No. 18-1173

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

PETITIONERS' MOTION FOR PRELIMINARY RELIEF

Derek O. Teaney
Evan D. Johns
Joseph M. Lovett
APPALACHIAN MOUNTAIN ADVOCATES, INC.
Post Office Box 507
Lewisburg, West Virginia 24901
Telephone: (304) 793-9007
Facsimile: (304) 645-9008
E-Mail: dteaney@appalmad.org
Counsel for Petitioners

TABLE OF CONTENTS

PAGE:

TABLE OF CONTENTS....i

TABLE OF AUTHORITIES....iii

INTRODUCTION....1

BACKGROUND....1

JURISDICTIONAL STATEMENT....7

STANDARD OF REVIEW....8

ARGUMENT....9

I. Sierra Club is Likely to Succeed On The Merits Because MVP Cannot Satisfy the Conditions of NWP 12, Rendering The Corps' Verification of The Pipeline Under NWP 12 Not In Accordance With Federal Law....9

A. The Pipeline does not meet the express terms of NWP 12....9

B. WVDEP lacks authority to modify either NWP 12 or its prior Certification of NWP 12....10

C. Neither the Corps nor WVDEP can expand the applicability of NWP 12 without formal modification of the permit by the Corps after public notice and comment....14

II. Without Preliminary Relief, Sierra Club Will Suffer Irreparable Harm....16

III. Preliminary Relief Will Not Substantially Harm the Corps or MVP....20

IV. The Public Interest Favors Preliminary Relief....21

CONCLUSION..... 22

TABLE OF AUTHORITIES

PAGE(S):

CASES:

AES Sparrows Point LNG, LLC v. Wilson,
589 F.3d 721 (4th Cir. 2009).....9

Amoco Prod. Co. v. Vill. Of Gambell,
480 U.S. 531 (1987).....19

Anglers of the AU Sable v. Forest Serv.,
402 F.Supp.2d 826 (E.D. Mich. 2005).....20

Citizens for a Better Env't—Calif. v. Union Oil Co. of Calif.,
83 F.3d 1111 (9th Cir. 1996).....14

Crutchfield v. Hanover Cnty.,
325 F.3d 211 (4th Cir. 2003).....9

Dixon v. U.S.,
381 U.S. 68 (1965).....13

Fed. Leasing, Inc. v. Underwriters at Lloyd's,
650 F.2d 495 (4th Cir. 1981).....20

Hilton v. Braunskill,
481 U.S. 770 (1987).....9

Johnson v. Dep't of Agric.,
734 F.2d 774 (11th Cir. 1984).....21

Keating v. F.E.R.C.,
927 F.2d 616 (D.C. Cir. 1991).....11, 12

League of Wilderness Defs. v. Connaughton,
752 F.3d 755 (9th Cir. 2014).....21

Long v. Robinson,
432 F.2d 977 (4th Cir. 1970).....9

Lujan v. Defenders of Wildlife,
504 U.S. 555 (1992).....8

Nat'l Audubon Soc'y v. Dep't of Navy,
422 F.3d 174 (4th Cir. 2005).....19

Nat'l Parks Conservation Ass'n v. Babbitt,
241 F.3d 722 (9th Cir. 2001).....20

Nat'l Wildlife Fed'n v. Burford,
676 F.Supp. 271 (D.D.C. 1985).....21

O.V.E.C. v. Bulen,
429 F.3d 493 (4th Cir. 2005).....2

O.V.E.C. v. Bulen,
315 F.Supp.2d 821 (S.D.W.Va. 2004).....21

O.V.E.C. v. U.S.A.C.O.E.,
528 F.Supp.2d 625 (S.D.W.Va. 2007).....20, 21

PUD No. 1 of Jefferson Cnty. v. Washington Dep't of Ecology,
511 U.S. 700 (1994).....5

Sierra Club v. Martin,
933 F.Supp. 1559 (N.D. Ga. 1996).....19

Sierra Club v. U.S.A.C.O.E.,
803 F.3d 31 (D.C. Cir. 2015).....3, 4

Sierra Club v. U.S.A.C.O.E.,
645 F.3d 978 (8th Cir. 2011).....21

Sierra Club v. U.S.A.C.O.E.,
399 F.Supp.2d 1335 (M.D. Fla. 2005).....19

Triska v. Dep't of Health and Envtl. Control,
355 S.E.2d 531 (S.C. 1987).....11

U.S. v. Bazile,
209 F.3d 1205 (10th Cir. 2000).....10

U.S. v. Malibu Beach, Inc.,
711 F.Supp. 1301 (D.N.J. 1989).....19, 20

U.S. v. Marathon Dev. Corp.,
867 F.2d 96 (1st Cir. 1989).....4, 5

U.S. v. Smithfield Foods, Inc.,
191 F.3d 516 (4th Cir. 1999).....14

Wisc. Gas Co. v. F.E.R.C.,
758 F.2d 669 (D.C. Cir. 1985).....20

FEDERAL CONSTITUTIONAL PROVISIONS:

Article III of the United States Constitution.....8

FEDERAL STATUTES:

5 U.S.C. § 701-706.....9

5 U.S.C. § 706(2)(A).....9

15 U.S.C. § 717f.....1, 7

15 U.S.C. § 717r(d)(1).....7, 8, 9

15 U.S.C. § 717r(d)(3).....6

33 U.S.C. § 403.....5

33 U.S.C. § 407.....4

33 U.S.C. § 1341.....*passim*

33 U.S.C. § 1341(a)(1).....5, 13, 15

33 U.S.C. § 1341(a)(3).....12

33 U.S.C. § 1341(d).....5, 10, 11

33 U.S.C. § 1344(a).....2, 16

33 U.S.C. § 1344(e).....1, 11

33 U.S.C. § 1344(e)(1).....2

FEDERAL REGULATIONS:

33 C.F.R. § 325.4(a).....

33 C.F.R. § 325.4(a)(2).....5, 6, 11, 12

33 C.F.R. § 330.1(b).....15

33 C.F.R. § 330.1(d).....15

33 C.F.R. § 330.2(g).....15

33 C.F.R. § 330.2(h).....3

33 C.F.R. § 330.3(a).....3

33 C.F.R. § 330.4(a).....9

33 C.F.R. § 330.4(b)(1).....3

33 C.F.R. § 330.4(c)(2).....6, 10, 15

33 C.F.R. § 330.5(b).....15

33 C.F.R. § 330.6(a)(2).....4

40 C.F.R. § 121.2(b).....12, 13

STATE REGULATIONS:

W. Va. C.S.R. § 47-5A-1 *et seq*.....12

W. Va. C.S.R. § 47-5A-5.....13

FEDERAL ADMINISTRATIVE DECISIONS:

Mountain Valley Pipeline, LLC,
161 FERC ¶61,043, 2017 WL 4925425 (Oct. 13, 2017).....2

FEDERAL REGISTER:

Issuance and Reissuance of Nationwide Permits,
82 Fed. Reg. 1860 (Jan. 6, 2017).....2, 3, 4, 11

INTRODUCTION

Petitioners Sierra Club, West Virginia Rivers Coalition, Indian Creek Watershed Association, Appalachian Voices, and Chesapeake Climate Action Network (hereinafter, collectively, "Sierra Club") seek judicial review of the December 22, 2017 authorization by the U.S. Army Corps of Engineers (the "Corps") of the discharge of dredged and fill material into waters of the United States associated with the Mountain Valley Pipeline project (the "Pipeline") under Nationwide Permit 12 ("NWP 12")—a general permit issued under Section 404(e) of the Clean Water Act ("CWA"), 33 U.S.C. § 1344(e). Because discharges under that authorization and the attendant stream-trenching that will occur are likely to cause irreparable harm to Sierra Club and its members before a ruling on the merits, Sierra Club respectfully requests that this Court suspend the authorization pending judicial review. Counsel for Respondents and Respondent-Intervenor have been informed of Sierra Club's intent to file this motion. They oppose the motion and intend to file responses in opposition within ten days.

BACKGROUND

On October 23, 2015, Mountain Valley Pipeline, LLC ("MVP") applied to the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity under Section 7 of the Natural Gas Act ("NGA"), 15 U.S.C. § 717f, to construct and operate a 303.5-mile-long natural gas pipeline

stretching from Wetzel County, West Virginia, to Pittsylvania County, Virginia. *Mountain Valley Pipeline, LLC*, 161 FERC ¶61,043 at PP1, 7, 2017 WL 4925425, at *1-2 (Oct. 13, 2017). Roughly 164 miles of the Pipeline and approximately 132 miles of access roads are located in the Corps' Huntington District in West Virginia. Ex. 1 at 1. As it cuts through West Virginia's forests and streams, the Pipeline and its access roads will require 594 crossings of waters of the United States in the Huntington District, resulting in the discharge of fill material into miles of streams and acres of wetlands. *Id.* at 1-2.

The Corps permits dredge-and-fill projects under Section 404 in two ways. It can issue individual permits tailored to specific activities, 33 U.S.C. § 1344(a), or it can issue general, nationwide permits ("NWPs") for defined sets of activities that are similar in nature and would cause only "minimal adverse environmental effects," *id.* § 1344(e)(1). But even when categories of activities are "delineated in objective, measurable terms," it is often difficult to determine *ex ante* that they will have only minimal impacts nationwide. *O.V.E.C. v. Bulen*, 429 F.3d 493, 501 (4th Cir. 2005). To overcome that difficulty, the Corps' NWP program relies on "a three-tiered approach to ensure compliance" with the statutory requirements of the CWA. *Issuance and Reissuance of Nationwide Permits*, 82 Fed. Reg. 1860, 1985 (Jan. 6, 2017). First, the Corps develops general conditions applicable to all NWPs, as well as activity-specific thresholds and conditions for each permit. *Id.* at 1864.

The Corps' regional offices may then add regional conditions, which further restrict the use of NWPs in their jurisdictions. *Id.* at 1861. Finally, district-level officers may review individual projects on a case-by-case basis and impose project-specific conditions necessary to ensure impacts are minimal. *Id*. at 1862.[1]

To facilitate this three-tiered approach, many NWPs require would-be-permittees submit their projects to the Corps for "verification"—a process "designed to ensure that the NWPs authorize only those categories of activities that have no more than minimal individual and cumulative adverse environmental effects." *Id.* at 1985. After receiving a request for verification, the Corps first confirms "that the proposed activities comply with all applicable general conditions" of the permit before determining whether any project-specific "special conditions" are necessary to avoid more-than-minimal environmental impacts. *Id.* at 1862, 1971; 33 C.F.R. § 330.4(b)(1).

Ultimately, the Corps can verify a project only if it "complies with the general permit's conditions, will cause no more than minimal adverse effects on the environment, and will serve the public interest." *Sierra Club v. U.S.A.C.O.E.*,

1 The Corps' general permitting regulations distinguish between an NWP's "terms"—defined as the "limitations and provisions included in the description of the NWP itself"—and its "conditions"—any "additional provisions [that] place restrictions or limitations on all of the NWPs" or that the Corps imposes during the regional or project-specific review stage. 33 C.F.R. § 330.2(h). Both are prerequisites to verification under an NWP. *Id.* § 330.3(a).

803 F.3d 31, 39 (D.C. Cir. 2015). If, however, "an activity does not comply with the terms and conditions of an NWP," the Corps must "notify the [applicant] and instruct him on the procedures to seek authorization under a[n appropriate] general permit or individual permit." 33 C.F.R. § 330.6(a)(2).

In January 2017, the Corps reissued its suite of 52 NWPs. *See generally* 82 Fed. Reg. 1860. One of those permits, NWP 12, permits discharges from utility crossings, including natural gas pipelines, "provided the activity does not result in the loss of greater than 1/2-acre of waters" at each discrete crossing. *Id*. at 1985. For projects, like the Pipeline, that require separate Corps approval under the Rivers and Harbors Act, 33 U.S.C. § 407, NWP 12 requires the prospective permittee to submit project-specific, pre-construction notification to the Corps for verification. 82 Fed. Reg. at 1986.

Because NWP 12 authorizes discharges into protected waters, its reissuance triggered another important provision of the CWA. Section 401 of the Act, 33 U.S.C. § 1341, provides that federal permits or licenses that result in discharges into waters of the United States cannot issue without "certification" by the affected state that the discharges will comply with all state water quality standards. The certification requirement "provides the states with a first line of defense against federally licensed or permitted activities that may have adverse effects on the state's waters," allowing them to determine whether those activities would frustrate

their efforts to attain and preserve water quality. *U.S. v. Marathon Dev. Corp.*, 867 F.2d 96, 100 (1st Cir. 1989) (internal quotation marks omitted). A permit is effective only if the state concludes that the permitted activities will not violate applicable state water quality standards—or if the state waives its certification rights by inaction. 33 U.S.C. § 1341(a)(1). However, a state can tailor its certification by imposing special conditions on certification, which become conditions of the federal permit as a matter of course. *Id.* § 1341(d); *PUD No. 1 of Jefferson Cnty. v. Washington Dep't of Ecology*, 511 U.S. 700, 708 (1994).

The West Virginia Department of Environmental Protection ("WVDEP") took just that approach in response to NWP 12, certifying the permit on April 13, 2017, subject to several "special conditions" designed to protect water quality. Ex. 2 at 1, 10-11 (hereinafter, the "Certification"). Foremost among them was a requirement that "[p]ipelines equal to or greater than 36 inches in diameter" possess an individual, project-specific water quality certification. *Id.* at 10; Ex. 1 at 43; Ex. 3 at 20. The Certification imposes the same individual, project-specific water quality certification requirement on pipelines that cross rivers protected by Section 10 of the Rivers and Harbors Act, 33 U.S.C. § 403.[2] Ex. 2 at 10; Ex. 1 at 43; Ex. 3 at 20. The Corps accepted WVDEP's conditions as "appropriate to the scope and degree of th[e] impacts" associated with pipeline projects and, consistent

2 Section 10 of the Rivers and Harbors Act prohibits the obstruction of any navigable-in-fact waterbody unless authorized by the Corps.

with Section 401 and its own permitting regulations, incorporated them into NWP 12. *See* 33 C.F.R. §§ 330.4(c)(2), 325.4(a). Accordingly, NWP 12 in West Virginia, as issued by the Corps on May 17, 2017, includes an express condition that "Individual State Water Quality Certification is *required* for...[p]ipelines equal to or greater than 36 inches in diameter...[or] [p]ipelines crossing a Section 10 river[.]" Ex. 3 at 20 (emphasis added).

MVP applied to WVDEP for an individual Section 401 certification of its use of NWP 12, and on March 23, 2017, WVDEP issued that certification. Ex. 4. After Sierra Club filed a timely petition for review in this Court of WVDEP's individual certification, Ex. 5, WVDEP sought a voluntary remand and asked this Court to vacate that certification. Ex. 6. In its motion, WVDEP admitted that "the information used to issue the Section 401 Certification needs to be further evaluated and possibly enhanced" and that it "need[ed] to reconsider its antidegradation analysis in the Section 401 Certification[.]" *Id.* at 2. WVDEP further "commit[ed] to doing so as expeditiously as possible." *Id.* On October 17, 2017, this Court granted WVDEP's motion, vacated MVP's individual Section 401 Certification, and remanded the matter to the agency under 15 U.S.C. § 717r(d)(3). Ex. 7.

On remand, rather than reconsidering its antidegradation analysis per its commitment to this Court, WVDEP opted to abdicate its responsibilities under

Section 401 of the CWA and, on November 1, 2017, waived its authority to certify the Pipeline under Section 401. Ex. 8. As a result of that waiver, MVP does not possess an individual water quality certification under Section 401 of the CWA.

On February 25, 2016, MVP requested that the Corps' Huntington District verify that the 42-inch Pipeline's 591 crossings of West Virginia's streams and wetlands were eligible for coverage under NWP 12. Ex. 1 at 1-2. Three of the rivers that the Pipeline would cross—the Gauley River, the Greenbrier River, and the Elk River—are Section 10 rivers. *Id.* at 5. MVP updated its application on February 17, 2017, and submitted additional information on December 18, 2017. *Id.* at 1. On December 22, 2017, the Corps issued the verification challenged here, acknowledging the Pipeline's size and impacts on Section 10 rivers, but nonetheless concluding that it "me[t] the criteria" for NWP 12, subject to several additional project-specific conditions not relevant to this action. *Id.* at 2, 4-7.

JURISDICTIONAL STATEMENT

Section 19(d)(1) of the NGA, 15 U.S.C. § 717r(d)(1), places review of the Corps' action in this Court's jurisdiction:

> [T]he United States Court of Appeals for the circuit in which a facility subject to...section 717f of this title is proposed to be constructed, expanded, or operated shall have original and exclusive jurisdiction over any civil action for the review of an order or action of a Federal agency...acting pursuant to Federal law to issue...any permit, license, concurrence, or approval...required under Federal law [for that facility].

Because the Pipeline is proposed to be built in West Virginia and Virginia, both of which lie within this Circuit, and because the Corps' authorization of the Pipeline under NWP 12 is a "permit...required under Federal law," jurisdiction exists under Section 19(d)(1).

The Petitioners are non-profit organizations whose members reside, work, and recreate in the areas that will be affected by the Pipeline. As set out in the declarations of Sierra Club's members, the construction and operation of the Pipeline will cause those members concrete, particularized, and imminent harm. *See* Ex. 9 (Declaration of Tammy Capaldo); Ex. 10 (Declaration of Maury Johnson); Ex. 11 (Declaration of Naomi Cohen). This Court can redress that harm by setting aside the Corps' verification of the Pipeline under NWP 12. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). Sierra Club, therefore, has Article III standing to seek judicial review.

STANDARD OF REVIEW

Sierra Club asks this Court to maintain the *status quo* by suspending the Corps' verification of the Pipeline under NWP 12 pending resolution of the merits. A movant qualifies for such preliminary relief upon showing

> (1) that he will likely prevail on the merits of the appeal, (2) that he will suffer irreparable injury if the stay is denied, (3) that other parties

> will not be substantially harmed by the stay, and (4) that the public interest will be served by granting the stay.

Long v. Robinson, 432 F.2d 977, 979 (4th Cir. 1970). *See also Hilton v. Braunskill*, 481 U.S. 770, 776 (1987).

Because Section 19(d)(1) of the NGA does not specify a standard of review, the Court should apply the standard set forth in the Administrative Procedure Act ("APA"), 5 U.S.C. §§ 701-706. *See AES Sparrows Point LNG, LLC v. Wilson*, 589 F.3d 721, 727 (4th Cir. 2009) (applying APA standard to petition under Section 19(d)(1) of the NGA). *See also Crutchfield v. Hanover Cnty.*, 325 F.3d 211, 216-17 (4th Cir. 2003) (applying APA standard in reviewing the Corps' verification of a project under an NWP). Under that standard, the Court must set aside any agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

ARGUMENT

I. Sierra Club Is Likely To Succeed On The Merits Because MVP Cannot Satisfy The Conditions of NWP 12, Rendering The Corps' Verification of The Pipeline Under NWP 12 Not In Accordance With Federal Law.

A. The Pipeline does not meet the express terms of NWP 12.

The Corps' permitting regulations unambiguously require that, "for a valid authorization to occur," a "prospective permittee must satisfy *all* terms and conditions of an NWP." 33 C.F.R. § 330.4(a) (emphasis added). When a state agency places conditions on its water quality certification for an NWP, as WVDEP

did in this case, those conditions become express conditions of the federal permit. 33 U.S.C. § 1341(d); 33 C.F.R. § 330.4(c)(2). As such, WVDEP's requirement that pipelines greater than 36 inches in diameter or that cross Section 10 rivers possess an individual water quality certification is a condition of NWP 12 on equal footing with any other term or condition of that permit. The language of the condition in NWP 12 regarding individual water quality certifications is unambiguous: "Individual State Water Quality Certification is *required* for...[p]ipelines equal to or greater than 36 inches in diameter...[or] [p]ipelines crossing a Section 10 river[.]" Ex. 3 at 20 (emphasis added). The plain meaning of the term "required" is "'demanded as necessary or essential[.]'" *U.S. v. Bazile*, 209 F.3d 1205, 1207 (10th Cir. 2000) (interpreting "required" in the U.S. Sentencing Guidelines by quoting Webster's Ninth New Collegiate Dictionary (1991)). Moreover, WVDEP did not include in its condition an option for a waiver of individual certification. That is, the condition does not read "Individual State Water Quality Certification *or waiver thereof* is required." Because MVP did not obtain an individual water certification and does not possess one, its 42-inch pipeline that crosses three Section 10 waters cannot satisfy the plain language of the condition.

