cambarus veteranus*); and one endangered fish - diamond darter (*Crystallaria cincotta*). Nine other listed species not associated with specific aquatic habitats also occur in West Virginia. Those species are not addressed here.

U.S. Army Corps of Engineers Huntington District

1. Big Sandy Creek: Kanawha County: Snuffbox.
2. Bluestone River: Mercer and Summers Counties (Bluestone Gorge to slackwater of Bluestone Reservoir): Virginia spiraea.
3. Cedar Creek: Braxton and Gilmer Counties: Snuffbox.
4. Clear Fork: Wyoming County: Guyandotte River crayfish
5. Cove Creek: Monroe County: James spinymussel.
6. Elk River: Braxton, Clay, and Kanawha Counties (Sutton Dam to slackwater below Coonskin Park), including the lower one-half mile reaches of its tributaries Birch River, Blue Creek, and Laurel Creek: Clubshell, pink mucket pearlymussel, northern riffleshell, rayed bean, and snuffbox. The Elk River also contains the diamond darter (endangered). Critical habitat for this species is from King Shoals to slackwater below Coonskin Park.
7. Gauley River: Fayette and Nicholas Counties (Summersville Dam to Swiss): Virginia spiraea.
8. Greenbrier River: Greenbrier and Pocahontas Counties: *Virginia spiraea*.
9. Henry Fork: Calhoun and Roane Counties: Snuffbox.
10. Hughes River: Ritchie and Wirt Counties, including the lower one-half mile reach of its tributary Goose Creek: Snuffbox.
11. Kanawha River: Fayette, Kanawha, Mason, and Putnam Counties: Fanshell, pink mucket pearlymussel, sheepnose, spectaclecase, and tubercled-blossum pearlymussel.
12. Leading Creek: Gilmer and Lewis Counties, including the lower one-half mile reach of its tributary Fink Creek: Snuffbox.

13. Little Kanawha River: Braxton, Calhoun, Gilmer, Wirt, and Wood Counties, including the lower one-half mile reaches of its tributaries Leading Creek (Calhoun County), Pine Creek, Sand Fork, Slate Creek, Straight Creek, Tanner Creek, Tucker Creek, and Walker Creek: Clubshell and snuffbox.

14. Marsh Fork River including Dingess Branch and Millers Camp Branch and associated palustrine emergent and scrub-shrub wetlands: Raleigh County: Virginia spiraea.

15. McElroy Creek: Doddridge and Tyler Counties: Snuffbox.

16. Meadow River: Fayette, Greenbrier, and Nicholas Counties: Virginia spiraea.

17. Meathouse Fork of Middle Island Creek: Doddridge County, including the lower one-half mile reach of its tributary Toms Fork: Clubshell and snuffbox.

18. Middle Island Creek: Doddridge, Pleasants, and Tyler Counties, including the lower one-half mile reaches of its tributaries Arnold Creek, Bluestone Creek, Buckeye Creek, Indian Creek, McKim Creek, Point Pleasant Creek, and Sancho Creek: Clubshell and snuffbox.

19. New River (Lower): Fayette County (Route 19 to Gauley Bridge): Virginia spiraea.

20. North Fork Hughes River: Ritchie and Wirt Counties, including the lower one-half mile reaches of its tributaries Addis Run, Bonds Creek, Devilhole Creek, and Gillespie Run: Snuffbox.

21. Ohio River: Cabell, Jackson, Mason Pleasants, Tyler, Wetzel, and Wood Counties: Fanshell, pink mucket pearlymussel, sheepnose, and snuffbox.

22. Pinnacle Creek: Wyoming County: Guyandotte River crayfish

23. Potts Creek and South Fork of Potts Creek: Monroe County: James spinymussel.

24. Reedy Creek: Roane and Wirt Counties: Snuffbox.

25. South Fork Hughes River: Doddridge, Ritchie, and Wirt Counties, including the lower one-half mile reaches of its tributaries Bone Creek, Indian Creek, Leatherbark Creek, Otterslide Creek, Slab Creek, and Spruce Creek: Clubshell and snuffbox.

26. Spring Creek: Roane and Wirt Counties: Snuffbox.

27. Steer Creek: Calhoun and Gilmer Counties: Snuffbox.

28. Sugar Creek: Pleasants County: Snuffbox.
29. Tug Fork River and tributaries including Dry Fork: McDowell and Mingo Counties: Big Sandy crayfish

30. West Fork Little Kanawha River: Calhoun, Roane, and Wirt Counties: Snuffbox.

U.S. Army Corps of Engineers Pittsburgh District

1. Back Creek: Berkeley County: Harperella.

2. Cacapon River: Morgan County: Harperella.

3. Dunkard Creek: Monongalia County: Snuffbox.

4. Fish Creek: Marshall County: Snuffbox.

5. Fishing Creek: Wetzel County: Snuffbox. Note – the mouth of Fishing Creek at the Ohio River is regulated by the Huntington District.

6. Hackers Creek (of the West Fork River): Harrison and Lewis Counties: Clubshell and snuffbox.

7. Potomac River: Morgan County (from the mouth of the Cacapon River to the mouth of Sleepy Creek): Harperella.

8. Sleepy Creek: Morgan County: Harperella.

9. West Fork River: Harrison, Lewis, and Marion Counties: Snuffbox.

10. Streams, springs, and wetlands connected to the groundwater system including caves, areas near sinkholes, and other groundwater/surface interfaces, from the Potomac River west to Opequon Creek, especially in the Rippon and Leetown Areas, and the Evitts Run Watershed: Jefferson and Berkeley Counties: Madison Cave isopod.

11. Wetlands: Berkeley and Hardy Counties: Northeastern bulrush.

***Note 1**: Applicants must ensure they are referencing the latest version of Appendix by contacting the USFWS since federally-listed species are continuously listed, proposed for listing, and/or de-listed.

***Note 2**: Please also note that freshwater mussels which are not federally listed are protected and managed by the State of West Virginia, Division of Natural Resources (WVDNR). Non-listed freshwater mussels may occur in the streams listed above as well as additional streams throughout the State. For information on the distribution of freshwater mussel species and

their protections contact the West Virginia Division of Natural Resources by phone at (304) 637-0245.

Standard Conditions of State 401 Water Quality Certification Applicable to Nationwide Permits

1. Any permitted activity for which U.S. Army Corps of Engineers (ACOE) requires pre-construction notification (PCN) in accordance with Nationwide Permit General Condition 32 requires the same information to be sent by the applicant, prior to construction, to West Virginia Department of Environmental Protection, Division of Water and Waste Management (WV DEP DWWM).

2. The applicant must provide proof of compensatory mitigation (as outlined in Standard Condition 19 below) to WV DEP DWWM prior to construction for a project with permanent stream impacts greater than 300 linear feet or causing the loss of greater than 1/10 acre of wetlands.

3. Culverted crossings should be sized and installed in a manner to allow the passage of aquatic life and freely pass bankfull flows. Exceptions to this requirement would be when culvert placement is on bedrock, or when stream gradient is equal to or greater than 4%, or when bankfull elevation is greater than final surface elevation.

4. The permittee will investigate for the presence of water supply intakes or other activities within 1/2 mile downstream, which may be affected by suspended solids and turbidity increases caused by work in the watercourse. The permittee will give notice to operators of any such water supply intakes and such other water quality dependent activities as necessary before beginning work in the watercourse in sufficient time to allow preparation for any change in water quality.

5. Excavation, dredging or filling in the watercourse will be done only to the extent necessary to achieve the project's purpose, and at each wetland crossing the top 12 inches of topsoil shall be removed and stockpiled separately from other excavated material. In addition, at each stream crossing, substrate in the channel is to be removed and stockpiled separately from other excavated material. This native material must be re-used in restoration of the wetland and/or stream bed.