B. WVDEP lacks authority to modify either NWP 12 or its prior Certification of NWP 12.

WVDEP's November 1, 2017 waiver of authority to issue an individual certification does not change that result. Once a state certifies a federal permit

under Section 401, any conditions placed on that certification become enforceable conditions of the federal permit. 33 U.S.C. § 1341(d). In other words, "[w]hatever freedom the states may have to impose their own substantive policies in reaching initial certification decisions, the picture changes dramatically once that decision has been made and a federal agency has acted upon it." *Keating v. F.E.R.C.*, 927 F.2d 616, 623 (D.C. Cir. 1991). A state's unilateral about-face simply cannot alter the terms and conditions of the federal permit. *See Triska v. Dep't of Health and Envtl. Control*, 355 S.E.2d 531, 534 (S.C. 1987).

And for good reason: state-imposed conditions protecting water quality often factor into the federal agency's permitting analysis—as they did in this case. Although water quality certification is the province of the states, the Corps' review at the regional- and project-level evaluation stages requires a determination that activities permitted under an NWP will result in only minimal impacts under Section 404(e) and are in the public interest. 82 Fed. Reg. at 1876, 1969, 2004. In reissuing NWP 12, the Corps explicitly recognized that regional conditions, including conditions "added to the NWPs as a result of water quality certifications...by states," are an "important mechanism for ensuring compliance with" Section 404(e)'s minimal impacts requirement. *Id.* at 1876. Corps regulations similarly recognize that the public interest review "take[s] into account the existence of controls imposed under other federal, state, or local programs." 33

C.F.R. § 325.4(a)(2). In other words, the Corps' decision as to whether additional region- or project-specific conditions are necessary to ensure compliance with the CWA proceeds against the backdrop of any state-imposed conditions under Section 401. Allowing a state to alter that backdrop after the fact would undermine the integrity of the Corps' review.

Even assuming that a modification to WVDEP's Certification *could* affect the terms of a federal permit, WVDEP lacked authority to make any such modification in this case. West Virginia regulations authorizing WVDEP to implement Section 401 do not empower the agency to modify previously issued certifications. W. Va. C.S.R. § 47-5A-1 *et seq.* Neither does federal law. Section 401 allows "a state to revoke a prior certification...but only pursuant to the terms of, and for the reasons indicated in, section 401(a)(3)." *Keating*, 927 F.2d at 622. None of the circumstances described in that section are present here.[3]

Furthermore, federal regulations promulgated by the Environmental Protection Agency ("EPA") interpreting Section 401 provide that a state's certification may only be modified "in such manner as may be agreed upon by the

3 Section 401(a)(3) contemplates the revocation of a certification for a federal *construction* permit as a valid certification for a second federal permit for *operation* of the same facility within 60 days of notice of the second permit when there are "changes since the construction license or permit certification was issued in (A) the construction or operation of the facility, (B) the characteristics of the waters into which such discharge is made, (C) the water quality criteria applicable to such waters or (D) applicable effluent limitations or other requirements." 33 U.S.C. § 1341(a)(3).

certifying agency, the licensing or permitting agency, *and* the Regional Administrator" of the EPA. 40 C.F.R. § 121.2(b) (emphasis added). That regulation ensures that any *post hoc* changes to a federal permit have the concurrence of the federal licensing authority and EPA. Here, even if the actions by WVDEP and the Corps could be construed as an agreement to modify the April 13, 2017 Certification issued by WVDEP for NWP 12, there is no evidence that the Regional Administrator of EPA ever agreed to such a modification. Because the Regional Administrator's agreement is a condition precedent to the modification of a certification, and because WVDEP is not authorized by state law to modify previously issued certifications, any effort by WVDEP to modify its Section 401 Certification for NWP 12 is a mere nullity. *Dixon v. U.S.*, 381 U.S. 68, 74 (1965) (holding that an *ultra vires* administrative action is a mere nullity).

Finally, WVDEP's November 1, 2017 waiver of its individual Section 401 authority with respect to the Pipeline cannot be construed as a lawful modification to the long-effective Section 401 Certification for NWP 12 because it was not subject to the requisite public participation procedures. WVDEP's April 13, 2017 Certification of NWP 12 was the subject of public notice and comment (Ex. 12)—a requirement imposed by Section 401 itself, 33 U.S.C. § 1341(a)(1). Pursuant to that requirement, West Virginia has promulgated legislative rules requiring public notice and comment on Section 401 certifications. W. Va. C.S.R. § 47-5A-5.

Because of the importance of those public participation provisions, WVDEP lacks the authority to unilaterally modify a previously issued and duly promulgated Section 401 certification without providing for public notice and comment. *Cf. U.S. v. Smithfield Foods, Inc.*, 191 F.3d 516, 524, 526 (4th Cir. 1999) (upholding district court ruling that prior, valid CWA permit could not be modified by later state agency action that did not comply with procedural requirements); *Citizens for a Better Env't—Calif. v. Union Oil Co. of Calif.*, 83 F.3d 1111, 1120 (9th Cir. 1996) (same). Accordingly, even if WVDEP's November 1, 2017 waiver of its Section 401 authority were to be construed as an attempt to modify the condition of NWP 12 requiring that pipelines greater than 36 inches in diameter or that cross Section 10 rivers possess an individual certification, such an effort would be ineffective as a matter of law.

C. Neither the Corps nor WVDEP can expand the applicability of NWP 12 without formal modification of the permit by the Corps after public notice and comment.

Even if WVDEP had the authority to modify its April 13, 2017 Certification of NWP 12 without EPA's concurrence and had validly exercised that authority, WVDEP lacks the authority to unilaterally modify the terms and conditions of NWP 12. As a result of WVDEP's April 13, 2017 certification of NWP 12, it is now a condition of NWP 12 itself that pipeline projects in West Virginia greater than 36 inches in diameter or that cross Section 10 rivers must possess an

individual water quality certification from WVDEP. 33 U.S.C. § 1341(a); 33 C.F.R. § 330.4(c)(2). As such, that requirement—like any other term or condition of an NWP—can be modified only as the Corps' general permitting regulations allow.

Those regulations are unequivocal: once the Corps issues an NWP, its terms and conditions can be relaxed only by formal modification or wholesale reissuance—both of which require full notice and comment. 33 C.F.R. §§ 330.1(b); 330.5(b). Although the Corps retains some discretion in authorizing projects under an already-issued NWP, it can exercise that discretion "only to *further condition or restrict the applicability* of the NWP." 33 C.F.R. § 330.1(d) (emphasis added). *See also id.* § 330.2(g) (Corps' discretionary authority includes the ability to "add[] conditions" to an NWP authorization). That discretion is a one-way valve that only allows permits to become more stringent. By contrast, the rules plainly provide that "modifications to...existing NWPs" require "the Corps give[] notice and allow[] the public an opportunity to comment on and request a public hearing." *Id.* §§ 330.1(b), 330.5(b).

In short, on April 13, 2017, WVDEP certified NWP 12 under Section 401, subject to the condition that pipelines like MVP's are required to have an individual water quality certification. Ex. 2. The Corps incorporated that requirement as a condition of NWP 12 in West Virginia. Ex. 3 at 20. Because

WVDEP lacks the authority to modify a condition of a NWP after its issuance, its November 1, 2017 waiver can have no effect on the condition in NWP 12 that large-diameter pipelines and those crossing Section 10 rivers must have an individual Section 401 certification. Moreover, the Corps has not purported to reissue NWP 12 or subjected any proposed modification to public notice and comment. Consequently, the Corps' verification of the Pipeline's application to use NWP 12 cannot be construed as a valid modification of NWP 12. The Corps and MVP were thus bound by the terms and conditions of NWP as they existed when the Corps issued its regionally-conditioned NWP 12 on May 17, 2017.

The ultimate result of WVDEP's November 1, 2017 waiver is that MVP is ineligible to use NWP 12 in West Virginia, and, if it is to obtain a Section 404 permit for its discharges, it must obtain an individual permit under 33 U.S.C. § 1344(a). Because the Pipeline cannot satisfy the terms and conditions of NWP 12, the Corps verified the project in contravention of its own regulations and, consequently, federal law. Accordingly, Sierra Club is likely to succeed on the merits of its petition for review.

II. Without Preliminary Relief, Sierra Club Will Suffer Irreparable Harm.

As it snakes some 300-miles up and over the Appalachian Mountains, the Pipeline will inflict significant environmental damage to the forests, streams, and wetlands in its path. Most significant to Sierra Club's claim here are the Pipeline's

impacts to aquatic resources at stream- and wetland-crossings in West Virginia. Those crossings will entail diverting water from the streams using one of three methods, digging a trench through the streambed up to eight-feet deep, placing the 42-inch-diameter pipe in the trench, and backfilling the trench. Ex. 13 at 2-42 to 2-46.

Although it represents only one of the nearly 600 crossings at issue in this case, the Pipeline's proposal to cross the Greenbrier River is a case study in the irreparable harm that will occur absent preliminary relief. Attached to this motion is a report by licensed geologist Dr. Pamela C. Dodds detailing the impacts of that crossing. Ex. 14. Dr. Dodds explains that, because bedrock is present at the Greenbrier crossing site, blasting is unavoidable. *Id.* at 4. Blasting at the crossing site has the potential to directly displace, injure, or even kill aquatic organisms. *Id.* In addition, blasting will further harm fisheries and other aquatic life by increasing turbidity in the Greenbrier or, as FERC recognized in its environmental review of the project, contaminating the water with chemical by-products. *Id.* at 4, 22.

More troubling still, blasting will reduce groundwater recharge, likely altering the flow of groundwater to the wetlands and waterbodies along the Greenbrier River valley. *Id.* at 4. That, in turn, could alter the flow of the Greenbrier itself, especially in times of drought. *Id.* at 22. This is of particular concern because the Greenbrier and its tributaries are within the "Zone of Critical

Concern" for the nearby Big Bend Public Service District, which supplies public water from an intake just downstream of the Pipeline crossing. *Id.* at 3.

For Sierra Club and its members, those impacts will hit close to home. Attached to this motion are declarations from Sierra Club members detailing specific, irreparable harms that will result if construction proceeds as planned. For example, Sierra Club member Tammy Capaldo owns the property on which the Pipeline proposes to cross the Greenbrier River. Ex. 9 at ¶¶1, 3. As explained in her declaration, the Pipeline's construction on her property, including the crossing of the Greenbrier and its water quality effects, would impact Ms. Capaldo's aesthetic and recreational enjoyment of her property and may ultimately lead her to "abandon [her] dream" of living along the river she "hold[s] so dear." *Id.* at ¶¶4, 18, 34. Moreover, Ms. Capaldo is a customer of the Big Bend Public Service District. *Id.* at ¶31.

Maury Johnson—a member of the Sierra Club, the West Virginia Rivers Coalition, the Indian Creek Watershed Association, and the Chesapeake Climate Action Network—owns, operates, and resides on a 160-acre organic farm in Monroe County, West Virginia. Ex. 10 at ¶¶3, 6. As proposed, the Pipeline would cross three streams on his farm, all of which share a hydrologic connection with a domestic water well Mr. Johnson uses for cooking, cleaning, and watering livestock. *Id.* at ¶¶8-9. The three Pipeline crossings will release sediment and other

pollutants into the aquifer that feeds his well or otherwise impact the flow of groundwater so as to render it "unusable." *Id.* at ¶10. And like Ms. Capaldo, Mr. Johnson will suffer aesthetic and recreational injuries as Pipeline construction disturbs wildlife habitats, fishing holes, hiking trails, and even the location where Mr. Johnson was baptized as a young man. *Id.* at ¶¶12, 15-16, 19-20.

The Supreme Court has recognized that environmental harms like those described above, "by [their] very nature, can seldom be adequately remedied by money damages and [are] often permanent or at least of long duration, *i.e.*, irreparable." *Amoco Prod. Co. v. Vill. Of Gambell*, 480 U.S. 531, 545 (1987). *See also Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 201 (4th Cir. 2005) (same). The requirement that a movant suffer irreparable injury "does not focus on the significance of the injury," but rather whether, "irrespective of its gravity, [it] is irreparable—that is, whether there is any adequate remedy at law." *Sierra Club v. Martin*, 933 F.Supp. 1559, 1570–71 (N.D. Ga. 1996), *rev'd on other grounds*, 110 F.3d 1551 (11th Cir. 1997).

Moreover, the "dredging and filling of wetlands that may occur while [a c]ourt decides [a] case cannot be undone." *Sierra Club v. U.S.A.C.O.E.*, 399 F.Supp.2d 1335, 1348 (M.D. Fla. 2005), *order vac'd in part*, 464 F.Supp.2d 1171 (M.D. Fla. 2006), *aff'd*, 508 F.3d 1332 (11th Cir. 2007). There simply "is no adequate remedy at law to compensate the public for the harm caused by the

disposal of fill material into waters...or in wetlands." *U.S. v. Malibu Beach, Inc.*, 711 F.Supp. 1301, 1313 (D.N.J. 1989). In the words of Ms. Capaldo, the law "simply cannot put a price tag" on those resources. Ex. 9 at ¶33.

III. Preliminary Relief Will Not Substantially Harm the Corps or MVP.

In contrast to the real and permanent environmental harms discussed above, equitable relief would pose only minimal or temporary injury to the Corps and MVP. "Although the Corps has an identifiable interest in defending the validity of permits it has issued and the permitting process itself, the effect of an injunction on these interests seems rather inconsequential." *O.V.E.C. v. U.S.A.C.O.E.* (*O.V.E.C. II*), 528 F.Supp.2d 625, 632 (S.D.W.Va. 2007).

As for MVP, any "[l]oss of anticipated revenues generally does not constitute harm to others affected by injunctions in environmental cases." *Anglers of the AU Sable v. Forest Serv.*, 402 F.Supp.2d 826, 839 (E.D. Mich. 2005) (citing *Nat'l Parks Conservation Ass'n v. Babbitt*, 241 F.3d 722, 738 (9th Cir. 2001)). Monetary loss is relevant to the balance of harms only when it "threatens the very existence of the movant's business." *Wisc. Gas Co. v. F.E.R.C.*, 758 F.2d 669, 674 (D.C. Cir. 1985). *Accord Fed. Leasing, Inc. v. Underwriters at Lloyd's*, 650 F.2d 495, 500 (4th Cir. 1981). This is not such a case, as MVP has maintained that it will build the Pipeline even if construction is delayed until 2019. Ex. 15 at 179-80 (Tr. of Testimony of MVP's Sr. V-P for Constr. & Eng'ing, Robert Cooper).

In any case, temporary delays in construction, and any associated economic loss, cannot outweigh the permanent environmental damages that will occur absent preliminary relief because irreparable environmental injury outweighs economic harm in the balance of equities. *League of Wilderness Defs. v. Connaughton*, 752 F.3d 755, 765 (9th Cir. 2014); *Sierra Club v. U.S.A.C.O.E.*, 645 F.3d 978, 996-97 (8th Cir. 2011). "Money can be earned, lost, and earned again;" but a wetland, once filled, "is gone" forever. *O.V.E.C. II*, 528 F.Supp.2d at 632.

IV. The Public Interest Favors Preliminary Relief.

Where environmental resources are threatened, "the balance of harms will usually favor the issuance of an injunction." *Amoco Prod. Co.*, 480 U.S. at 545. *See also Nat'l Wildlife Fed'n v. Burford*, 676 F.Supp. 271, 279 (D.D.C. 1985). More specifically, the "public has an interest in the integrity of the waters of the United States and in seeing that administrative agencies act within their statutory authorizations and abide by their own regulations." *O.V.E.C. v. Bulen*, 315 F.Supp.2d 821, 831 (S.D.W.Va. 2004). In fact, the CWA itself embodies the "balance Congress sought to establish between economic gain and environmental protection." *O.V.E.C. II*, 528 F.Supp.2d at 633. Ensuring its mandates are thoroughly carried out is therefore always in the public interest. *See*, *e.g.*, *Johnson v. Dep't of Agric.*, 734 F.2d 774, 788 (11th Cir. 1984) ("Congressional intent and statutory purpose can be taken as a statement of public interest.").

CONCLUSION

Because Sierra Club is likely to prevail on the merits and the other factors all favor preliminary relief, Sierra Club respectfully requests that this Court maintain the *status quo* and suspend the Corp's verification of NWP 21 for the Pipeline pending resolution of the merits of Sierra Club's petition for review.

Dated: February 23, 2018

Respectfully submitted,

/s/ Derek O. Teaney
Derek O. Teaney
Evan D. Johns
Joseph M. Lovett
APPALACHIAN MOUNTAIN ADVOCATES, INC.
Post Office Box 507
Lewisburg, West Virginia 24901
Telephone: (304) 793-9007
Facsimile: (304) 645-9008
E-Mail: *dteaney@appalmad.org*
Counsel for Petitioners

UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT
Effective 12/01/2016

No. 18-1173 **Caption:** Sierra Club et al. v. U.S. Army Corps of Engineers et al.

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMIT

Type-Volume Limit, Typeface Requirements, and Type-Style Requirements

Type-Volume Limit for Briefs: Appellant's Opening Brief, Appellee's Response Brief, and Appellant's Response/Reply Brief may not exceed 13,000 words or 1,300 lines. Appellee's Opening/Response Brief may not exceed 15,300 words or 1,500 lines. A Reply or Amicus Brief may not exceed 6,500 words or 650 lines. Amicus Brief in support of an Opening/Response Brief may not exceed 7,650 words. Amicus Brief filed during consideration of petition for rehearing may not exceed 2,600 words. Counsel may rely on the word or line count of the word processing program used to prepare the document. The word-processing program must be set to include headings, footnotes, and quotes in the count. Line count is used only with monospaced type. See Fed. R. App. P. 28.1(e), 29(a)(5), 32(a)(7)(B) & 32(f).

Type-Volume Limit for Other Documents if Produced Using a Computer: Petition for permission to appeal and a motion or response thereto may not exceed 5,200 words. Reply to a motion may not exceed 2,600 words. Petition for writ of mandamus or prohibition or other extraordinary writ may not exceed 7,800 words. Petition for rehearing or rehearing en banc may not exceed 3,900 words. Fed. R. App. P. 5(c)(1), 21(d), 27(d)(2), 35(b)(2) & 40(b)(1).

Typeface and Type Style Requirements: A proportionally spaced typeface (such as Times New Roman) must include serifs and must be 14-point or larger. A monospaced typeface (such as Courier New) must be 12-point or larger (at least 10½ characters per inch). Fed. R. App. P. 32(a)(5), 32(a)(6).

This brief or other document complies with type-volume limits because, excluding the parts of the document exempted by Fed. R. App. R. 32(f) (cover page, disclosure statement, table of contents, table of citations, statement regarding oral argument, signature block, certificates of counsel, addendum, attachments):

☑ this brief or other document contains 5,188 [*state number of*] words

☐ this brief uses monospaced type and contains _____ [*state number of*] lines

This brief or other document complies with the typeface and type style requirements because:

☑ this brief or other document has been prepared in a proportionally spaced typeface using
Microsoft Word for Mac 2011 [*identify word processing program*] in
Times New Roman, 14 point [*identify font size and type style*]; **or**

☐ this brief or other document has been prepared in a monospaced typeface using
_____ [*identify word processing program*] in
_____ [*identify font size and type style*].

(s) Derek O. Teaney

Party Name Petitioners

Dated: February 23, 2018

CERTIFICATE OF SERVICE

I hereby certify that, on February 23, 2018, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Fourth Circuit by using the appellate CM/ECF system. The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system.

/s/ Derek O. Teaney
Derek O. Teaney
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

EXHIBIT 1 TO MOTION FOR PRELIMINARY RELIEF

CORPS' DECEMBER 22, 2017 VERIFICATION UNDER NWP 12

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 .

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

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
Page 3 of 4

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
Page 4 of 4

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.