6. Spoil materials from the watercourse or onshore operations, including sludge deposits, will not be dumped in the watercourse, or deposited in wetlands or other areas where the deposit may adversely affect the surface or ground waters of the state.

7. The permittee will employ measures to prevent or control spills from fuels, lubricants or any other materials used in connection with construction and restrict them from entering the watercourse. Storage areas for chemicals, explosives, lubricants, equipment fuels, etc., as well as equipment refueling areas, must include containment measures (e.g., liner systems, dikes, etc.) to ensure that spillage of any material will not contact surface or ground waters. Storage areas and refueling areas shall be a minimum distance of 100 feet from any surface

water body. All spills shall be promptly reported to the State Center for Pollution, Toxic Chemical and Oil Spills, 1-800-642-3074.

8. Upon completion of in-stream operations all disturbances below the ordinary high water mark will be properly stabilized within 24 hours to prevent soil erosion. Where possible, stabilization shall incorporate revegetation using bioengineering as an alternative to rip rap. If rip rap is utilized, it is to be of such weight and size that bank stress or slump conditions will not be created due to its placement. Fill is to be clean, nonhazardous and of such composition that it will not adversely affect the biological, chemical or physical properties of the receiving waters. Unsuitable materials include but are not limited to: copper chromium arsenate (CCA) and creosote treated lumber, car bodies, tires, large household appliances, construction debris, and asphalt. To reduce potential slope failure and/or erosion behind the material, fill containing concrete must be of such weight and size that promotes stability during expected high flows. Loose large slab placement of concrete sections from demolition projects greater than thirty-six inches in its longest dimension and tires are prohibited. Rebar or wire in concrete should not extend further than one (1) inch. All activities require the use of clean and coarse non-erodible materials with 15% or less of like fines that is properly sized to withstand expected high flows.

9. Runoff from any storage areas or spills will not be allowed to enter storm sewers without acceptable removal of solids, oils and toxic compounds. Discharges from retention/detention ponds must comply with permit requirements of the National Pollutant Discharge Elimination System permit program of the West Virginia Department of Environmental Protection, Division of Water and Waste Management.

10. Land disturbances, which are one (1) acre or greater in total area, must comply with the National Pollutant Discharge Elimination System or other state stormwater permit requirements as established by the WV DEP DWWM, if applicable. Any land disturbances are required to use Best Management Practices for Sediment and Erosion Control, as described in the latest West Virginia Department of Environmental Protection's Erosion and Sediment Control Best Management Practice Manual, or similar documents prepared by the West Virginia Division of Highways. These handbooks are available from the respective agency offices.

11. Concrete will not be permitted to enter the watercourse unless contained by tightly sealed forms or cells. Concrete handling equipment shall not discharge waste washwater into wetlands or watercourses at any time without adequate wastewater treatment as approved by the WV DEP DWWM.

12. In stream work in designated warm water streams and their adjacent tributaries during the fish spawning season, April - June and trout waters and their adjacent tributaries during the trout water fish spawning season September 15 to March 31 requires a spawning season waiver from the West Virginia Division of Natural Resources (WV DNR) Coordination Unit, at (304) 637-0245. For information about specific stream designations contact West Virginia Department of Environmental Protection, Water Quality Standards Section at (304) 926-0495. In-stream work may occur during the respective spawning season in ephemeral

waters without a waiver if all reasonable measures are taken to minimize turbidity and sedimentation downstream associated with the proposed project.

13. Removal of well-established riparian vegetation not directly associated with the project construction is prohibited. Disturbance and removal of vegetation from project construction area is to be avoided, where possible, and minimized when necessary. Removal of vegetation shall not be allowed where stream bank stability under normal flow conditions would be compromised.

14. Operation of equipment instream is to be minimized and accomplished during low flow periods when practical. Ingress and egress for equipment shall be within the work site. Location of ingress and egress outside the immediate work area requires prior approval of the WV DEP DWWM in concurrence with the WV DNR.