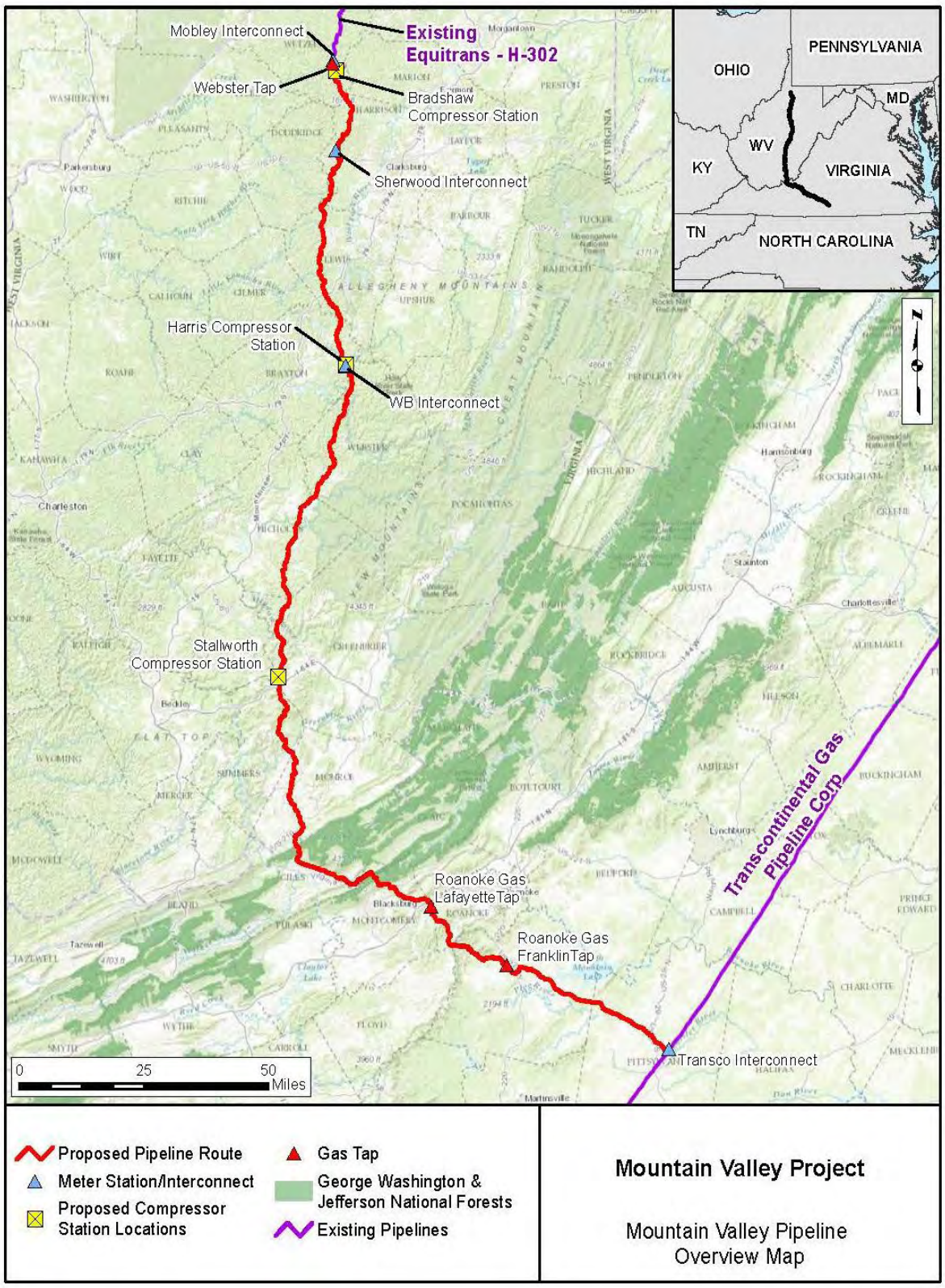


Figure 1. MVP overview.

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
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
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.

EXHIBIT 2 TO MOTION FOR PRELIMINARY RELIEF

WVDEP'S APRIL 13, 2017 OF NWPS

west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Telephone Number: (304) 926-0495
Fax Number: (304) 926-0496

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
dep.wv.gov

April 13, 2017

Mr. Michael Hatten
Chief, Regulatory Branch
United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701

Re: Nationwide Permit Reissuance and Issuance for the State of West Virginia, Public Notice No. LRH-2016-00006-WV
Issuance Date: April 13, 2017

Dear Mr. Hatten,

The West Virginia Department of Environmental Protection, Division of Water and Waste Management (WV DEP DWWM) submits West Virginia's Section 401 Water Quality Certification (WQC) standard and special conditions that apply to the Nationwide Permits (NWPs) 1 through 51, and 53 as published on January 6, 2017 in the Federal Register (82 FR 1860), by the U.S. Army Corps of Engineers (ACOE). These conditions must be implemented into any activity authorized by an ACOE NWP. The State's certification of these NWP activities does not replace the need for the applicant proposing an activity under the NWP Program from obtaining other applicable permits/authorizations from the West Virginia Department of Environmental Protection and/or the West Virginia Division of Natural Resources. Each permittee shall, if they do not understand or are not aware of applicable NWP conditions, contact the ACOE prior to conducting any activity authorized by an NWP in order to be advised of applicable conditions. These 401 Water Quality Certifications, with all attendant standard conditions and special conditions, are applicable to ACOE projects in West Virginia.

EXHIBIT 2 TO MOTION FOR PRELIMINARY RELIEF

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.

Special Conditions of State 401Water Quality Certification
Applicable to Individual Nationwide Permits

Nationwide Permits 1, 2, 4, 8, 10, 11, 16, 22, 24, 25, 26, 27, 28, 30, 34, 35, 41, 42, 44, 46, 47, and 53 have no West Virginia 401 Water Quality Certification Special Conditions.

3. Maintenance.

Nationwide Permit 3 West Virginia 401 Water Quality Certification Special Conditions:

A. Prior written notification to the West Virginia Department of Environmental Protection, Division of Water and Waste Management is required for use of this permit on streams identified in Section H Standard Condition 18 A, B, and C herein, and for all Section 10 Rivers.

5. Scientific Measurement Devices.

Nationwide Permit 5 West Virginia 401 Water Quality Certification Special Conditions:

A. Measurement devices will not restrict stream flow. No structure authorized by this permit shall entrain or impinge fish or any other aquatic life; or impede or prevent fish movement upstream or downstream; or cause more than minimal impact without specific written authorization from West Virginia Department of Environmental Protection, Division of Water and Waste Management.

6. Survey Activities.

Nationwide Permit 6 West Virginia 401 Water Quality Certification Special Conditions:

A. All test holes which penetrate solid rock shall be abandoned so that the lateral and vertical movement of fluids is prevented, provided that the test hole need not be plugged if subsequent excavation will remove the full depth of the test hole.

B. Prior written notification to West Virginia Department of Environmental Protection, Division of Water and Waste Management is required for activities proposing exploratory trenching under this permit.

7. Outfall Structures and Associated Intake Structures.

Nationwide Permit 7 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required when outfall structures and associated intake structures are being constructed in any streams identified in Section H Condition 18 A, B, and C herein.

B. Forty-five-day advance notification prior to installation of an outfall must be provided to West Virginia Department of Environmental Protection, Division of Water and Waste Management (WV DEP DWWM) allowing for a determination to be made as to whether the outfall will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

C. Disturbance of shoreline will be limited to 100 linear feet.

D. The structure is to be properly designed to prevent erosion. Rip rap or a splash pad is to be constructed to dissipate energy and to aerate the discharge unless the discharge elevation is below the water line at all times.

E. 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
iii. a description of how the intake rate will affect streamflow, or be varied, during periods of seasonal low flow and/or drought.

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

9. Structures in Fleeting and Anchorage Areas.

Nationwide Permit 9 West Virginia 401 Water Quality Certification Special Conditions:

A. Compensatory mitigation is required by 47 CSR 5A 6.2.k. for barge fleeting areas.

12. Utility Line Activities.

Nationwide Permit 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 Section II 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) 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."

13. Bank Stabilization.

Nationwide Permit 13 West Virginia 401 Water Quality Certification Special Conditions:

A. Except for activities under Section 14 of the 1946 Flood Control Act. Individual State Water Quality Certification is required for bank stabilization activities:

i. Greater than 500 linear feet of perennial and intermittent stream bank authorized by the U.S. Army Corps of Engineers (this condition may be waived up to 1,000 linear feet for landowners working with West Virginia Conservation Agency);

ii. Activities impacting greater than 200 linear feet on one or more of the streams identified in Section H Standard Condition 18 A, B, and C herein.

B. Pre-construction notification shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the stabilization activity will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

C. Bank protection measures may not be extended into the bed of the stream except as necessary to provide proper footing of the bank stabilization measure.

D. Stabilized streambanks, where possible and practicable, should be sloped and revegetated for erosion control purposes.

E. The use of unconsolidated river gravel (river jack) for streambank stabilization is not allowed. Unconsolidated river material may be used to reconstruct streambanks or form bankfull benches provided they are stabilized by material and/or methods which prevent further erosion under normal or expected high flows. Acceptable material and/or methods are; quarried or shot rock, clean concrete rubble, gabions, cribbing, woody vegetation, and flow diversion structures such as rock vanes. All of the foregoing are to be used in combination with appropriate sloping and engineering specifications.

14. Linear Transportation Projects.

Nationwide Permit 14 West Virginia 401 Water Quality Certification Special Conditions:

A. Activities associated with temporary access fills, temporary cofferdams or other discharges related to accessing the stream for maintenance 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.

B. Pipe, box, and arched culvert crossings:

i. The volume of fill for culverted structures is limited to the amount required to achieve transportation purpose.

ii. The inlet/outlets must be designed in such a manner as to maintain substrate in the bottom of the culvert (culverts installed in bedrock or with a stream gradient of 4% or greater do not need to be countersunk). Countersinking the culvert to the sub-pavement of the streambed, backwatering or the use of a bottomless culvert will generally fulfill this requirement.

iii. If fills associated with the crossing extend onto the floodplain, the use of floodplain culverts is strongly encouraged.

C. The volume of fill for a bridge abutment or piers below the ordinary high water mark is not to exceed 200 cubic yards for a single bridge project.

D. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in Section H Standard Condition 18 A, B, and C herein.

15. U.S. Coast Guard Approved Bridges.

Nationwide Permit 15 West Virginia 401 Water Quality Certification Special Conditions:

A. Pre-construction notification shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management for the use of this permit.

17. Hydropower Projects.

Nationwide Permit 17 West Virginia 401 Water Quality Certification Special Conditions:

A. An Individual State Water Quality Certification is required for use of this permit.

18. Minor Discharges.

Nationwide Permit 18 West Virginia 401 Water Quality Certification Special Conditions:

A. Prior notification describing the project location and impacts of dredging/filling shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the activity will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

19. Minor Dredging.

Nationwide Permit 19 West Virginia 401 Water Quality Certification Special Conditions:

A. Prior notification describing the project location and impacts of dredging/filling shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the activity will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

20. Response Operations for Oil and Hazardous Substances.

Nationwide Permit 20 West Virginia 401 Water Quality Certification Special Conditions:

A. Substances contained during cleanup or other contaminated dredged or fill material cannot be discharged or disposed of in sensitive areas such as islands, embayments, wetlands, or any water course, but only in disposal areas approved by West Virginia Department of Environmental Protection, Division of Water and Waste Management.

21. Surface Coal Mining Activities.

Nationwide Permit 21 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for activities impacting any classification of stream listed in West Virginia 401 Water Quality Certification Standard Condition 18.

B. Individual State Water Quality Certification is required for activities impacting an intermittent or perennial stream(s).

C. Individual State Water Quality Certification is required for intermittent or perennial stream, crossing (linear transportation projects) e.g. haul roads, access roads, conveyor belts, and pipelines, greater than 100 linear feet per each crossing.

D. Individual State Water Quality Certification is required for wetland impacts greater than ½ acre.

23. Approved Categorical Exclusions.

Nationwide Permit 23 West Virginia 401 Water Quality Certification Special Conditions:

An Individual State Water Quality Certification is required for use of this permit.

29. Residential Developments.

Nationwide Permit 29 West Virginia 401 Water Quality Certification Special Conditions:

A. Projects affecting Section 10 waters and adjacent wetlands require individual state water quality certification.

B. Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

31. Maintenance of Existing Flood Control Facilities.

Nationwide Permit 31 West Virginia 401 Water Quality Certification Special Conditions:

A. In non-emergency situations, prior written notification is required from West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days ensure both the minimization of impacts to fisheries and wildlife habitat and the consideration of habitat enhancements.

32. Completed Enforcement Actions.

Nationwide Permit 32 West Virginia 401 Water Quality Certification Special Conditions:

A. An Individual State Water Quality Certification is required for use of this permit.

33. Temporary Construction, Access, and Dewatering.

Nationwide Permit 33 West Virginia 401 Water Quality Certification Special Conditions:

Individual State Water Quality Certification is required for use of this permit to construct temporary causeways in Section 10 waters, or for fills in any water anticipated to exceed one year.

36. Boat Ramps.

Nationwide Permit 36 West Virginia 401 Water Quality Certification Special Conditions:

A. Pre-construction notification for this permit shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the boat ramp will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

37. Emergency Watershed Protection and Rehabilitation.

Nationwide Permit 37 West Virginia 401 Water Quality Certification Special Conditions:

A. Projects that have been coordinated with and obtained concurrence from West Virginia Department of Environmental Protection, Division of Water and Waste Management in the early project planning phase are certified.

B. This certification applies only to those emergency situations that involve: threats to life, threat of loss of primary residence, and loss or threat of loss to the areas infrastructure and/or other community services.

38. Cleanup of Hazardous and Toxic Waste.

Nationwide Permit 38 West Virginia 401 Water Quality Certification Special Conditions:

A. Along with the pre-construction notification required to be submitted to West Virginia Department of Environmental Protection, Division of Water and Waste Management (as specified in Section H Standard Condition 1), notice of the proposed activity must be provided to the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Environmental Remediation, 601 57th Street, Charleston, West Virginia 25304, as early as possible.

39. Commercial and Institutional Developments.

Nationwide Permit 39 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for projects impacting Section 10 waters and adjacent wetlands.

B. Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

40. Agricultural Activities.

Nationwide Permit 40 West Virginia 401 Water Quality Certification Special Conditions:

Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

43. Stormwater Management Facilities.

Nationwide Permit 43 West Virginia 401 Water Quality Certification Special Conditions:

Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

45. Repair of Uplands Damaged by Discrete Events.

Nationwide Permit 45 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in Section H Standard Condition 18 A, B, and C herein.

48. Commercial Shellfish Aquaculture Activities.

Nationwide Permit 48 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in Section H Standard Condition 18 A, B, and C herein.

49. Coal Remining Activities.

Nationwide Permit 49 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for activities impacting any classification of stream listed in West Virginia 401 Water Quality Certification Standard Condition 18.

B. Individual State Water Quality Certification is required for activities impacting an intermittent or perennial stream(s).

C. Individual State Water Quality Certification is required for intermittent or perennial stream, crossing (linear transportation projects) e.g. haul roads, access roads, conveyor belts, etc., greater than 100 linear feet per each crossing.

D. Individual State Water Quality Certification is required for wetland impacts greater than ½ acre.

50. Underground Coal Mining Activities.

Nationwide Permit 50 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for activities impacting any classification of stream listed in West Virginia 401 Water Quality Certification Standard Condition 18.

B. Individual State Water Quality Certification is required for activities impacting an intermittent or perennial stream(s).

C. Individual State Water Quality Certification is required for intermittent or perennial stream, crossing (linear transportation projects) e.g. haulroads, access roads, conveyor belts, etc., greater than 100 linear feet per each crossing.

D. Individual State Water Quality Certification is required for wetland impacts greater than ½ acre.

51. Land-Based Renewable Energy Generation Facilities.

Nationwide Permit 51 West Virginia 401 Water Quality Certification Special Conditions:

Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in Section H Condition 18 A, B, and C herein.

State 401 Certification, as required by the Clean Water Act, is granted subject to the above special conditions and the standard conditions for Nationwide Permits in West Virginia. Certification is effective immediately upon receipt; however, be aware that one or more of the Nationwide Permits West Virginia 401 Water Quality Certification(s) may be appealed within fifteen (15) day under Title 47, Series 5A, Section 7, of the Code of State Regulations, State Certification of Activities Requiring Federal Licenses and Permits.

Sincerely,

Scott G. Mandirola
Director

cc:
U.S. Army Corps of Engineers – Pittsburgh District – Scott Hans
WVDNR – Wildlife Resources Section, Elkins – Danny Bennett
U.S. Environmental Protection Agency – Jessica Martinsen
U.S. Fish and Wildlife Service – John Schmidt

SGM/lkc

EXHIBIT 3 TO MOTION FOR PRELIMINARY RELIEF

CORPS' NWPS ISSUED FOR WEST VIRGINIA

NATIONWIDE PERMITS FOR THE STATE OF WEST VIRGINIA

Public Notice

U S Army Corps of Engineers
Huntington District
Pittsburgh District

In reply refer to Public Notice No. LRH-2016-00006-WV

Issuance Date: May 17, 2017

Stream: **N/A**

Closing Date: March 18, 2022

Please address all comments and inquiries to:
U.S. Army Corps of Engineers, Huntington District
ATTN: CELRH-RD-S
502 8th Street
Huntington, WV 25701-2070
Phone: (304) 399-5710

CORPS OF ENGINEERS REGULATORY PROGRAM
REISSUANCE AND ISSUANCE OF NATIONWIDE PERMITS
WITH WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
401 WATER QUALITY CERTIFICATION

On January 6, 2017, the U.S. Army Corps of Engineers (Corps) published in the Federal Register (82 FR 1860) the final rule for the administration of its nationwide permit (NWP) program regulations under the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and the Marine Protection, Research and Sanctuaries Act. The rule became effective on March 19, 2017. These NWPs will expire on March 18, 2022.

An integral part of the Corps' regulatory program is the concept of NWPs for minor activities. NWPs are activity specific and are designed to relieve some of the administrative burdens associated with permit processing for both the applicant and the Federal government. The NWPs are issued by the Chief of Engineers and are intended to apply throughout the entire U.S. and its territories. The Corps Districts representing West Virginia have imposed regional conditions on the NWPs that are applicable throughout the entire state. For convenience, all NWPs with the appropriate regional, general, and special conditions are attached.

The NWPs are not valid until the appropriate state agency certifies the discharge does not violate state water quality standards. The West Virginia Department of Environmental Protection (WVDEP) granted water quality certification and imposed general conditions on NWP nos. 1, 2, 4, 8, 10, 11, 16, 22, 24, 25, 27, 28, 30, 34, 35, 41, 42, 44, 46, and 53, and general and specific conditions on NWP nos. 3, 5, 6, 7, 9, 12, 13, 14, 15, 17, 18, 19, 20, 21, , 29, 31, , 33, 36, 37, 38, 39, 40, 43, 45, 48, 49, 50, and 51.

The WVDEP denied water quality certification for NWP 23 - *Approved Categorical Exclusions*, NWP 32 – *Completed Enforcement Actions*, NWP 52-*Water-Based Renewable Energy Generation Pilot Projects* **(revoked for use in West Virginia)** and NWP 54-*Living Shorelines* **(revoked for use in West Virginia)**. Discharges that are NOT included in WVDEP's certification of the NWPs must obtain either individual water quality certification or a

waiver from:

West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Telephone Number: (304) 926-0495

Some NWP activities may proceed without notifying the Corps, as long as those activities comply with all applicable terms and conditions of the NWPs, including regional conditions imposed by division engineers. A non-reporting NWP may become a reporting NWP (requires the submittal of a Pre-Construction Notification [PCN] to the Corps in accordance with NWP General Condition 32) if the activity has the potential to affect a historic property (See NWP General Condition 20), federally-listed endangered or threatened species or their habitat (See NWP General Condition 18 and Regional General Condition 2), waters of special concern (Regional General Conditions 3 and 4), National Wild and Scenic Rivers (See NWP General Condition 16). **Applicants must review the water quality certification general and NWP-specific terms and conditions and submit an application to the WVDEP, at the address provided above, when an individual 401 Water Quality Certification or prior notification to WVDEP is required.**

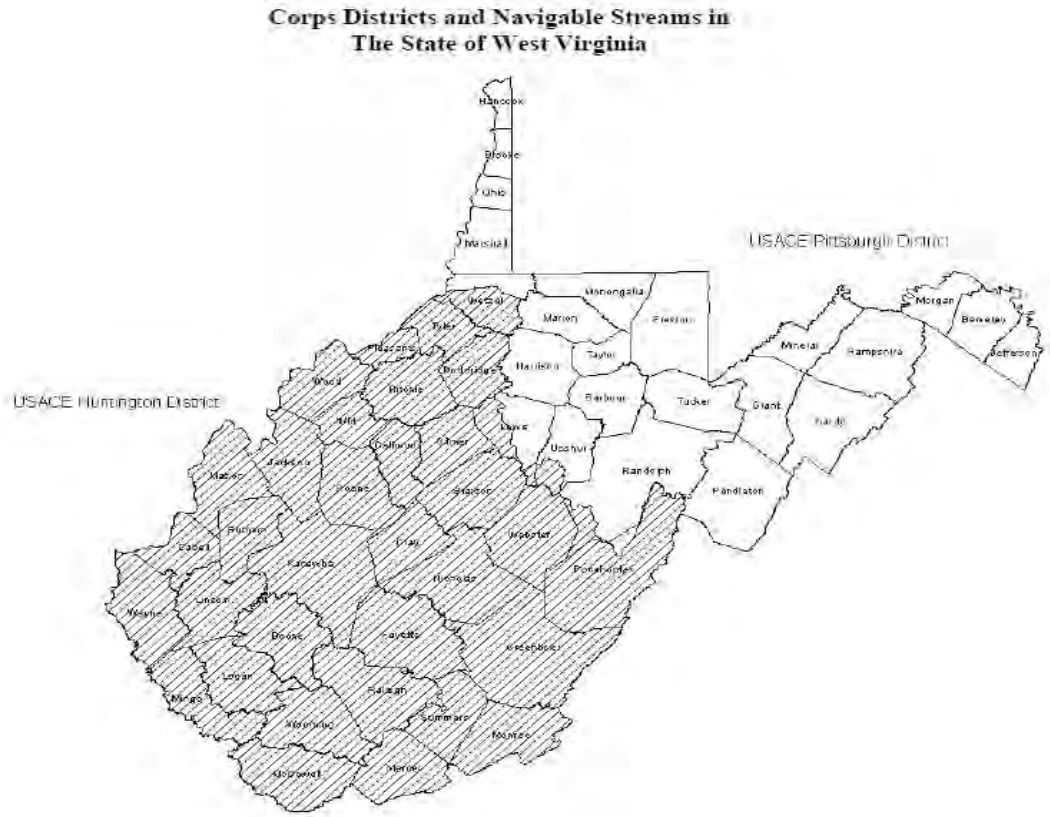
Many of the proposed NWPs require advance notification (PCN) to the district engineer before commencing those activities, to ensure that the activities authorized by those NWPs cause no more than minimal individual and cumulative adverse environmental effects. The notification must be made in writing as early as possible prior to commencing the proposed activity. The notification procedures are located under NWP General Condition. The notification to the Corps can be made concurrently with the request for individual state water quality certification, if required. The district engineer may require an individual permit for any activity determined to have more than minimal adverse environmental effects, individually or cumulatively, on the aquatic environment or would be contrary to the public interest.