15. The permittee will comply with water quality standards as contained in the West Virginia Requirements Governing Water Quality Standards, Title 47 of Code of State Regulations, Series 2.

16. Stream activities permitted under the Nationwide Permit Program require that a West Virginia Public Lands Corporation Right of Entry be obtained. Application for Stream Activity should be made to the WV DNR, Office of Lands and Streams, at http://www.wvdnr.gov/REM/default.shtm or (304) 558-3225. In addition, any activity within the Federal Emergency Management Agency delineated 100-year floodplain requires approval from the appropriate Floodplain Manager. The following website provides a statewide listing of Floodplain Managers in West Virginia: http://www.dhsem.wv.gov/MitigationRecovery/Pages/Floodplain-Management.aspx www.dhsem.wv.gov/mitigation/floodplain/Pages/default.aspx

17. If applicable, the permittee must measure and report Large Quantity Water use pursuant to §22-26-1et seq of the West Virginia Code.

18. Prior notification describing the project location and impacts must be given to the WV DEP DWWM for use of any of the Nationwide Permits for all work in streams set forth in Sections A, B, and C below.

    A. Tier 3 Protection. West Virginia Code of State Regulations, Requirements Governing Water Quality Standards, Title 47, Series 2. **Outstanding National Resource Waters:** Outstanding National Resource Waters include, but are not limited to, all streams and rivers within the boundaries of Wilderness Areas designated by The Wilderness Act (16 U.S.C. §1131 et seq.) within the State, all Federally designated rivers under the Wild and Scenic Rivers Act, 16 U.S.C. §1271 et seq.; all streams and other bodies of water in state parks which are high quality waters or naturally reproducing trout streams; waters in national parks and forests which are high quality waters or naturally reproducing trout streams; waters designated under the National Parks and Recreation Act of 1978, as amended; and pursuant to

subsection 7.1 of 60CSR5, those waters whose unique character, ecological or recreational value, or pristine nature constitutes a valuable national or state resource. The listing of Tier 3 streams is located at: http://www.dep.wv.gov/WWE/Programs/wqs/Documents/Tier%203%20Info/WVTier_3_Nov2013_web.xlt

B. All naturally-reproducing trout streams. For information about specific streams contact WV DNR, Wildlife Resource Section, Trout Fisheries Program at 304-637-0245.

C. West Virginia Natural Stream Preservation Act. The following streams or rivers are protected from activities that would impound, divert or flood the body of water: Greenbrier River from its confluence with Knapps Creek to its confluence with the New River, Anthony Creek from its headwaters to its confluence with the Greenbrier River, Cranberry River from its headwaters to its confluence with the Gauley River, Birch River from Cora Brown Bridge in Nicholas County to the confluence of the river with the Elk River, and New River from its confluence with the Greenbrier River to its confluence with the Gauley River.

19. Wetland and stream mitigation guidelines. The discharge of dredged or fill material into a stream or wetland is authorized based upon the following criteria:

A. One-tenth to ½ acre of permanent impact to wetland(s) (including wetland type conversion) requires prior notification describing the project location and impacts and plan for mitigation to be submitted to the WV DEP DWWM along with the proposed plan for mitigation provided to the state for approval.

B. The amount of fill in a wetland, wetland complex or wetland system without mitigation is not to cumulatively exceed 1/10 acre.

C. West Virginia Stream Wetland Valuation Metric (SWVM) is the preferred method to assist with the determination of required mitigation. The metric is available at the Huntington and Pittsburgh ACOE web sites.

In all instances, mitigation for all impacts incurred through use of these Nationwide Permits must first be directed to elimination of the impacts, then minimization of the impacts and lastly through compensatory mitigation. In many cases, the environmentally preferable compensatory mitigation may be provided through an approved mitigation bank or the West Virginia In-Lieu Fee Program. Permittee responsible compensatory mitigation may be performed using the methods of: restoration, enhancement, establishment and in certain circumstances preservation. In general, the required compensatory mitigation should be located in the same watershed as the impact site, and located where it is most likely to successfully replace lost functions and services as the impacted site. However, the use of mitigation banks or in-lieu fee for in-kind replacement is not restricted to the major watershed in which the impact has occurred until such time as mitigation banks or in-lieu projects are developed in each major watershed.