The NWPs provide a simplified, expeditious means of project authorization under the various authorities of the Corps. We encourage prospective permit applicants to consider the advantages of NWP authorization during the preliminary design of their projects. Assistance and further information regarding all aspects of the Corps regulatory program may be obtained by contacting:

HUNTINGTON DISTRICT
Address: U.S. Army Corps of Engineers, Huntington District
502 Eighth Street
Huntington, West Virginia 25701-2070
Phone: (304) 399-5210

PITTSBURGH DISTRICT
Address: U.S. Army Corps of Engineers, Pittsburgh District
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222-4186
Phone: (412) 395-7155

Below is a map showing the district boundaries for the State of West Virginia.



Navigable Limits of <u>Major Section 10 Streams in West Virginia</u>

<u>Huntington District</u>

1. Ohio River……..Total Length in State
2. Kanawha River……Total Length
3. New River……...Total Length in State
4. Big Sandy River…….……Total Length
5. Tug Fork…….……58 Miles
6. Elk River……..139 Miles
7. Gauley River……..75 Miles
8. Guyandot River……122 Miles
9. Little Kanawha River……..130.75 Miles
10. Greenbrier River…….150.50 Miles
11. Coal River…….57.90 Miles

<u>Pittsburgh District</u>

1. Ohio River……Total Length in State
12. Monongahela River…….Total Length in State
13. Tygart River…….……..7 Miles
14. West Fork…….……74 Miles
15. Shenandoah River…….Total Length in State
16. Potomac River…….….Total Length in State

Note: The Huntington District processes all highway projects where the West Virginia Department of Transportation is the applicant.

A. Special Note

B. Regional General Conditions (apply to all Nationwide Permits)

1. Bogs and/or Fens
2. Diverting Water from Great Lakes
3. Littoral Transport within Lake Erie
4. In-Water Exclusion Dates
5. Waters of Special Condition
   a. Endangered Species and Threatened Species
   b. Critical Resource Waters
   c. Oak Openings
   6. Pre-Construction Notification (PCN) submittals
   a. Illustrations/Drawings
   b. United States Fish and Wildlife
   c. Cultural Resources
   d. National Wild and Scenic Rivers
   e. Agency Coordination

C. Nationwide Permits Terms and Specific Regional Conditions

1. Aids to Navigation
2. Structures in Artificial Canals
3. Maintenance
4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
5. Scientific Measurement Devices
6. Survey Activities
7. Outfall Structures and Associated Intake Structures
8. Oil and Gas Structures on the Outer Continental Shelf
9. Structures in Fleeting and Anchorage Areas
10. Mooring Buoys
11. Temporary Recreational Structures
12. Utility Line Activities
13. Bank Stabilization
14. Linear Transportation Projects
15. U.S. Coast Guard Approved Bridges
16. Return Water From Upland Contained Disposal Areas
17. Hydropower Projects
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil or Hazardous Substances
21. Surface Coal Mining Activities
22. Removal of Vessels
23. Approved Categorical Exclusions
24. Indian Tribe or State Administered Section 404 Programs
25. Structural Discharges
26. [Reserved]
27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities
28. Modifications of Existing Marinas
29. Residential Developments
30. Moist Soil Management for Wildlife
31. Maintenance of Existing Flood Control Facilities
32. Completed Enforcement Actions

33. Temporary Construction, Access, and Dewatering
34. Cranberry Production Activities
35. Maintenance Dredging of Existing Basins
36. Boat Ramps
37. Emergency Watershed Protection and Rehabilitation
38. Cleanup of Hazardous and Toxic Waste
39. Commercial and Institutional Developments
40. Agricultural Activities
41. Reshaping Existing Drainage Ditches
42. Recreational Facilities
43. Stormwater Management Facilities
44. Mining Activities
45. Repair of Uplands Damaged by Discrete Events
46. Discharges in Ditches
47. [Reserved]
48. Commercial Shellfish Aquaculture Activities
49. Coal Remining Activities
50. Underground Coal Mining Activities
51. Land-Based Renewable Energy Generation Facilities
52. Water-Based Renewable Energy Generation Pilot Projects
53. Removal of Low-Head Dams
54. Living Shorelines

D. Nationwide Permit General Conditions

1. Navigation
2. Aquatic Life Movements
3. Spawning Areas
4. Migratory Bird Breeding Areas
5. Shellfish Beds
6. Suitable Material
7. Water Supply Intakes
8. Adverse Effects from Impoundments
9. Management of Water Flows
10. Fills Within 100-Year Floodplains
11. Equipment
12. Soil Erosion and Sediment Controls
13. Removal of Temporary Fills
14. Proper Maintenance
15. Single and Complete Project
16. Wild and Scenic Rivers
17. Tribal Rights
18. Endangered Species
19. Migratory Bird and Bald and Golden Eagle Permits
20. Historic Properties
21. Discovery of Previously Unknown Remains and Artifacts
22. Designated Critical Resource Waters
23. Mitigation
24. Safety of Impoundment Structures
25. Water Quality

26. Coastal Zone Management
27. Regional and Case-by-Case Conditions
28. Use of Multiple Nationwide Permits
29. Transfer of Nationwide Permit Verifications
30. Compliance Certification
31. Activities Affecting Structures or Works Built by the United States
32. Pre-Construction Notification

E. District Engineer's Decision

F. Further Information

G. General Limitations and Conditions for all WVDEP 401 Certified Nationwide Permits

H. Definitions

Best management practices (BMPs)
Compensatory mitigation
Currently serviceable
Direct effects
Discharge
Ecological reference
Enhancement
Ephemeral stream
Establishment (creation)
High Tide Line
Historic property
Independent utility
Indirect effects
Intermittent stream
Loss of waters of the United States
Navigable waters
Non-tidal wetland
Open water
Ordinary high water mark
Perennial stream
Practicable
Pre-construction notification
Preservation
Protected tribal resources
Re-establishment
Rehabilitation
Restoration
Riffle and pool complex
Riparian areas
Shellfish seeding
Single and complete linear project
Single and complete non-linear project
Stormwater management
Stormwater management facilities

Stream bed
Stream channelization
Structure
Tidal wetland
Tribal lands
Tribal rights
Vegetated shallows
Waterbody

A. Special Note. For NWPs that do not require pre-construction notification to the Corps, it is an applicant's responsibility to review the Water Quality Certification general and NWP-specific terms and conditions and submit information to the WVDEP as required by their water quality certification. A project that meets the terms and conditions of a NWP with no Pre-Construction Notification to the Corps is only valid when accompanied by a blanket or individual 401 Water Quality Certification from the WVDEP. No work in waters of the United States may commence until the required 401 water quality certification (or waiver) has been obtained from the WVDEP.

B. Nationwide Permits Regional General Conditions (Applies to All Nationwide Permits):

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 Nationwide Permit 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 in 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 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.

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.

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 should ensure they are referencing the latest version of Appendix A by contacting the USFWS.

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.

C. **Nationwide Permit Terms and Specific Regional Conditions:**

1. ***Aids to Navigation***. The placement of aids to navigation and regulatory markers that are approved by and installed in accordance with the requirements of the U.S. Coast Guard (see 33 CFR, chapter I, subchapter C, part 66). (Authority: Section 10 of the Rivers and Harbors Act of 1899 (Section 10))

2. ***Structures in Artificial Canals***. Structures constructed in artificial canals within principally residential developments where the connection of the canal to a navigable water of the United States has been previously authorized (see 33 CFR 322.5(g)). (Authority: Section 10)

3. ***Maintenance.*** (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair,

rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance 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 conducting the maintenance activity, 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.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Authorities: Section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act (Sections 10 and 404))

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act section 404(f) exemption for maintenance.

Corps NWP 3 Specific Regional Conditions:

a. PCN in accordance with NWP General Condition 32 is required for the following activities:
   i. All regulated activities in the Ohio River and the Kanawha River; and
   ii. For temporary structures, work, and discharges (including cofferdams) necessary for access fills or dewatering of construction sites occurring in Section 10 waters when the primary activity is otherwise authorized by the Corps of Engineers. 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.

NWP 3 West Virginia 401 Water Quality Certification Special Condition:

A. Prior written notification to the West Virginia Department of Environmental Protection, Division of Water and Waste Management is required for use of this permit on streams identified in WQC Standard Condition 18 A, B, and C herein, and for all Section 10 Rivers.

4. *Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities.* Fish and wildlife harvesting devices and activities such as pound nets, crab traps, crab dredging, eel pots, lobster traps, duck blinds, and clam and oyster digging, fish aggregating devices, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This NWP does not authorize artificial reefs or impoundments and semi-impoundments of waters of the United States for the culture or holding of motile species such as lobster, or the use of covered oyster trays or clam racks. (Authorities: Sections 10 and 404)

5. *Scientific Measurement Devices.* Devices, whose purpose is to measure and record scientific data, such as staff gages, tide and current gages, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures. Small weirs and flumes constructed primarily to record water quantity and velocity are also authorized provided the discharge is limited to 25 cubic yards. Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to pre-construction elevations. (Authorities: Sections 10 and 404)

NWP 5 West Virginia 401 Water Quality Certification Special Condition:

A. Measurement devices will not restrict stream flow. No structure authorized by this permit shall entrain or impinge fish or any other aquatic life; or impede or prevent fish movement upstream or downstream; or cause more than minimal impact without specific written authorization from West Virginia Department of Environmental Protection, Division of Water and Waste Management.

6. *Survey Activities.* Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys. For the purposes of this NWP, the term “exploratory trenching” means mechanical land

clearing of the upper soil profile to expose bedrock or substrate, for the purpose of mapping or sampling the exposed material. The area in which the exploratory trench is dug must be restored to its pre-construction elevation upon completion of the work and must not drain a water of the United States. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. This NWP authorizes the construction of temporary pads, provided the discharge does not exceed 1/10-acre in waters of the U.S. Discharges and structures associated with the recovery of historic resources are not authorized by this NWP. Drilling and the discharge of excavated material from test wells for oil and gas exploration are not authorized by this NWP; the plugging of such wells is authorized. Fill placed for roads and other similar activities is not authorized by this NWP. The NWP does not authorize any permanent structures. The discharge of drilling mud and cuttings may require a permit under section 402 of the Clean Water Act. (Authorities: Sections 10 and 404)

NWP 6 West Virginia 401 Water Quality Certification Special Conditions:

A. All test holes which penetrate solid rock shall be abandoned so that the lateral and vertical movement of fluids is prevented, provided that the test hole need not be plugged if subsequent excavation will remove the full depth of the test hole.

B. Prior written notification to West Virginia Department of Environmental Protection, Division of Water and Waste Management is required for activities proposing exploratory trenching under this permit.

7. *Outfall Structures and Associated Intake Structures.* Activities related to the construction or modification of outfall structures and associated intake structures, where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted by, or otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (section 402 of the Clean Water Act). The construction of intake structures is not authorized by this NWP, unless they are directly associated with an authorized outfall structure.

NWP 7 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required when outfall structures and associated intake structures are being constructed in any streams identified in WQC Standard Condition 18 A, B, and C herein.

B. Forty-five-day advance notification prior to installation of an outfall must be provided to West Virginia Department of Environmental Protection, Division of Water and Waste Management (WV DEP DWWM) allowing for a determination to be made as to whether the outfall will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

C. Disturbance of shoreline will be limited to 100 linear feet.

D. The structure is to be properly designed to prevent erosion. Rip rap or a splash pad is to be constructed to dissipate energy and to aerate the discharge unless the discharge elevation is below the water line at all times.

E. 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
iii. a description of how the intake rate will affect streamflow, or be varied, during periods of seasonal low flow and/or drought.

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

8. *Oil and Gas Structures on the Outer Continental Shelf.* Structures for the exploration, production, and transportation of oil, gas, and minerals on the outer continental shelf within areas leased for such purposes by the Department of the Interior, Bureau of Ocean Energy Management. Such structures shall not be placed within the limits of any designated shipping safety fairway or traffic separation scheme, except temporary anchors that comply with the fairway regulations in 33 CFR 322.5(l). The district engineer will review such proposals to ensure compliance with the provisions of the fairway regulations in 33 CFR 322.5(l). Any Corps review under this NWP will be limited to the effects on navigation and national security in accordance with 33 CFR 322.5(f), as well as 33 CFR 322.5(l) and 33 CFR part 334. Such structures will not be placed in established danger zones or restricted areas as designated in 33 CFR part 334, nor will such structures be permitted in EPA or Corps-designated dredged material disposal areas.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 10)

9. *Structures in Fleeting and Anchorage Areas.* Structures, buoys, floats, and other devices placed within anchorage or fleeting areas to facilitate moorage of vessels where such areas have been established for that purpose. (Authority: Section 10)

NWP 9 West Virginia 401 Water Quality Certification Special Condition:

A. Compensatory mitigation is required by 47 CSR 5A 6.2.k. for barge fleeting areas.

10. *Mooring Buoys.* Non-commercial, single-boat, mooring buoys. (Authority: Section 10)

11. *Temporary Recreational Structures.* Temporary buoys, markers, small floating docks, and similar structures placed for recreational use during specific events such as water skiing competitions and boat races or seasonal use, provided that such structures are removed within 30 days after use has been discontinued. At Corps of Engineers reservoirs, the reservoir managers must approve each buoy or marker individually. (Authority: Section 10)

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 WQC Standard 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."

13. ***Bank Stabilization.*** Bank stabilization activities necessary for erosion control or prevention, such as vegetative stabilization, bioengineering, sills, rip rap, revetment, gabion baskets, stream barbs, and bulkheads, or combinations of bank stabilization techniques, provided the activity meets all of the following criteria:

(a) No material is placed in excess of the minimum needed for erosion protection;

(b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects (an exception is for bulkheads – the district engineer cannot issue a waiver for a bulkhead that is greater than 1,000 feet in length along the bank);

(c) The activity will not exceed an average of one cubic yard per running foot, as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;

(d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;

(e) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the United States;

(f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas);

(g) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization;

(h) The activity is not a stream channelization activity; and

(i) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This NWP authorizes those maintenance and repair activities if they require authorization.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization 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 the bank stabilization activity: (1) involves discharges into special aquatic sites; or (2) is in excess of 500 feet in length; or (3) will involve the discharge of greater than an average of one cubic yard per running foot as measured along the length of the treated bank, below the plane of the ordinary high water mark or the high tide line. (See general condition 32.) (Authorities: Sections 10 and 404)

Corps NWP 13 Specific Regional Conditions:

a. PCN in accordance with NWP General Condition 32 is required for the following activities:

i. All regulated activities in the Ohio River and the Kanawha River;
ii. All activities in Section 10 waters that involve a discharge of greater than 10 cubic yards of dredged or fill material below the ordinary high water mark; and
iii. The use of any vertical bulkhead. A vertical bulkhead is defined as any structure of fill, with a vertical face. It may be constructed of timber, steel, concrete, etc.

NWP 13 West Virginia 401 Water Quality Certification Special Conditions:

A. Except for activities under Section 14 of the 1946 Flood Control Act, Individual State Water Quality Certification is required for bank stabilization activities:

i. Greater than 500 linear feet of perennial and intermittent stream bank authorized by the U.S. Army Corps of Engineers (this condition may be waived up to 1,000 linear feet for landowners working with West Virginia Conservation Agency);
ii. Activities impacting greater than 200 linear feet on one or more of the streams identified in WQC Standard Condition 18 A, B, and C herein.

B. Pre-construction notification shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the stabilization activity will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

C. Bank protection measures may not be extended into the bed of the stream except as necessary to provide proper footing of the bank stabilization measure.

D. Stabilized streambanks, where possible and practicable, should be sloped and revegetated for erosion control purposes.

E. The use of unconsolidated river gravel (river jack) for streambank stabilization is not allowed. Unconsolidated river material may be used to reconstruct streambanks or form bankfull benches provided they are stabilized by material and/or methods which prevent further erosion under normal or expected high flows. Acceptable material and/or methods are; quarried or shot rock, clean concrete rubble, gabions, cribbing, woody vegetation, and flow diversion structures such as rock vanes. All of the foregoing are to be used in combination with appropriate sloping and engineering specifications.

14. ***Linear Transportation Projects.*** Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is

limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. 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. 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.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects 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. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 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 14 Specific Regional Conditions:

a. PCN in accordance with NWP General Condition 32 is required for the following activities:
   i. All regulated activities in Section 10 waters;
   ii. Discharge of dredged or fill material into greater than 200 linear feet of stream; and
   iii. All vented low water crossings and all vented crossings requiring more than two culverts to pass expected ordinary high flows. A vented crossing

is defined as a stream crossing where multiple culverts are proposed to be installed in waters of the U.S.

NWP 14 West Virginia 401 Water Quality Certification Special Conditions:

A. Activities associated with temporary access fills, temporary cofferdams or other discharges related to accessing the stream for maintenance 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.

B. Pipe, box, and arched culvert crossings:

i. The volume of fill for culverted structures is limited to the amount required to achieve transportation purpose.

ii. The inlet/outlets must be designed in such a manner as to maintain substrate in the bottom of the culvert (culverts installed in bedrock or with a stream gradient of 4% or greater do not need to be countersunk). Countersinking the culvert to the sub-pavement of the streambed, backwatering or the use of a bottomless culvert will generally fulfill this requirement.

iii. If fills associated with the crossing extend onto the floodplain, the use of floodplain culverts is strongly encouraged.

C. The volume of fill for a bridge abutment or piers below the ordinary high water mark is not to exceed 200 cubic yards for a single bridge project.

D. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in WQC Standard Condition 18 A, B, and C herein.

15. ***U.S. Coast Guard Approved Bridges.*** Discharges of dredged or fill material incidental to the construction of a bridge across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills, provided the construction of the bridge structure has been authorized by the U.S. Coast Guard under section 9 of the Rivers and Harbors Act of 1899 or other applicable laws. Causeways and approach fills are not included in this NWP and will require a separate section 404 permit. (Authority: Section 404 of the Clean Water Act (Section 404))

NWP 15 West Virginia 401 Water Quality Certification Special Condition:

A. Pre-construction notification shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management for the use of this permit.

16. ***Return Water From Upland Contained Disposal Areas.*** Return water from an upland contained dredged material disposal area. The return water from a contained disposal area is administratively defined as a discharge of dredged material by 33 CFR 323.2(d), even though the disposal itself occurs in an area that has no waters of the United States and does not require a section 404 permit. This NWP satisfies the technical requirement for a section 404 permit for the return water where the quality of the return water is controlled by the state through the section 401 certification procedures. The dredging activity may require a section 404 permit (33 CFR

323.2(d)), and will require a section 10 permit if located in navigable waters of the United States. (Authority: Section 404)

17. *Hydropower Projects.* Discharges of dredged or fill material associated with hydropower projects having: (a) Less than 5000 kW of total generating capacity at existing reservoirs, where the project, including the fill, is licensed by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act of 1920, as amended; or (b) a licensing exemption granted by the FERC pursuant to section 408 of the Energy Security Act of 1980 (16 U.S.C. 2705 and 2708) and section 30 of the Federal Power Act, as amended.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

NWP 17 West Virginia 401 Water Quality Certification Special Condition:

A. An Individual State Water Quality Certification is required for use of this permit.

18. *Minor Discharges.* Minor discharges of dredged or fill material into all waters of the United States, provided the activity meets all of the following criteria:

(a) The quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;

(b) The discharge will not cause the loss of more than 1/10-acre of waters of the United States; and

(c) The discharge is not placed for the purpose of a stream diversion.

Corps NWP 18 Specific Regional Condition:

This NWP does not authorize stream relocations or channelization, impoundments, well pads and/or utility substations for commercial and/or industrial use, construction of valley fills, or fills resulting in the permanent losses of streams.

NWP 18 West Virginia 401 Water Quality Certification Special Condition:

A. Prior notification describing the project location and impacts of dredging/filling shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the activity will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

19. *Minor Dredging.* Dredging of no more than 25 cubic yards below the plane of the ordinary high water mark or the mean high water mark from navigable waters of the United States (i.e., section 10 waters). This NWP does not authorize the dredging or degradation through siltation of coral reefs, sites that support submerged aquatic vegetation (including sites where submerged aquatic vegetation is documented to exist but may not be present in a given year), anadromous fish spawning areas, or wetlands, or the connection of canals or other artificial waterways to

navigable waters of the United States (see 33 CFR 322.5(g)). All dredged material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. (Authorities: Sections 10 and 404)

NWP 19 West Virginia 401 Water Quality Certification Special Condition:

A. Prior notification describing the project location and impacts of dredging/filling shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the activity will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

20. ***Response Operations for Oil and Hazardous Substances.*** Activities conducted in response to a discharge or release of oil or hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR part 300) including containment, cleanup, and mitigation efforts, provided that the activities are done under either: (1) the Spill Control and Countermeasure Plan required by 40 CFR 112.3; (2) the direction or oversight of the federal on-scene coordinator designated by 40 CFR part 300; or (3) any approved existing state, regional or local contingency plan provided that the Regional Response Team (if one exists in the area) concurs with the proposed response efforts. This NWP also authorizes activities required for the cleanup of oil releases in waters of the United States from electrical equipment that are governed by EPA's polychlorinated biphenyl spill response regulations at 40 CFR part 761. This NWP also authorizes the use of temporary structures and fills in waters of the U.S. for spill response training exercises. (Authorities: Sections 10 and 404)

NWP 20 West Virginia 401 Water Quality Certification Special Condition:

A. Substances contained during cleanup or other contaminated dredged or fill material cannot be discharged or disposed of in sensitive areas such as islands, embayments, wetlands, or any water course, but only in disposal areas approved by West Virginia Department of Environmental Protection, Division of Water and Waste Management.

21. ***Surface Coal Mining Activities.*** Discharges of dredged or fill material into waters of the United States associated with surface coal mining and reclamation operations, provided the following criteria are met:

(a) The activities are already authorized, or are currently being processed by states with approved programs under Title V of the Surface Mining Control and Reclamation Act of 1977 or as part of an integrated permit processing procedure by the Department of the Interior, Office of Surface Mining Reclamation and Enforcement;

(b) The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal individual and cumulative adverse environmental effects. The loss of stream bed

plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into tidal waters or non-tidal wetlands adjacent to tidal waters; and

(c) The discharge is not associated with the construction of valley fills. A "valley fill" is a fill structure that is typically constructed within valleys associated with steep, mountainous terrain, associated with surface coal mining activities.

Notification: The permittee must submit a pre-construction notification to the district engineer and receive written authorization prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

NWP 21 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for activities impacting any classification of stream listed in West Virginia 401 Water Quality Certification Standard Condition 18.

B. Individual State Water Quality Certification is required for activities impacting an intermittent or perennial stream(s).

C. Individual State Water Quality Certification is required for intermittent or perennial stream, crossing (linear transportation projects) e.g. haul roads, access roads, conveyor belts, and pipelines, greater than 100 linear feet per each crossing.

D. Individual State Water Quality Certification is required for wetland impacts greater than ½ acre.

22. *Removal of Vessels.* Temporary structures or minor discharges of dredged or fill material required for the removal of wrecked, abandoned, or disabled vessels, or the removal of man-made obstructions to navigation. This NWP does not authorize maintenance dredging, shoal removal, or riverbank snagging.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the vessel is listed or eligible for listing in the National Register of Historic Places; or (2) the activity is conducted in a special aquatic site, including coral reefs and wetlands. (See general condition 32.) If condition 1 above is triggered, the permittee cannot commence the activity until informed by the district engineer that compliance with the "Historic Properties" general condition is completed. (Authorities: Sections 10 and 404)

Note 1: If a removed vessel is disposed of in waters of the United States, a permit from the U.S. EPA may be required (see 40 CFR 229.3). If a Department of the Army permit is required for vessel disposal in waters of the United States, separate authorization will be required.

Note 2: Compliance with general condition 18, Endangered Species, and general condition 20, Historic Properties, is required for all NWPs. The concern with historic properties is emphasized in the notification requirements for this NWP because of the possibility that shipwrecks may be historic properties.

23. ***Approved Categorical Exclusions.*** Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

(a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from the requirement to prepare an environmental impact statement or environmental assessment analysis, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and

(b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

Notification: Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters. (Authorities: Sections 10 and 404)

Note: The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO). Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are: the Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07, which is available at: http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-07.pdf . Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same web site.

Corps NWP 23 Specific Regional Conditions:

a. PCN in accordance with NWP General Condition 32 is required for use of this NWP.

b. The PCN must include a copy of the Categorical Exclusion determination.

An Individual State Water Quality Certification is required for use of this nationwide permit.

24. ***Indian Tribe or State Administered Section 404 Programs.*** Any activity permitted by a state or Indian Tribe administering its own section 404 permit program pursuant to 33 U.S.C. 1344(g)-(l) is permitted pursuant to section 10 of the Rivers and Harbors Act of 1899. (Authority: Section 10)

Note 1: As of the date of the promulgation of this NWP, only New Jersey and Michigan administer their own section 404 permit programs.

Note 2: Those activities that do not involve an Indian Tribe or State section 404 permit are not included in this NWP, but certain structures will be exempted by Section 154 of Pub. L. 94-587, 90 Stat. 2917 (33 U.S.C. 591) (see 33 CFR 322.4(b)).

25. *Structural Discharges.* Discharges of material such as concrete, sand, rock, etc., into tightly sealed forms or cells where the material will be used as a structural member for standard pile supported structures, such as bridges, transmission line footings, and walkways, or for general navigation, such as mooring cells, including the excavation of bottom material from within the form prior to the discharge of concrete, sand, rock, etc. This NWP does not authorize filled structural members that would support buildings, building pads, homes, house pads, parking areas, storage areas and other such structures. The structure itself may require a separate section 10 permit if located in navigable waters of the United States. (Authority: Section 404)

26. [Reserved]

27. *Aquatic Habitat Restoration, Establishment, and Enhancement Activities.* Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas, the restoration and enhancement of non-tidal streams and other non-tidal open waters, and the rehabilitation or enhancement of tidal streams, tidal wetlands, and tidal open waters, provided those activities result in net increases in aquatic resource functions and services.

To be authorized by this NWP, the aquatic habitat restoration, enhancement, or establishment activity must be planned, designed, and implemented so that it results in aquatic habitat that resembles an ecological reference. An ecological reference may be based on the characteristics of an intact aquatic habitat or riparian area of the same type that exists in the region. An ecological reference may be based on a conceptual model developed from regional ecological knowledge of the target aquatic habitat type or riparian area.

To the extent that a Corps permit is required, activities authorized by this NWP include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms, as well as discharges of dredged or fill material to restore appropriate stream channel configurations after small water control structures, dikes, and berms, are removed; the installation of current deflectors; the enhancement, rehabilitation, or re-establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to enhance, rehabilitate, or re-establish stream meanders; the removal of stream barriers, such as undersized culverts, fords, and grade control structures; the backfilling of artificial channels; the removal of existing drainage structures, such as drain tiles, and the filling, blocking, or reshaping of drainage ditches to restore wetland hydrology; the installation of structures or fills necessary to restore or enhance wetland or stream hydrology; the construction of small nesting islands; the construction of open water areas; the construction of oyster habitat over unvegetated bottom in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; re-establishment of submerged aquatic vegetation in areas where those plant communities previously existed; re-establishment

of tidal wetlands in tidal waters where those wetlands previously existed; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

This NWP authorizes the relocation of non-tidal waters, including non-tidal wetlands and streams, on the project site provided there are net increases in aquatic resource functions and services.

Except for the relocation of non-tidal waters on the project site, this NWP does not authorize the conversion of a stream or natural wetlands to another aquatic habitat type (e.g., the conversion of a stream to wetland or vice versa) or uplands. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic habitat type. This NWP does not authorize stream channelization. This NWP does not authorize the relocation of tidal waters or the conversion of tidal waters, including tidal wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water impoundments.

Compensatory mitigation is not required for activities authorized by this NWP since these activities must result in net increases in aquatic resource functions and services.

Reversion. For enhancement, restoration, and establishment activities conducted: (1) In accordance with the terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), U.S. Forest Service (USFS), or their designated state cooperating agencies; (2) as voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) on reclaimed surface coal mine lands, in accordance with a Surface Mining Control and Reclamation Act permit issued by the Office of Surface Mining Reclamation and Enforcement (OSMRE) or the applicable state agency, this NWP also authorizes any future discharge of dredged or fill material associated with the reversion of the area to its documented prior condition and use (i.e., prior to the restoration, enhancement, or establishment activities). The reversion must occur within five years after expiration of a limited term wetland restoration or establishment agreement or permit, and is authorized in these circumstances even if the discharge occurs after this NWP expires. The five-year reversion limit does not apply to agreements without time limits reached between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS, or an appropriate state cooperating agency. This NWP also authorizes discharges of dredged or fill material in waters of the United States for the reversion of wetlands that were restored, enhanced, or established on prior-converted cropland or on uplands, in accordance with a binding agreement between the landowner and NRCS, FSA, FWS, or their designated state cooperating agencies (even though the restoration, enhancement, or establishment activity did not require a section 404 permit). The prior condition will be documented in the original agreement or permit, and the determination of return to prior conditions will be made by the Federal agency or appropriate state agency executing the agreement or permit. Before conducting any reversion activity the permittee or the appropriate Federal or state agency must notify the district engineer and include the documentation of the prior condition. Once an area has reverted to its prior physical condition, it will be subject to whatever the Corps Regulatory requirements are applicable to that type of land at the time. The

requirement that the activity results in a net increase in aquatic resource functions and services does not apply to reversion activities meeting the above conditions. Except for the activities described above, this NWP does not authorize any future discharge of dredged or fill material associated with the reversion of the area to its prior condition. In such cases a separate permit would be required for any reversion.

Reporting. For those activities that do not require pre-construction notification, the permittee must submit to the district engineer a copy of: (1) The binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement, or a project description, including project plans and location map; (2) the NRCS or USDA Technical Service Provider documentation for the voluntary stream enhancement or restoration action or wetland restoration, enhancement, or establishment action; or (3) the SMCRA permit issued by OSMRE or the applicable state agency. The report must also include information on baseline ecological conditions on the project site, such as a delineation of wetlands, streams, and/or other aquatic habitats. These documents must be submitted to the district engineer at least 30 days prior to commencing activities in waters of the United States authorized by this NWP.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing any activity (see general condition 32), except for the following activities:

(1) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding stream enhancement or restoration agreement or wetland enhancement, restoration, or establishment agreement between the landowner and the FWS, NRCS, FSA, NMFS, NOS, USFS or their designated state cooperating agencies;

(2) Voluntary stream or wetland restoration or enhancement action, or wetland establishment action, documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or

(3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSMRE or the applicable state agency.

However, the permittee must submit a copy of the appropriate documentation to the district engineer to fulfill the reporting requirement. (Authorities: Sections 10 and 404)

Note: This NWP can be used to authorize compensatory mitigation projects, including mitigation banks and in-lieu fee projects. However, this NWP does not authorize the reversion of an area used for a compensatory mitigation project to its prior condition, since compensatory mitigation is generally intended to be permanent.

Corps NWP 27 Specific Regional Condition:

> PCN in accordance with NWP General Condition 32 is required for all regulated activities in waters of the U.S., including special aquatic sites.

28. ***Modifications of Existing Marinas.*** Reconfiguration of existing docking facilities within an authorized marina area. No dredging, additional slips, dock spaces, or expansion of any kind within waters of the United States is authorized by this NWP. (Authority: Section 10)

29. *Residential Developments.* Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision. This NWP authorizes the construction of building foundations and building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development).

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre.

Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this NWP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

NWP 29 West Virginia 401 Water Quality Certification Special Conditions:

A. Projects affecting Section 10 waters and adjacent wetlands require individual state water quality certification.

B. Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

30. *Moist Soil Management for Wildlife.* Discharges of dredged or fill material into non-tidal waters of the United States and maintenance activities that are associated with moist soil management for wildlife for the purpose of continuing ongoing, site-specific, wildlife management activities where soil manipulation is used to manage habitat and feeding areas for wildlife. Such activities include, but are not limited to, plowing or discing to impede succession, preparing seed beds, or establishing fire breaks. Sufficient riparian areas must be maintained adjacent to all open water bodies, including streams, to preclude water quality degradation due to erosion and sedimentation. This NWP does not authorize the construction of new dikes, roads, water control structures, or similar features associated with the management areas. The activity must not result in a net loss of aquatic resource functions and services. This NWP does not authorize the conversion of wetlands to uplands, impoundments, or other open water bodies. (Authority: Section 404)

Note: The repair, maintenance, or replacement of existing water control structures or the repair or maintenance of dikes may be authorized by NWP 3. Some such activities may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

31. ***Maintenance of Existing Flood Control Facilities.*** Discharges of dredged or fill material resulting from activities associated with the maintenance of existing flood control facilities, including debris basins, retention/detention basins, levees, and channels that: (i) were previously authorized by the Corps by individual permit, general permit, or 33 CFR 330.3, or did not require a permit at the time they were constructed, or (ii) were constructed by the Corps and transferred to a non-Federal sponsor for operation and maintenance. Activities authorized by this NWP are limited to those resulting from maintenance activities that are conducted within the "maintenance baseline," as described in the definition below. Discharges of dredged or fill materials associated with maintenance activities in flood control facilities in any watercourse that have previously been determined to be within the maintenance baseline are authorized under this NWP. To the extent that a Corps permit is required, this NWP authorizes the removal of vegetation from levees associated with the flood control project. This NWP does not authorize the removal of sediment and associated vegetation from natural water courses except when these activities have been included in the maintenance baseline. All dredged and excavated material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. Proper sediment controls must be used.

Maintenance Baseline: The maintenance baseline is a description of the physical characteristics (e.g., depth, width, length, location, configuration, or design flood capacity, etc.) of a flood control project within which maintenance activities are normally authorized by NWP 31, subject to any case-specific conditions required by the district engineer. The district engineer will approve the maintenance baseline based on the approved or constructed capacity of the flood control facility, whichever is smaller, including any areas where there are no constructed channels but which are part of the facility. The prospective permittee will provide documentation of the physical characteristics of the flood control facility (which will normally consist of as-built or approved drawings) and documentation of the approved and constructed design capacities of the flood control facility. If no evidence of the constructed capacity exists, the approved capacity will be used. The documentation will also include best management practices to ensure that the adverse environmental impacts caused by the maintenance activities are no more than minimal, especially in maintenance areas where there are no constructed channels. (The Corps may request maintenance records in areas where there has not been recent maintenance.) Revocation or modification of the final determination of the maintenance baseline can only be done in accordance with 33 CFR 330.5. Except in emergencies as described below, this NWP cannot be used until the district engineer approves the maintenance baseline and determines the need for mitigation and any regional or activity-specific conditions. Once determined, the maintenance baseline will remain valid for any subsequent reissuance of this NWP. This NWP does not authorize maintenance of a flood control facility that has been abandoned. A flood control facility will be considered abandoned if it has operated at a significantly reduced capacity without needed maintenance being accomplished in a timely manner. A flood control facility will not be considered abandoned if the prospective permittee is in the process of obtaining other authorizations or approvals required for maintenance activities and is experiencing delays in obtaining those authorizations or approvals.

Mitigation: The district engineer will determine any required mitigation one-time only for impacts associated with maintenance work at the same time that the maintenance baseline is approved. Such one-time mitigation will be required when necessary to ensure that adverse environmental effects are no more than minimal, both individually and cumulatively. Such mitigation will only be required once for any specific reach of a flood control project. However,

if one-time mitigation is required for impacts associated with maintenance activities, the district engineer will not delay needed maintenance, provided the district engineer and the permittee establish a schedule for identification, approval, development, construction and completion of any such required mitigation. Once the one-time mitigation described above has been completed, or a determination made that mitigation is not required, no further mitigation will be required for maintenance activities within the maintenance baseline (see Note, below). In determining appropriate mitigation, the district engineer will give special consideration to natural water courses that have been included in the maintenance baseline and require mitigation and/or best management practices as appropriate.

Emergency Situations: In emergency situations, this NWP may be used to authorize maintenance activities in flood control facilities for which no maintenance baseline has been approved. Emergency situations are those which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if action is not taken before a maintenance baseline can be approved. In such situations, the determination of mitigation requirements, if any, may be deferred until the emergency has been resolved. Once the emergency has ended, a maintenance baseline must be established expeditiously, and mitigation, including mitigation for maintenance conducted during the emergency, must be required as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer before any maintenance work is conducted (see general condition 32). The pre-construction notification may be for activity-specific maintenance or for maintenance of the entire flood control facility by submitting a five-year (or less) maintenance plan. The pre-construction notification must include a description of the maintenance baseline and the disposal site for dredged or excavated material. (Authorities: Sections 10 and 404)

Note: If the maintenance baseline was approved by the district engineer under a prior version of NWP 31, and the district engineer imposed the one-time compensatory mitigation requirement on maintenance for a specific reach of a flood control project authorized by that prior version of NWP 31, during the period this version of NWP 31 is in effect (March 19, 2017, to March 18, 2022) the district engineer will not require additional compensatory mitigation for maintenance activities authorized by this NWP in that specific reach of the flood control project.

NWP 31 West Virginia 401 Water Quality Certification Special Conditions:

A. In non-emergency situations, prior written notification is required from West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days ensure both the minimization of impacts to fisheries and wildlife habitat and the consideration of habitat enhancements.

32. *Completed Enforcement Actions.* Any structure, work, or discharge of dredged or fill material remaining in place or undertaken for mitigation, restoration, or environmental benefit in compliance with either:

(i) The terms of a final written Corps non-judicial settlement agreement resolving a violation of Section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899; or the terms of an EPA 309(a) order on consent resolving a violation of section 404 of the Clean Water Act, provided that:

(a) The activities authorized by this NWP cannot adversely affect more than 5 acres of non-tidal waters or 1 acre of tidal waters;

(b) The settlement agreement provides for environmental benefits, to an equal or greater degree, than the environmental detriments caused by the unauthorized activity that is authorized by this NWP; and

(c) The district engineer issues a verification letter authorizing the activity subject to the terms and conditions of this NWP and the settlement agreement, including a specified completion date; or

(ii) The terms of a final Federal court decision, consent decree, or settlement agreement resulting from an enforcement action brought by the United States under section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899; or

(iii) The terms of a final court decision, consent decree, settlement agreement, or non-judicial settlement agreement resulting from a natural resource damage claim brought by a trustee or trustees for natural resources (as defined by the National Contingency Plan at 40 CFR subpart G) under Section 311 of the Clean Water Act, Section 107 of the Comprehensive Environmental Response, Compensation and Liability Act, Section 312 of the National Marine Sanctuaries Act, section 1002 of the Oil Pollution Act of 1990, or the Park System Resource Protection Act at 16 U.S.C. 19jj, to the extent that a Corps permit is required.

Compliance is a condition of the NWP itself; non-compliance of the terms and conditions of an NWP 32 authorization may result in an additional enforcement action (e.g., a Class I civil administrative penalty). Any authorization under this NWP is automatically revoked if the permittee does not comply with the terms of this NWP or the terms of the court decision, consent decree, or judicial/non-judicial settlement agreement. This NWP does not apply to any activities occurring after the date of the decision, decree, or agreement that are not for the purpose of mitigation, restoration, or environmental benefit. Before reaching any settlement agreement, the Corps will ensure compliance with the provisions of 33 CFR part 326 and 33 CFR 330.6(d)(2) and (e). (Authorities: Sections 10 and 404)

Individual state water quality certification is required for use of this nationwide permit.