Wetlands. When permittee responsible in-kind replacement mitigation is used, it is to be accomplished at the following ratios until such time an approved functional assessment methodology is established for the state of West Virginia:

Permanent impacts to open water wetlands are to be one (1) acre replaced for one (1) acre impacted.

Permanent impacts to wet meadow/emergent wetlands are to be two (2) acres replaced for one (1) acre impacted.

Permanent impacts to scrub-shrub and forested wetlands are to be three (3) acres replaced for one (1) acre impacted.

In instances where compensatory in-kind mitigation is completed 12 months prior to the impact of the resource, the replacement ratio may be reduced to as low as one (1) acre created/restored to every one (1) acre impacted.

NOTE: The ratio of created/restored wetlands to impacted wetlands not only ensures no net loss, but assures the adequate replacement of the impacted wetlands functions and values at the level existing prior to the impact. For many of the more complicated type wetlands, such as scrub-shrub and forested, the values and functions cannot readily be replaced through creation. Furthermore, not all wetland creation is successful.

In certain instances, the West Virginia Department of Environmental Protection, Division of Water and Waste Management may consider the acquisition of existing wetlands. Acquisition ratios are the following:

5 to 1 for open water wetlands
10 to 1 for wet meadow/emergent wetlands
15 to 1 for scrub-shrub and forested wetlands

Under extenuating circumstances the director may accept lower ratios for high quality wetlands under significant threat of development.

All wetlands acquired, using the acquisition method of mitigation, will either be deeded to the WV DNR Public Land Corporation for management by the Wildlife Resources Section or placed under a conservation easement and be protected from disturbance by the permittee or their designee. Third party oversight of the conservation easement by a non-profit conservation organization is preferred.

Streams. Compensatory mitigation projects for permanent stream impacts should attempt to replace lost functions. Mitigation will be determined on a case-by-case basis based on the pre- and post- condition stream quality and complexity of the mitigation project preferably utilizing the SWVM worksheets. Compensatory mitigation may require protection through deed restrictions or conservation easements by the permittee or their designee.

20. Streams with Mussel populations.

A. Should native freshwater mussels be encountered during the use of any Nationwide Permit, all activity is to cease immediately and the WV DNR Wildlife Resources Section, Wildlife Diversity Program is to be contacted (304-637-0245) to determine significance of the mussel population and the action to be taken.

B. Work in streams known to have protected "no take" mussel populations or contain protected habitat of mussels on the Federal Endangered Species list must be approved by the WV DNR, Wildlife Diversity Program. Applicants wishing to conduct projects in such streams should contact the program at (304) 637-0245. The most current list of these waters and other mussel information can be found here: http://www.wvdnr.gov/Mussels/Main.shtm.

C. Applicants should also consider utilizing WV DNR Wildlife Data Base Inquiry process. This resource is designed for the applicant as an informative preplanning tool. It allows the applicant to know, in advance, if they will be encountering any federally listed endangered species (ES), state species of concern and high quality fish and wildlife habitats such as trout streams, warm water fisheries, wetlands, karst and cave habitats. This inquiry can be obtained from the: Wildlife Data Base Coordinator, PO Box 67, Elkins West Virginia 26241. Information on what to submit to receive an inquiry should be directed to data base coordinator at 304-637-0245.

21. Isolated State Waters. In some cases, the ACOE may determine that an activity will not impact waters of the United States because the water is an isolated wetland or stream, and therefore does not require a 404 permit. However, under West Virginia Code §22-11-8(b)(3), a permit is needed to place a waste into any water of the State. Accordingly, any applicant proposing to impact an isolated water must contact WV DEP DWWM to obtain all necessary approvals for activities impacting any isolated State waters.

H. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it

would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary

source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A

slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.