33. ***Temporary Construction, Access and Dewatering.*** Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work, and discharges, including cofferdams, necessary for construction activities not otherwise subject to the Corps or U.S. Coast Guard permit requirements. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if the district engineer determines that it will not cause more than minimal adverse environmental effects. Following completion of construction, temporary fill must be entirely removed to an area that has no waters of the United States, dredged material must be returned to its original location, and the affected areas must be restored to pre-construction elevations. The affected areas must also be revegetated, as appropriate. This permit

does not authorize the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a separate section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322.)

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the activity is conducted in navigable waters of the United States (i.e., section 10 waters) (see general condition 32). The pre-construction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. (Authorities: Sections 10 and 404)

Corps NWP 33 Specific Regional Condition:

The applicant must submit a PCN to the Corps in accordance with general condition 32 whenever the work is conducted in a perennial stream or is expected to take more than one year to complete to allow the Corps to consider the temporal effects of the activity.

NWP 33 West Virginia 401 Water Quality Certification Special Condition:

Individual State Water Quality Certification is required for use of this permit to construct temporary causeways in Section 10 waters, or for fills in any water anticipated to exceed one year.

34. *Cranberry Production Activities.* Discharges of dredged or fill material for dikes, berms, pumps, water control structures or leveling of cranberry beds associated with expansion, enhancement, or modification activities at existing cranberry production operations. The cumulative total acreage of disturbance per cranberry production operation, including but not limited to, filling, flooding, ditching, or clearing, must not exceed 10 acres of waters of the United States, including wetlands. The activity must not result in a net loss of wetland acreage. This NWP does not authorize any discharge of dredged or fill material related to other cranberry production activities such as warehouses, processing facilities, or parking areas. For the purposes of this NWP, the cumulative total of 10 acres will be measured over the period that this NWP is valid.

Notification: The permittee must submit a pre-construction notification to the district engineer once during the period that this NWP is valid, and the NWP will then authorize discharges of dredge or fill material at an existing operation for the permit term, provided the 10-acre limit is not exceeded. (See general condition 32.) (Authority: Section 404)

35. *Maintenance Dredging of Existing Basins.* The removal of accumulated sediment for maintenance of existing marina basins, access channels to marinas or boat slips, and boat slips to previously authorized depths or controlling depths for ingress/egress, whichever is less. All dredged material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. Proper sediment controls must be used for the disposal site. (Authority: Section 10)

Corps NWP 35 Specific Regional Condition:

PCN in accordance with Nationwide Permit General Condition 32 is required for use of

this NWP.

36. *Boat Ramps.* Activities required for the construction of boat ramps, provided the activity meets all of the following criteria:

(a) The discharge into waters of the United States does not exceed 50 cubic yards of concrete, rock, crushed stone or gravel into forms, or in the form of pre-cast concrete planks or slabs, unless the district engineer waives the 50 cubic yard limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;

(b) The boat ramp does not exceed 20 feet in width, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;

(c) The base material is crushed stone, gravel or other suitable material;

(d) The excavation is limited to the area necessary for site preparation and all excavated material is removed to an area that has no waters of the United States; and,

(e) No material is placed in special aquatic sites, including wetlands.

The use of unsuitable material that is structurally unstable is not authorized. If dredging in navigable waters of the United States is necessary to provide access to the boat ramp, the dredging must be authorized by another NWP, a regional general permit, or an individual permit.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The discharge into waters of the United States exceeds 50 cubic yards, or (2) the boat ramp exceeds 20 feet in width. (See general condition 32.) (Authorities: Sections 10 and 404)

Corps NWP 36 Specific Regional Conditions:

a. PCN in accordance with NWP General Condition 32 is required for use of this NWP for regulated activities located at a stream confluence.

b. PCN in accordance with NWP General Condition 32 is required for any boat ramp proposed to be located within the area between the upstream and the downstream arrival points of any Corps of Engineers lock and dam, or within 1,500 feet of any federal-mooring cell at any lock, as shown on the navigation charts.

NWP 36 West Virginia 401 Water Quality Certification Special Conditions:

A. Pre-construction notification for this permit shall be provided to the West Virginia Department of Environmental Protection, Division of Water and Waste Management allowing 45 days for a determination to be made as to whether the boat ramp will negatively impact the nursery functions of an embayment, island back channel, or stream mouth on a Section 10 River, necessitating further review or an individual certification.

37. *Emergency Watershed Protection and Rehabilitation.* Work done by or funded by:

(a) The Natural Resources Conservation Service for a situation requiring immediate action under its emergency Watershed Protection Program (7 CFR part 624);

(b) The U.S. Forest Service under its Burned-Area Emergency Rehabilitation Handbook (FSH 2509.13);

(c) The Department of the Interior for wildland fire management burned area emergency stabilization and rehabilitation (DOI Manual part 620, Ch. 3);

(d) The Office of Surface Mining, or states with approved programs, for abandoned mine land reclamation activities under Title IV of the Surface Mining Control and Reclamation Act (30 CFR subchapter R), where the activity does not involve coal extraction; or

(e) The Farm Service Agency under its Emergency Conservation Program (7 CFR part 701).

In general, the prospective permittee should wait until the district engineer issues an NWP verification or 45 calendar days have passed before proceeding with the watershed protection and rehabilitation activity. However, in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur, the emergency watershed protection and rehabilitation activity may proceed immediately and the district engineer will consider the information in the pre-construction notification and any comments received as a result of agency coordination to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

Notification: Except in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). (Authorities: Sections 10 and 404)

NWP 37 West Virginia 401 Water Quality Certification Special Conditions:

A. Projects that have been coordinated with and obtained concurrence from West Virginia Department of Environmental Protection, Division of Water and Waste Management in the early project planning phase are certified.

A. This certification applies only to those emergency situations that involve: threats to life, threat of loss of primary residence, and loss or threat of loss to the areas infrastructure and/or other community services.

38. *Cleanup of Hazardous and Toxic Waste.* Specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Court ordered remedial action plans or related settlements are also authorized by this NWP. This NWP does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste.

Notification: The permittee must submit a pre-construction notification to the district

engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA, are not required to obtain permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Nationwide Permit 38 West Virginia 401 Water Quality Certification Special Condition:

A. Along with the pre-construction notification required to be submitted to West Virginia Department of Environmental Protection, Division of Water and Waste Management (as specified in WQC Standard Condition 1), notice of the proposed activity must be provided to the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Environmental Remediation, 601 57th Street, Charleston, West Virginia 25304, as early as possible.

39. *Commercial and Institutional Developments.* Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of commercial and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, storm water management facilities, wastewater treatment facilities, and recreation facilities such as playgrounds and playing fields. Examples of commercial developments include retail stores, industrial facilities, restaurants, business parks, and shopping centers. Examples of institutional developments include schools, fire stations, government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship. The construction of new golf courses and new ski areas is not authorized by this NWP.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: For any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission line, 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.

NWP 39 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for projects impacting Section 10 waters and adjacent wetlands.
B. Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

40. ***Agricultural Activities.*** Discharges of dredged or fill material into non-tidal waters of the United States for agricultural activities, including the construction of building pads for farm buildings. Authorized activities include the installation, placement, or construction of drainage tiles, ditches, or levees; mechanized land clearing; land leveling; the relocation of existing serviceable drainage ditches constructed in waters of the United States; and similar activities.

This NWP also authorizes the construction of farm ponds in non-tidal waters of the United States, excluding perennial streams, provided the farm pond is used solely for agricultural purposes. This NWP does not authorize the construction of aquaculture ponds.

This NWP also authorizes discharges of dredged or fill material into non-tidal waters of the United States to relocate existing serviceable drainage ditches constructed in non-tidal streams.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

Note: Some discharges for agricultural activities may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4). This NWP authorizes the construction of farm ponds that do not qualify for the Clean Water Act section 404(f)(1)(C) exemption because of the recapture provision at section 404(f)(2).

NWP 40 West Virginia 401 Water Quality Certification Special Conditions:

A. Placing in-stream stormwater management facilities with this permit requires Individual State Water Quality Certification.

41. ***Reshaping Existing Drainage Ditches.*** Discharges of dredged or fill material into non-tidal waters of the United States, excluding non-tidal wetlands adjacent to tidal waters, to modify the cross-sectional configuration of currently serviceable drainage ditches constructed in waters of the United States, for the purpose of improving water quality by regrading the drainage ditch with gentler slopes, which can reduce erosion, increase growth of vegetation, and increase uptake of nutrients and other substances by vegetation. The reshaping of the ditch cannot increase drainage capacity beyond the original as-built capacity nor can it expand the area drained by the ditch as originally constructed (i.e., the capacity of the ditch must be the same as originally

constructed and it cannot drain additional wetlands or other waters of the United States). Compensatory mitigation is not required because the work is designed to improve water quality.

This NWP does not authorize the relocation of drainage ditches constructed in waters of the United States; the location of the centerline of the reshaped drainage ditch must be approximately the same as the location of the centerline of the original drainage ditch. This NWP does not authorize stream channelization or stream relocation projects. (Authority: Section 404)

42. *Recreational Facilities.* Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of recreational facilities. Examples of recreational facilities that may be authorized by this NWP include playing fields (e.g., football fields, baseball fields), basketball courts, tennis courts, hiking trails, bike paths, golf courses, ski areas, horse paths, nature centers, and campgrounds (excluding recreational vehicle parks). This NWP also authorizes the construction or expansion of small support facilities, such as maintenance and storage buildings and stables that are directly related to the recreational activity, but it does not authorize the construction of hotels, restaurants, racetracks, stadiums, arenas, or similar facilities.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

43. *Stormwater Management Facilities.* Discharges of dredged or fill material into non-tidal waters of the United States for the construction of stormwater management facilities, including stormwater detention basins and retention basins and other stormwater management facilities; the construction of water control structures, outfall structures and emergency spillways; the construction of low impact development integrated management features such as bioretention facilities (e.g., rain gardens), vegetated filter strips, grassed swales, and infiltration trenches; and the construction of pollutant reduction green infrastructure features designed to reduce inputs of sediments, nutrients, and other pollutants into waters to meet reduction targets established under Total Daily Maximum Loads set under the Clean Water Act.

This NWP authorizes, to the extent that a section 404 permit is required, discharges of dredged or fill material into non-tidal waters of the United States for the maintenance of stormwater management facilities, low impact development integrated management features, and pollutant reduction green infrastructure features. The maintenance of stormwater management facilities, low impact development integrated management features, and pollutant reduction green infrastructure features that are not waters of the United States does not require a section 404 permit.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed,

unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges of dredged or fill material for the construction of new stormwater management facilities in perennial streams.

Notification: For discharges into non-tidal waters of the United States for the construction of new stormwater management facilities or pollutant reduction green infrastructure features, or the expansion of existing stormwater management facilities or pollutant reduction green infrastructure features, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) Maintenance activities do not require pre-construction notification if they are limited to restoring the original design capacities of the stormwater management facility or pollutant reduction green infrastructure feature. (Authority: Section 404)

Corps NWP 43 Specific Regional Condition:

PCN in accordance with NWP General Condition 32 is required for use of the NWP.

44. *Mining Activities.* Discharges of dredged or fill material into non-tidal waters of the United States for mining activities, except for coal mining activities, provided the activity meets all of the following criteria:

(a) For mining activities involving discharges of dredged or fill material into non-tidal wetlands, the discharge must not cause the loss of greater than 1/2-acre of non-tidal wetlands;

(b) For mining activities involving discharges of dredged or fill material in non-tidal open waters (e.g., rivers, streams, lakes, and ponds) the mined area, including permanent and temporary impacts due to discharges of dredged or fill material into jurisdictional waters, must not exceed 1/2-acre; and

(c) The acreage loss under paragraph (a) plus the acreage impact under paragraph (b) does not exceed 1/2-acre.

The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects.

The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre.

This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) If reclamation is required

by other statutes, then a copy of the final reclamation plan must be submitted with the pre-construction notification. (Authorities: Sections 10 and 404)

45. ***Repair of Uplands Damaged by Discrete Events.*** This NWP authorizes discharges of dredged or fill material, including dredging or excavation, into all waters of the United States for activities associated with the restoration of upland areas damaged by storms, floods, or other discrete events. This NWP authorizes bank stabilization to protect the restored uplands. The restoration of the damaged areas, including any bank stabilization, must not exceed the contours, or ordinary high water mark, that existed before the damage occurred. The district engineer retains the right to determine the extent of the pre-existing conditions and the extent of any restoration work authorized by this NWP. The work must commence, or be under contract to commence, within two years of the date of damage, unless this condition is waived in writing by the district engineer. This NWP cannot be used to reclaim lands lost to normal erosion processes over an extended period.

This NWP does not authorize beach restoration or nourishment.

Minor dredging is limited to the amount necessary to restore the damaged upland area and should not significantly alter the pre-existing bottom contours of the waterbody.

Notification: The permittee must submit a pre-construction notification to the district engineer (see general condition 32) within 12 months of the date of the damage; for major storms, floods, or other discrete events, the district engineer may waive the 12-month limit for submitting a pre-construction notification if the permittee can demonstrate funding, contract, or other similar delays. The pre-construction notification must include documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration. (Authorities: Sections 10 and 404)

Note: The uplands themselves that are lost as a result of a storm, flood, or other discrete event can be replaced without a section 404 permit, if the uplands are restored to the ordinary high water mark (in non-tidal waters) or high tide line (in tidal waters). (See also 33 CFR 328.5.) This NWP authorizes discharges of dredged or fill material into waters of the United States associated with the restoration of uplands.

NWP 45 West Virginia 401 Water Quality Certification Special Condition:

A. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in WQC Standard Condition 18 A, B, and C herein.

46. ***Discharges in Ditches.*** Discharges of dredged or fill material into non-tidal ditches that are: (1) constructed in uplands, (2) receive water from an area determined to be a water of the United States prior to the construction of the ditch, (3) divert water to an area determined to be a water of the United States prior to the construction of the ditch, and (4) determined to be waters of the United States. The discharge must not cause the loss of greater than one acre of waters of the United States.

This NWP does not authorize discharges of dredged or fill material into ditches constructed in streams or other waters of the United States, or in streams that have been relocated

in uplands. This NWP does not authorize discharges of dredged or fill material that increase the capacity of the ditch and drain those areas determined to be waters of the United States prior to construction of the ditch.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authority: Section 404)

47. [Reserved]

48. *Existing Commercial Shellfish Aquaculture Activities*. Discharges of dredged or fill material into waters of the United States or structures or work in navigable waters of the United States necessary for new and continuing commercial shellfish aquaculture operations in authorized project areas. For the purposes of this NWP, the project area is the area in which the operator is authorized to conduct commercial shellfish aquaculture activities, as identified through a lease or permit issued by an appropriate state or local government agency, a treaty, or any easement, lease, deed, contract, or other legally binding agreement that establishes an enforceable property interest for the operator. A "new commercial shellfish aquaculture operation" is an operation in a project area where commercial shellfish aquaculture activities have not been conducted during the past 100 years.

This NWP authorizes the installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into navigable waters of the United States. This NWP also authorizes discharges of dredged or fill material into waters of the United States necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities. Rafts and other floating structures must be securely anchored and clearly marked.

This NWP does not authorize:

(a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody;

(b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990;

(c) Attendant features such as docks, piers, boat ramps, stockpiles, or staging areas, or the deposition of shell material back into waters of the United States as waste; or

(d) Activities that directly affect more than 1/2-acre of submerged aquatic vegetation beds in project areas that have not been used for commercial shellfish aquaculture activities during the past 100 years.

Notification: The permittee must submit a pre-construction notification to the district engineer if: (1) the activity will include a species that has never been cultivated in the waterbody; or (2) the activity occurs in a project area that has not been used for commercial shellfish aquaculture activities during the past 100 years. If the operator will be conducting commercial shellfish aquaculture activities in multiple contiguous project areas, he or she can either submit one PCN for those contiguous project areas or submit a separate PCN for each project area. (See general condition 32.)

In addition to the information required by paragraph (b) of general condition 32, the pre-construction notification must also include the following information: (1) a map showing the boundaries of the project area(s), with latitude and longitude coordinates for each corner of each project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area(s) (a detailed survey is not required). No more than one pre-construction notification per project area or group of contiguous project areas should be submitted for the commercial shellfish operation during the effective period of this NWP. The pre-construction notification should describe all species and culture activities the operator expects to undertake in the project area or group of contiguous project areas during the effective period of this NWP. If an operator intends to undertake unanticipated changes to the commercial shellfish aquaculture operation during the effective period of this NWP, and those changes require Department of the Army authorization, the operator must contact the district engineer to request a modification of the NWP verification; a new pre-construction notification does not need to be submitted. (Authorities: Sections 10 and 404)

Note 1: The permittee should notify the applicable U.S. Coast Guard office regarding the project.

Note 2: To prevent introduction of aquatic nuisance species, no material that has been taken from a different waterbody may be reused in the current project area, unless it has been treated in accordance with the applicable regional aquatic nuisance species management plan.

Note 3: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 defines "aquatic nuisance species" as "a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural, or recreational activities dependent on such waters."

NWP 48 West Virginia 401 Water Quality Certification Special Condition:

A. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in WQC Standard Condition 18 A, B, and C herein.

49. *Coal Remining Activities.* Discharges of dredged or fill material into non-tidal waters of the United States associated with the remining and reclamation of lands that were previously mined for coal. The activities must already be authorized, or they must currently be in process as part of an integrated permit processing procedure, by the Department of the Interior Office of Surface Mining Reclamation and Enforcement, or by states with approved programs under Title IV or Title V of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). Areas previously mined include reclaimed mine sites, abandoned mine land areas, or lands under bond forfeiture contracts.

As part of the project, the permittee may conduct new coal mining activities in conjunction with the remining activities when he or she clearly demonstrates to the district engineer that the overall mining plan will result in a net increase in aquatic resource functions. The Corps will consider the SMCRA agency's decision regarding the amount of currently undisturbed adjacent lands needed to facilitate the remining and reclamation of the previously mined area. The total

area disturbed by new mining must not exceed 40 percent of the total acreage covered by both the remined area and the additional area necessary to carry out the reclamation of the previously mined area.

Notification: The permittee must submit a pre-construction notification and a document describing how the overall mining plan will result in a net increase in aquatic resource functions to the district engineer and receive written authorization prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

NWP 49 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for activities impacting any classification of stream listed in West Virginia 401 Water Quality Certification Standard Condition 18.

B. Individual State Water Quality Certification is required for activities impacting an intermittent or perennial stream(s).

C. Individual State Water Quality Certification is required for intermittent or perennial stream, crossing (linear transportation projects) e.g. haul roads, access roads, conveyor belts, etc., greater than 100 linear feet per each crossing.

D. Individual State Water Quality Certification is required for wetland impacts greater than ½ acre.

50. ***Underground Coal Mining Activities.*** Discharges of dredged or fill material into non-tidal waters of the United States associated with underground coal mining and reclamation operations provided the activities are authorized, or are currently being processed as part of an integrated permit processing procedure, by the Department of the Interior, Office of Surface Mining Reclamation and Enforcement, or by states with approved programs under Title V of the Surface Mining Control and Reclamation Act of 1977.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. This NWP does not authorize coal preparation and processing activities outside of the mine site.

Notification: The permittee must submit a pre-construction notification to the district engineer and receive written authorization prior to commencing the activity. (See general condition 32.) If reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification. (Authorities: Sections 10 and 404)

Note: Coal preparation and processing activities outside of the mine site may be authorized by NWP 21.

NWP 50 West Virginia 401 Water Quality Certification Special Conditions:

A. Individual State Water Quality Certification is required for activities impacting any classification of stream listed in West Virginia 401 Water Quality Certification Standard Condition 18.

B. Individual State Water Quality Certification is required for activities impacting an intermittent or perennial stream(s).

C. Individual State Water Quality Certification is required for intermittent or perennial stream, crossing (linear transportation projects) e.g. haulroads, access roads, conveyor belts, etc., greater than 100 linear feet per each crossing.

D. Individual State Water Quality Certification is required for wetland impacts greater than ½ acre.

51. ***Land-Based Renewable Energy Generation Facilities.*** Discharges of dredged or fill material into non-tidal waters of the United States for the construction, expansion, or modification of land-based renewable energy production facilities, including attendant features. Such facilities include infrastructure to collect solar (concentrating solar power and photovoltaic), wind, biomass, or geothermal energy. Attendant features may include, but are not limited to roads, parking lots, and stormwater management facilities within the land-based renewable energy generation facility.

The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. The discharge must not cause the loss of more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects. The loss of stream bed plus any other losses of jurisdictional wetlands and waters caused by the NWP activity cannot exceed 1/2-acre. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the discharge results in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Utility lines constructed to transfer the energy from the land-based renewable energy generation facility to a distribution system, regional grid, or other facility are generally considered to be linear projects and each separate and distant crossing of a waterbody is eligible for treatment as a separate single and complete linear project. Those utility lines may be authorized by NWP 12 or another Department of the Army authorization.

Note 2: If the only activities associated with the construction, expansion, or modification of a land-based renewable energy generation facility that require Department of the Army authorization are discharges of dredged or fill material into waters of the United States to construct, maintain, repair, and/or remove utility lines and/or road crossings, then NWP 12 and/or NWP 14 shall be used if those activities meet the terms and conditions of NWPs 12 and 14, including any applicable regional conditions and any case-specific conditions imposed by the

district engineer.

Note 3: For any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission line, 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.

NWP 51 West Virginia 401 Water Quality Certification Special Condition:

A. Individual State Water Quality Certification is required for an activity impacting greater than 200 linear feet on one or more of the streams identified in WQC Standard Condition 18 A, B, and C herein.

52. ***Water-Based Renewable Energy Generation Pilot Projects.*** Revoked

53. ***Removal of Low-Head Dams.*** Structures and work in navigable waters of the United States and discharges of dredged or fill material into waters of the United States associated with the removal of low-head dams.

For the purposes of this NWP, the term "low-head dam" is defined as a dam built across a stream to pass flows from upstream over all, or nearly all, of the width of the dam crest on a continual and uncontrolled basis. (During a drought, there might not be water flowing over the dam crest.) In general, a low-head dam does not have a separate spillway or spillway gates but it may have an uncontrolled spillway. The dam crest is the top of the dam from left abutment to right abutment, and if present, an uncontrolled spillway. A low-head dam provides little storage function.

The removed low-head dam structure must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

Because the removal of the low-head dam will result in a net increase in ecological functions and services provided by the stream, as a general rule compensatory mitigation is not required for activities authorized by this NWP. However, the district engineer may determine for a particular low-head dam removal activity that compensatory mitigation is necessary to ensure the authorized activity results in no more than minimal adverse environmental effects.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: This NWP does not authorize discharges of dredged or fill material into waters of the United States or structures or work in navigable waters to restore the stream in the vicinity of the low-head dam, including the former impoundment area. Nationwide permit 27 or other Department of the Army permits may authorize such activities. This NWP does not authorize discharges of dredged or fill material into waters of the United States or structures or work in navigable waters to stabilize stream banks. Bank stabilization activities may be authorized by NWP 13 or other Department of the Army permits.

Corps NWP 53 Specific Regional Conditions:

a. The PCN shall include the amount of sediments within the pool upstream of the dam which are to be released downstream and a discussion of the steps taken to minimize the potential adverse effects on the downstream aquatic environment.

b. Sediments to be released from the pool upstream of the dam shall be consistent with NWP General Condition 6.

54. ***Living Shorelines.*** Revoked.

D. **Nationwide Permit General Conditions**

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for a NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

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.

E. **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.

F. **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).

G. **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.

EXHIBIT 4 TO MOTION FOR PRELIMINARY RELIEF

WVDEP'S MARCH 23, 2017 SECTION 401 CERTIFICATION OF MVP PROJECT

west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Telephone Number: (304) 926-0495
Fax Number: (304) 926-0496

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
dep.wv.gov

March 23, 2017

Michael Hatten
Chief, Regulatory Branch
United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701

Re: State 401 Water Quality Certification; Nationwide Permit No. 12; Mountain Valley Pipeline, LLC; Mountain Valley Pipeline Project; FERC Docket No. CP-16-10-000; Wetzel, Harrison, Doddridge, Lewis, Braxton, Webster, Nicholas, Greenbrier, Fayette, Summers, and Monroe Counties, West Virginia; WQC-16-0005

Dear Mr. Hatten,

The West Virginia Department of Environmental Protection-Division of Water and Waste Management (WVDEP-DWWM), in conjunction with the West Virginia Division of Natural Resources - Wildlife Resources Section (WVDNR-WRS), has completed review of the above-referenced project. In addition, WVDEP-DWWM has participated as a cooperating agency with the Federal Energy Regulatory Commission (FERC) on the project since May 2015.

Mountain Valley Pipeline, LLC (MVP) is proposing the Mountain Valley Pipeline Project (Project) which will include pipeline 303-miles in length and 42-inches in diameter in order to transport natural gas. The proposed route will begin at an existing Equitrans, L.P. transmission system near the Mobley processing facility in Wetzel County, West Virginia and extend to the Transcontinental Gas Pipe Line Company, LLC's Zone 5 Compressor Station 165 in Transco Village, Pittsylvania County, Virginia. To date; however, FERC has not issued the Final Environmental Impact Statement for the Project, confirming the final route of the Project. The proposed Project is approximately 196 miles long within West Virginia with approximately 147 miles of proposed temporary and permanent access roads. In addition to the proposed pipeline, the Project will include the construction of three compressor stations currently planned along the route in West Virginia as

EXHIBIT 4 TO MOTION FOR PRELIMINARY RELIEF

well as the installation of other ancillary facilities that are required for the safe and reliable operation of the pipeline.

The proposed Bradshaw Compressor Station will be located in Wetzel County, the proposed Harris Compressor Station will be located in Braxton County, and the proposed Stallworth Compressor Station will be located in Fayette County. In addition to compressor stations, the Project proposes three new meter stations within West Virginia: Mobley Meter Station in Wetzel County, Sherwood Meter Station in Harrison County, and WB Meter Station in Braxton County.

Delineation of Waters of the U.S. surveys were performed for approximately 189 miles of pipeline centerline and 141 miles of proposed access roads within West Virginia. While the majority of the Project has currently been surveyed for streams and wetlands, field teams have not been granted access by landowners to approximately 7 miles of proposed pipeline right-of-way (ROW) and 6 miles of proposed access roads. A desktop Waters of the U.S. evaluation of these unsurveyed areas was conducted to evaluate the likely presence and approximate location of aquatic resources. This survey was conducted so as to overestimate the potential impacts until surveys can be conducted in these areas. As a result, proposed impacts associated with the project are designated as surveyed and non-surveyed.

Proposed impacts are considered either temporary or permanent. Proposed temporary impacts will result from temporary disturbance to Waters of the U.S. within the pipeline ROW during pipeline construction, additional temporary work spaces, contractor yards, and temporary access roads. Impacts considered as temporary include aquatic resources that will be restored upon completion of proposed activities. Proposed permanent impacts will result from stream culverting along permanent access roads, constructing above ground facilities, converting palustrine forested and palustrine scrub-shrub wetlands along the pipeline ROW, and filling of wetlands for permanent access roads.

Construction of the Project would result in unavoidable temporary and permanent impacts to Waters of the U.S. in the Pittsburgh District and Huntington District of the U.S. Army Corps of Engineers (USACE). Permanent impacts to streams and wetlands were evaluated utilizing the West Virginia Stream and Wetland Valuation Metric (SWVM). To compensate for permanent impacts associated with this project, the applicant has proposed to purchase credits from a USACE approved mitigation bank if available or, if credits are not available, from the WVDEP In-Lieu Fee (ILF) Program. SWVM units for proposed permanent impacts were calculated for surveyed impacts only and represent the requirements stated in this Individual 401 Water Quality Certification (401 WQC). SWVM units for non-surveyed impacts will be calculated if survey permission is granted, submitted to the WVDEP-DWWM, and additional compensatory mitigation will be required for those areas.

Total proposed stream crossings associated with the Project in West Virginia include 631 crossings comprised of 569 crossings in the Huntington District and 62 crossings in the Pittsburgh District. Stream crossings in the Huntington District include 569 crossings comprised of 501 surveyed and 68 non-surveyed crossings. Of the 501 surveyed crossings, 464 are temporary crossings and 37 crossings are permanent. The remaining 68 non-surveyed crossings include 59 temporary and 9 permanent. Including both surveyed and non-surveyed crossings, 523 are temporary and 46 are permanent in the Huntington District. Stream crossings in the Pittsburgh District include 62 crossings

comprised of 59 surveyed and 3 non-surveyed crossings. Of the 59 surveyed crossings, 53 are temporary crossings and 6 crossings are permanent. The remaining 3 non-surveyed crossings are all temporary. Including both surveyed and non-surveyed crossings, 56 are temporary and 6 are permanent in the Pittsburgh District. MVP does not intend to cross any streams by Horizontal Directional Drill (HDD). Permanent impact to streams associated with the Project includes 2,392 linear feet (lf), accruing a total of 1,411.171 SWVM debits.

Total proposed wetland crossings associated with the Project in West Virginia include 424 crossings comprised of 366 crossings in the Huntington District and 58 crossings in the Pittsburgh District. Wetland crossings in the Huntington District include 366 crossings comprised of 343 surveyed and 23 non-surveyed crossings. Of the 343 surveyed crossings, 282 are temporary crossings and 61 crossings are permanent. The remaining 23 non-surveyed crossings include 13 temporary and 10 permanent. Including both surveyed and non-surveyed crossings, 295 are temporary and 71 are permanent in the Huntington District. Wetland crossings in the Pittsburgh District include 58 crossings comprised of 56 surveyed and 2 non-surveyed crossings. Of the 56 surveyed crossings, 55 are temporary crossings and 1 crossing is permanent. The remaining 2 non-surveyed crossings are both temporary. Including both surveyed and non-surveyed crossings, 57 are temporary and 1 is permanent in the Pittsburgh District. MVP does not intend to cross any wetlands by HDD. Permanent impact to wetlands associated with the Project includes 2.132 acre, accruing a total of 4.113 SWVM debits.

WVDEP-DWWM received 875 total comments regarding this project that included 593 comments in favor of the project and 267 comments opposing it. The remaining 15 comments did not indicate being in favor of or opposed to the project. In addition, 100 public comments included a request for public hearings. WVDEP-DWWM held public hearings in Webster Springs, Hinton, and Clarksburg in March 2017.

Stream and wetland debits will be mitigated for using purchase of mitigation bank credits or purchase from the WVDEP ILF Program at the respective crediting ratios (greater than 1:1 when using the WVDEP ILF Program). As calculated by current methodologies, if completed in 5 years, mitigation for the project would be for proposed permanent impact of 2,392 lf of stream (1,411.171 SWVM debits) and 2.132 acre of wetland (4.113 SWVM debits). The total number of credits which will be purchased, if available, from a mitigation bank include 1,411.171 stream credits and 4.113 wetland credits. If mitigation bank credits are not available, the total number of credits which would be purchased from the WVDEP ILF Program includes 1,580.511 stream credits and 6.533 wetland credits.

In order to comply with the state's water quality certification, groundwater and water quality standards regulations the following special conditions must be met:

Special Conditions:

1. If project construction is not completed within five years of issuance of certification, impacts will be re-evaluated at the then current rates and methodologies.

2. Representatives from WVDEP-DWWM and WVDNR-WRS must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the terms and conditions of certification are being met or will be met.

3. WVDEP-DWWM 401 Certification Program is to be informed within 2 business days of the applicant's knowledge of any slips that have impacted or may impact a stream and/or wetland.

4. The applicant does not propose to cross any streams or wetlands by HDD method. If, during project construction it becomes necessary to cross a stream or wetland by HDD, a Horizontal Directional Drill Inadvertent Return and Contingency Plan must be provided to the WVDEP-DWWM prior to the activity.

5. At all times during pipeline operation, the applicant must adhere to the Section 10 Crossing Operations Plan dated March 2017.

6. All stream and wetland crossings must be completed in accordance with the Wetland and Waterbody Construction and Mitigation Procedures established by the Federal Energy Regulatory Commission (FERC); Upland Erosion Control, Revegetation Plan, and Maintenance Plan established by FERC; and the Stream Bank Restoration Plan submitted to the WVDEP-DWWM dated March 2017.

7. Completion of stream and wetland crossings must adhere to dates established in standard conditions for 404/401 permits including restrictions during the spawning season for warm water streams (April to June) and trout waters (September 14 to March 31).

8. 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. Upon final stream bed restoration, the stream must have similar substrate pattern, profile, dimension and embeddedness of the original stream channel.

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

10. For stream crossings, prior to any construction activities photographs of the channel within the ROW, the channel upstream of the ROW, and the channel downstream of the ROW are to be taken. For wetland crossings, photographs of the wetland within the ROW, the ROW as it enters the wetland, and the ROW as it exits the wetland are to be taken. All photos are to be georeferenced to include a unique identification, date, and GPS coordinates. The photographs associated with each stream and wetland crossing are to be submitted to WVDEP-DWWM and WVDNR-WRS.

11. Upon completion of construction and reclamation of each stream and wetland crossing, associated photographs are to be taken in the same manner and locations as pre-impact existing conditions (as described above). Associated photographs of each stream and wetland crossing

within the ROW upon completion of construction and reclamation are to be submitted to WVDEP-DWWM and WVDNR-WRS.

12. Stream and wetland crossings are to be monitored for a minimum period of 3 years. A monitoring report must be submitted annually to WVDEP-DWWM and WVDNR-WRS which includes photographs (as described above), details of any slips encountered which affected streams and/or wetlands, and an evaluation of the current conditions of each stream crossing.

13. Based on review of monitoring reports, additional restoration and/or mitigation may be required for permanent or temporary stream impacts/losses or conversion of palustrine scrub shrub and palustrine forested wetlands as outlined in 47CSR5A and 33 CFR Parts 325 and 332 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule.

14. Compensatory mitigation requirements as presented in this 401 WQC are based on SWVM units for proposed permanent impacts for surveyed impacts only.

15. SWVM units for non-surveyed impacts will be calculated if survey permission is granted and submitted to the WVDEP-DWWM in order to calculate additional compensatory mitigation associated with this project. No impacts to non-surveyed areas are to occur until this information is submitted to WVDEP-DWWM.

16. In advance of pipeline construction in karst areas, the applicant must submit for review and concurrence an enhanced karst management plan. At a minimum, the plan shall include provisions for:
    - A preplan development meeting with agency staff to discuss the approach for, and agency expectations of, the plan
    - Ability to physically access all final Right -of Way (ROW) and access road areas
    - Field reviews with WVDEP-DWWM staff
    - Identification of all karst features in, and receiving drainage from, the ROW and access roads
    - Predictions and /or depictions of karst drainage patterns and springs receiving, or potentially receiving, ROW and access road drainage
    - Construction designs to minimize disturbed areas
    - Construction designs to minimize temporal disturbance
    - Construction schedule to avoid typically wetter periods of the year
    - Typical construction designs for mitigating encountered, unanticipated, karst openings
    - Mitigation measures to be deployed if a water supply's quality is affected
    - Mitigation measures to be deployed if a water supply's quantity is diminished or the supply is lost
    - Reexamination of setback distances for equipment storage/fueling areas

17. Only open bottom box culverts are to be used for culverts on permanent access roads that cross trout streams. The applicant shall contact the WVDEP-DWWM for a complete listing of trout streams after determination of the final route of the Project.

18. Upon issuance of the FEIS by FERC and determination of the final route of the Project, the applicant will submit to WVDEP-DWWM either confirmation that the proposed route provided in the 401 WQC is the final route of the Project or provide the final route if it differs from the 401 WQC. If the final route differs from the 401 WQC, the applicant will provide updated impacts corresponding to the final route of the Project.

19. The applicant shall supply to the WVDEP-DWWM a copy of the Certificate issued by FERC for this project, not later than ten days after the issuance of such license. WVDEP-DWWM may revoke, suspend or modify this Conditional Water Quality Certification as it deems appropriate, depending upon the terms of said license.

State 401 Water Quality Certification, as required by the Federal Clean Water Act, is conditionally granted subject to the above special conditions and the attached 401 standard conditions. Certification shall be effective fifteen (15) days after receipt unless appealed under title 47, Series 5A, Section 7 of the Code of State Regulations, State Certification of Activities Requiring a Federal Permit. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It should be directed to: Director, Division of Water and Waste Management, West Virginia Department of Environmental Protection, 601 57th Street SE, Charleston, West Virginia 25304: ATTENTION: 401 Certification Program.

Sincerely,

Scott G. Mandirola
Director

SGM/njd

cc: Ms. Megan Neylon
Mountain Valley Pipeline, LLC
555 Southpoint Boulevard, Suite 2000
Canonsburg, Pennsylvania 15317
U.S. Environmental Protection Agency – Jessica Martinsen
U.S. Fish and Wildlife Service – John Schmidt
WVDNR-Wildlife Resources Section, Elkins – Danny Bennett
WVDEP-DWWM, In-Lieu Fee Program – Brian Bridgewater
WVDEP-DWWM, Environmental Enforcement – John Hendley

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CONDITIONS REQUIRED FOR SECTION 404/10 PERMITS
ISSUANCE AND STATE CERTIFICATION AS REQUIRED BY SECTION 401

Applicant:	Mountain Valley Pipeline, LLC
WQC No.:	16-0005
Nationwide Permit No.:	12
Date:	March 23, 2017

1. 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-March 31st requires a spawning season waiver from the West Virginia Division of Natural Resources, Wildlife Resources Section. For information about specific stream designations contact DEP's Water Quality Standards Section at 304-926-0495. The Wildlife Resources Section, Trout Fisheries Program at 304-637-0245 or Warm Water fisheries Program 304-558-2771 should be contacted if a waiver is needed. 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.

2. 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 West Virginia Department of Environmental Protection, Division of Water and Waste Management in concurrence with the West Virginia Division of Natural Resources.

3. 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.

4. Activities permitted under Section 404 of the Clean Water Act are not authorized in the vicinity of or within stream mouths, embayments or island backchannels. Stream mouth is defined as the area extending 100 feet upstream and 100 feet downstream on receiving streams that are classified as a Section 10 stream.

5. 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
waterbody. All spills shall be promptly reported to the State Center for Pollution, Toxic Chemical and Oil Spills, 1-800-642-3074.

6. 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: Cadmium 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.

7. Land disturbances, which are integral to the completion of the permitted activity and 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 West Virginia Department of Environmental Protection, Division of Water and Waste Management, if applicable. Best Management Practices for Sediment and Erosion Control, as described in the West Virginia Department of Environmental Protection's Erosion and Sediment Control Best Management Practice Manual, 2006, or similar documents prepared by the West Virginia Division of Highways may be used. These handbooks are available from the respective agency offices.

8. 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.

9. All permit modifications must be re-certified.

10. 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.

11. Excavated material, other than rock or gravel, for use as backfill for the trench will not be stockpiled in the watercourse.

12. Excavation, dredging or filling in the watercourse will be done only to the extent necessary to achieve the project's purpose.

13. Bilge, ballast or wash water pumped from barges will not be discharged to the water course without acceptable removal of solids, oils or toxic compounds.

14. The pipeline should be designed and constructed to prevent flotation and minimize the possibility of leakage or rupture. Also, shutoff valves should be installed on both sides of the channel so that the crossing can be isolated in case of pipe failure. Submarine-type pipeline crossings 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.

15. 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.

16. 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 waste water treatment as approved by the WVDEP – DWWM.

17. The permittee will provide written notice of the proposed start-up date to the WVDEP-Environmental Enforcement (EE), fifteen days in advance of initiation of any activity authorized by the certification. The address for EE is 601 57th Street SE, Charleston, West Virginia 25304.

18. Stream activities permitted under the US Army Corps of Engineers 404 Program require that a West Virginia Public Lands Corporation Right of Entry be obtained. Application for this authorization should be made to the West Virginia Division of Natural Resources, Office of Lands and Streams, Building 74, Room 200, 324 Fourth Avenue, South Charleston, West Virginia 25303, or by contacting them at 304-558-3225. Any activity within the 100-year floodplain requires approval from the appropriate Floodplain Manager. The following website provides a statewide listing of Floodplain Managers in West Virginia: www.dhsem.wv.gov/mitigation/floodplain/Pages/default.aspx

19. Should potentially hazardous waste materials be located, the permittee will advise the WVDEP, Division of Water and Waste Management (Hazardous Waste Section), telephone (304) 926-0495, prior to disturbance of material.

20. The permittee shall provide a copy of the State 401 Certification to the construction contractor. A copy of the State 401 Certification shall be available at the project site until such time as the project is complete.

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

EXHIBIT 5 TO MOTION FOR PRELIMINARY RELIEF

PETITION FOR JUDICIAL REVIEW OF WVDEP'S MARCH 23, 2017 SECTION 401 CERTIFICATION OF MVP PROJECT

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.

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, and AUSTIN CAPERTON, Secretary of the West Virginia Department of Environmental Protection
Respondents

PETITION FOR REVIEW

Derek O. Teaney
Joseph M. Lovett
Benjamin A. Luckett
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

EXHIBIT 5 TO MOTION FOR PRELIMINARY RELIEF

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 order of the West Virginia Department of Environmental Protection issuing a Water Quality Certification under Section 401 of the Clean Water Act, 33 U.S.C. § 1341(a) for the Mountain Valley Pipeline entered on March 23, 2017, and finalized upon denial of requests for hearing on May 10, 2017. In accordance with Local Rule 15(b), a copy of the Water Quality Certification is attached hereto as Exhibit A, and the May 10, 2017 letter by which Respondent Austin Caperton denied certain Petitioners request for a hearing on the Water Quality Certification is attached as Exhibit B.

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)

EXHIBIT 5 TO MOTION FOR PRELIMINARY RELIEF

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

Dated June 9, 2017

Counsel for Petitioners

CERTIFICATE OF SERVICE

In accordance with Federal Rule of Appellate Procedure 15(c)(1) & (2), the undersigned hereby certifies that, on June 9, 2017, 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. Megan Neylon
   Mountain Valley Pipeline, LLC
   555 Southpoint Boulevard, Suite 2000
   Canonsburg, PA 15317

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

3. Kimberly D. Bose
   Secretary, Federal Energy Regulatory Commission
   888 First Street, NE
   Washington, DC 20426

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

5. Jessica Martinsen
   U.S. Environmental Protection Agency, Region III
   1650 Arch Street
   Philadelphia, PA 19103-2029

///

///

EXHIBIT 5 TO MOTION FOR PRELIMINARY RELIEF

6. John Schmidt
U.S. Fish and Wildlife Service
694 Beverly Pike
Elkins, WV 26241

7. Danny Bennett
West Virginia Division of Natural Resources
Wildlife Resources Section, Elkins
PO Box 67
Elkins, WV 26241

8. Brian Bridgewater
West Virginia Department of Environmental Protection
Division of Water and Waste Management, In-Lieu Fee Program
601 57th Street, SE
Charleston, WV 25304

9. John Hendley
West Virginia Department of Environmental Protection
Divisions of Water and Waste Management, Environmental Enforcement
601 57th Street, SE
Charleston, WV 25304

10. O. Ashby Berkley
P.O. Box 366
Talcott, WV 24981

11. Tammy A. Capaldo and Caitlyn A. Gregg
P.O. Box 58
Alderson, WV 24910

12. Maury Johnson
3227 Ellison's Ridge
Greenville, WV 24945

13. Norvel and Jean Mann
3330 Cooks Run Road
Lindside, WV 24951

///

EXHIBIT 5 TO MOTION FOR PRELIMINARY RELIEF

14. A. Petrie Brown
1019 Hans Creek Road
Greenville, WV 24945

15. Landcey Ragland
163 Slate Run Road
Greenville, WV 24945

16. Charles Chong and Rebecca A. Eneix-Chong
1839 Halls Run Road
Bristol, WV 26426-7350

17. Ty and Susan Bouldin
P.O. Box 431
Talcott, WV 24981

18. Dr. Stephen Miller
Route 1, Box 665A
Peterstown, WV 24963

19. James Gore
49 Fairview Drive
Peterstown, WV 24963

20. Shirley Hall
Route 1, Box 240F
Lindside, WV 24951

21. Dana O. Olson, M.D. & Jana M. Peters, D.O.
P.O. Box 480
Peterstown, WV 24963

///

///

///

///

EXHIBIT 5 TO MOTION FOR PRELIMINARY RELIEF

In addition, although not required by the rule, Petitioners have served Respondents via first-class mail this 9th day of June, 2017:

22. Kristin Boggs
General Counsel
Office of General Counsel
West Virginia Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

23. Austin Caperton
Secretary
West Virginia Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

DATED: June 9, 2017

/s/ Derek O. Teaney

Derek O. Teaney (W. Va. Bar No. 10223)
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

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 and/or their counsel may be served with copies of the Petition:

Kristin Boggs
General Counsel
Office of General Counsel
West Virginia Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

Austin Caperton
Secretary
West Virginia Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

EXHIBIT 6 TO MOTION FOR PRELIMINARY RELIEF

WVDEP'S MOTION FOR VOLUNTARY REMAND WITH VACATUR OF MARCH 23, 2017 SECTION 401 CERTIFICATION OF MVP PROJECT

No. 17-1714

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.

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, and AUSTIN CAPERTON, Secretary of the West Virginia Department of Environmental Protection
Respondents

and

MOUNTAIN VALLEY PIPELINE, LLC
Intervenor-Respondent

CONSENT MOTION FOR VOLUNTARY REMAND WITH VACATUR BY RESPONDENTS WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AUSTIN CAPERTON

Jason E. Wandling
West Virginia Department of Environmental Protection
Office of Legal Services
601 57th Street, SE
Charleston, WV 25304
Telephone: (304) 926-0499, ext. 1446
Facsimile: (304) 926-0461
Email: jason.e.wandling@wv.gov
Counsel for Respondents

EXHIBIT 6 TO MOTION FOR PRELIMINARY RELIEF

Pursuant to Rule 27 of the Federal Rules of Appellate Procedure, Respondents West Virginia Department of Environmental Protection and Austin Caperton (hereinafter, collectively, "WVDEP") respectfully request that the Court vacate the water quality certification on judicial review in this case and grant Respondents a voluntary remand pursuant to Section 19(d)(3) of the Natural Gas Act, 15 U.S.C. § 717r(d)(3). Counsel for WVDEP has conferred with counsel for Petitioners and Intervenor Respondent, and all Parties consent to the relief requested in this motion.

On March 23, 2017, WVDEP issued a water quality certification under Section 401 of the Clean Water Act ("CWA"), 33 U.S.C. § 1341 (hereinafter, the "Section 401 Certification"), to Intervenor-Respondent Mountain Valley Pipeline, LLC ("MVP") for the proposed Mountain Valley Pipeline project (hereinafter, "the Pipeline"). AR15195-203. On June 9, 2017, after their request for a hearing on the Section 401 Certification was denied, Petitioners Sierra Club, West Virginia Rivers Coalition, Indian Creek Watershed Association, Appalachian Voices, and Chesapeake Climate Action Network (hereinafter, collectively, "Sierra Club") filed a timely petition for review in this Court under Section 19(d)(1) of the Natural Gas Act, 15 U.S.C. § 717r(d)(1). On August 14, 2017, WVDEP submitted the Administrative Record to this Court. Doc. Nos. 26-32. On August 15, 2017,

EXHIBIT 6 TO MOTION FOR PRELIMINARY RELIEF

pursuant to this Court's July 6, 2017 Briefing Order, Sierra Club filed its page-proof opening brief. Doc. No. 34.

During its review of the filings in this judicial review proceeding, WVDEP determined that the information used to issue the Section 401 Certification needs to be further evaluated and possibly enhanced. Among the issues raised by Sierra Club is the requirement that certifications under Section 401 of the CWA examine compliance with all water quality standards, including a state's antidegradation policy. In light of that requirement, WVDEP recognizes that it needs to reconsider its antidegradation analysis in the Section 401 Certification and commits to doing so as expeditiously as possible.

CONCLUSION

For the foregoing reasons, WVDEP requests that this Court remand the Section 401 Certification to the agency under Section 19(d)(3) of the Natural Gas Act, 15 U.S.C. § 717r(d)(3), with vacatur. As noted above, Sierra Club and MVP report that they consent to the relief requested in this motion.

Respectfully submitted,

/s/ Jason E. Wandling
Jason E. Wandling
West Virginia Department of Environmental Protection
Office of Legal Services
601 57th Street, SE
Charleston, WV 25304
Telephone: (304) 926-0499, ext. 1446
Facsimile: (304) 926-0461

Email: jason.e.wandling@wv.gov

Counsel for Respondents

EXHIBIT 6 TO MOTION FOR PRELIMINARY RELIEF

CERTIFICATE OF SERVICE

I hereby certify that on September 13, 2017, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Fourth Circuit by using the appellate CM/ECF system. The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system. I further certify that on September 13, 2017, I will serve on the Clerk of the Court an original and three copies of the foregoing by United States Mail, postage prepaid.

/s/ Jason E. Wandling
Jason E. Wandling
West Virginia Department of Environmental Protection
Office of Legal Services
601 57th Street, SE
Charleston, WV 25304
Telephone:(304) 926-0499, ext. 1446
Facsimile: (304) 926-0461
Email: jason.e.wandling@wv.gov

Counsel for Respondents

EXHIBIT 7 TO MOTION FOR PRELIMINARY RELIEF

ORDER GRANTING MOTION FOR VOLUNTARY REMAND WITH VACATUR

FILED: October 17, 2017

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 17-1714
(WQC-16-0005)
(CP-16-10-000)

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

Petitioners

v.

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION; AUSTIN CAPERTON, Secretary of the West Virginia Department of Environmental Protection

Respondents

MOUNTAIN VALLEY PIPELINE, LLC

Intervenor

ORDER

Upon consideration of the consent motion for voluntary remand with vacatur, the court grants the motion, vacates the water quality certification, and

EXHIBIT 7 TO MOTION FOR PRELIMINARY RELIEF

remands this matter to the agency pursuant to Section 19(d)(3) of the Natural Gas Act, 15 U.S.C. section 717r(d)(3).

Entered at the direction of Judge Wilkinson, with the concurrence of Chief Judge Gregory and Judge Traxler.

For the Court

/s/ Patricia S. Connor, Clerk

EXHIBIT 8 TO MOTION FOR PRELIMINARY RELIEF

WVDEP'S NOVEMBER 1, 2017 WAIVER OF AUTHORITY TO ISSUE INDIVIDUAL SECTION 401 CERTIFICATION FOR MVP PROJECT

west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street, Southeast
Charleston, West Virginia 25304
Phone: (304) 926-0495
Fax: (304) 926-0463

Jim Justice, Governor
Austin Caperton, Cabinet Secretary
www.dep.wv.gov

November 1, 2017

Michael Hatten
Chief, Regulatory Branch
United States Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, West Virginia 25701

Re: State 401 Water Quality Certification – Nationwide Permit No.12; Mountain Valley Pipeline, LLC; Mountain Valley Pipeline Project; FERC Docket No. CP-16-10-000; Wetzel, Harrison, Doddridge, Lewis, Braxton, Webster, Nicholas, Greenbrier, Fayette, Summers, and Monroe Counties, West Virginia; WQC-16-005

Dear Mr. Hatten:

This letter is to advise you that the West Virginia Department of Environmental Protection's Division of Water and Waste Management hereby waives the requirement that Mountain Valley Pipeline, LLC (MVP) obtain an Individual 401 Water Quality Certification (WQC) pursuant to Section 401 of the federal Clean Water Act and by Special Condition A of the U. S. Army Corps of Engineers Nationwide 12 Permit. This waiver is specific to the above-referenced MVP project to construct a natural gas pipeline in West Virginia.

If you have any questions or concerns, or if you wish to discuss this matter in any particular, please do not hesitate to contact me.

Sincerely,

Scott G. Mandirola
Director

EXHIBIT 8 TO MOTION FOR PRELIMINARY RELIEF

EXHIBIT 9 TO MOTION FOR PRELIMINARY RELIEF

DECLARATION OF TAMMY A. CAPALDO

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

SIERRA CLUB, et al.,
Petitioners,

v.

U.S. ARMY CORPS OF ENGINEERS, et al., No. 18-1173
Respondents

and

MOUNTAIN VALLEY PIPELINE, LLC,
Intervenor-Respondent.

DECLARATION OF TAMMY A. CAPALDO

I, Tammy A. Capaldo, state and affirm as follows:

1. I have lived in Pence Springs, West Virginia, on property along the Greenbrier River that I co-own with my daughter, Caitlyn A. Gragg, since approximately February 2015.

2. I am a member of Sierra Club. Sierra Club is a nonprofit corporation, incorporated in California, with more than 770,000 members and supporters nationwide and approximately 2,600 members who reside in West Virginia and belong to its West Virginia Chapter. The Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass the exploration, enjoyment, and protection of surface waters in West Virginia.

3. The proposed right-of-way for the Mountain Valley Pipeline—a 42-inch natural gas transmission line—crosses the property on which I live and co-own along the Greenbrier River in Pence Springs, West Virginia.

4. My lifelong dream, since I was a little girl, has been to own property along the Greenbrier River in West Virginia. I spent my formative years in Ohio, but my fondest memories of childhood are of time spent on my father's family's camps along the Greenbrier River. The time that I spent there instilled in

me a lifelong love for the outdoors and for river life. I always dreamed about owning a place of my own on the Greenbrier River and using it to share with my children and grandchildren the same joys, memories, and upbringing that I had.

5. For decades, I have planned to purchase property along the Greenbrier River and spend my retirement years there.

6. I looked at many properties along the Greenbrier River in West Virginia before I decided to purchase the property on which I now live. I selected this property because it was unique among the properties at which I looked in that the property has approximately 271 feet of Greenbrier River frontage, the property includes a sand and pebble beach along the River (providing incomparable access to the water for me, my children, and my grandchildren), and the residence on the property is located out of the floodplain. Indeed, in the "1000-year" flood of June 2016, the residence on my property was untouched by the floodwaters.

7. In or around July 2014, my daughter and I made an offer to purchase the Greenbrier River property on which I now live. The purchase transaction closed in or around January 2015. The prolonged time period between my offer to purchase the property and closing was due to difficulties in locating comparable properties on which to base an appraisal of the property.

8. Sometime between July 2014 and October 2014, I learned that the property that I was purchasing was located on one of several potential routes by which the Mountain Valley Pipeline was proposed to cross the Greenbrier River. It was my understanding that the proposed pipeline would cross the Greenbrier River one time, but that the precise location of that crossing was not confirmed. It was not until sometime in 2016, after I had purchased the property, that I learned that the crossing location that affected my property was selected as the final proposed route.

9. The pebble and sandy beach described above is the only access point I have on my property to the Greenbrier River. The remainder of my river frontage is along a bank too steep to provide access for my family and me.

10. In addition to my daughter Caitlyn, with whom I co-own the property, I have a son, Carson, who has two children of his own. My children and grandchildren frequently visit the property, fulfilling my dream of sharing time along this special river with them. When I think of the Greenbrier River, I have always thought of family.

11. The beach is the center of activities on my property for my family and me. The ease of access, and child-friendly beach areas, were the main reasons that I selected this property. There is something about the water that just soothes the soul.

12. The recreational activities that my family and I use the beach for include camping, wading and swimming, fishing, and kayaking.

13. During my annual family reunion, my guests frequently camp near the beach, pitching tents and building campfires. For thirty years, my family has reunited along the Greenbrier River, and since I acquired my property, we have used it for camping, swimming, and kayaking as part of the reunion.

14. My family and I use the beach to wade into the Greenbrier River and access deeper swimming holes in the river.

15. We also fish from the beach for bass and catfish.

16. The beach provides a launch point for kayaking out to fishing holes, as well as a take-out point for longer float trips along the Greenbrier River.

17. As I understand the proposed final route for the Mountain Valley Pipeline, the beach on my property is located at the point at which the pipeline is proposed to emerge from the Greenbrier River at the southern end of its crossing of that stream.

18. If the pipeline is constructed as proposed, it will change my day-to-day use of my property, affect my enjoyment of living along the Greenbrier River, and may cause me to abandon my dream of living on the property full-time, or even to sell the property (if I can).

19. Construction and operation of the pipeline at its proposed location will affect the landscape of my beloved beach, changing its features and diminishing my recreational and aesthetic enjoyment of this aspect of my property.

20. During construction, I will lose access to the beach for an undefined period of time, as construction crews build cofferdams across the river, dig a trench and workspace out of the riverbed, and then construct the pipeline through the beach to the point it exits my property. My access to the beach will also be affected by efforts to "reclaim" the property to the long-term right-of-way.

21. After construction, I fear that the landscape features of the beach, now transformed into a pipeline right-of-way, will be altered to the point that I will no longer be able to use it recreationally, if at all, and that any use that I am able to make of the beach will not be as enjoyable because of its alterations. It may be unrecognizable from the little slice of heaven that I purchased.

22. Moreover, since the time I purchased the property I have thought that I had the potential to generate supplemental retirement income if necessary by using the beach area as part of a commercial campground. Because of the pipeline right-of-way and its disturbance to the natural beauty of the area, I will no longer be able to use the beach for that purpose.

23. As I understand, the pipeline right-of-way only crosses a portion of my property on the western property line. The proposed river crossing, however, proceeds from the northeast to the southwest. Accordingly, there is the potential for sedimentation from construction on the opposing shore and under upstream portions of the river that could affect much more of the river along my

property than just the corner of the property on which the right-of-way is directly located.

24. I fear that construction of the pipeline crossing under the Greenbrier River adjacent to my property will lead to water quality problems from, among other things, increased sedimentation that will result from the construction process. I enjoy the aquatic life in the Greenbrier River, including the fish that I catch and the crawdads that I show my grandchildren. I am concerned that sedimentation from the construction process may adversely affect the aquatic life and that will diminish my enjoyment of my time along the Greenbrier River.

25. I am also concerned that construction on the riverbanks adjacent to the pipeline will increase sedimentation into the Greenbrier River along the stretch of river that I own, harming aquatic life and altering the stream bottom that I wade on and swim above. Those effects will diminish my recreational and aesthetic enjoyment of the Greenbrier River.

26. Moreover, I fear that construction and maintenance of the pipeline crossing and associated rights-of-way could result in prolonged sedimentation into the Greenbrier River and/or the creation of sediment deposits that could alter the streambed where my family and I wade and swim along the Greenbrier River, converting it from an accessible gravelly riverbed in to a mucky, swampy, and inaccessible mess. Those concerns affect my enjoyment of my time along the Greenbrier River.

27. I understand that underground natural gas pipeline leaks are not uncommon. I have great fear that once the pipeline is in operation, minor leaks could occur into the Greenbrier River. For that reason, if the pipeline is constructed, I expect that my family and I will forego all water activities, to include camping, along the Greenbrier on my property. I do not want my children and grandchildren to play near or splash around in the river when there could be a leak.

28. Although less frequent, I also understand that catastrophic natural pipeline leaks can occur. My fears of a catastrophic explosion from a leaking pipeline will, and in fact already have, diminished my enjoyment of using my beach and swimming in the Greenbrier River along my property.

29. If the pipeline is constructed, I will very likely not continue to use my property to host guests during my annual family reunion. That prospect saddens me and affects my recreational and aesthetic enjoyment of my property and the river.

30. In June 2016, I witnessed the effects of a “1000-year” flood on my property. I saw unimaginable debris float down the Greenbrier River and fear that floods could expose the pipeline or damage it, and those fears affect my enjoyment of my property.

31. My domestic water supply for my residence on my property is provided by the Big Bend Public Service District, which withdrawals water from the Greenbrier River downstream of the final proposed crossing. I am aware of changes in water quality observed in other water districts as a result of upstream pipeline crossings, and I have concerns about the effects of the proposed final Greenbrier River crossing on my domestic water supply, both in the short term and the long term. Those concerns include both water quality issues and rate increases that may result from any additional treatment that the water district must add to account for pollutants from the construction, operation, and maintenance of the Mountain Valley Pipeline. Those concerns affect my enjoyment of my property.

32. I became engaged to be married in May 2017 and got married on August 13, 2017. My husband and I have discussed living on my Greenbrier River property full time. My husband has told me that he does not want live on the property if the pipeline is constructed because of his fears of leaks/explosions and concerns about health issues related to living so close to a major natural gas transmission line.

33. As a result of all of the possible effects described above, my concerns about those effects, my diminished recreational and aesthetic enjoyment of my property and this stretch of river, and my foregone use of the Greenbrier River that will result from them, I may simply have to give up on this property. That deeply saddens me and causes me anxiety. You simply cannot put a price tag on a dream. If the pipeline company were to come in and destroy my sanctuary, and take away the spot where I have long intended to enjoy the outdoors with my grandchildren, you simply cannot put a price on that. If I do find myself in the market for new Greenbrier River property, I will not purchase a property located downstream of (or anywhere near) the Mountain Valley Pipeline crossing because of my concerns about the effects of the pipeline on water quality in the river.

34. To be clear, my concerns about future effects of the construction, operation, and maintenance of the pipeline on my Greenbrier River property are presently diminishing my quality of life and my recreational and aesthetic enjoyment of my property and the Greenbrier River. Each time I wade, swim, or kayak in the Greenbrier River, I am unfortunately preoccupied with concerns about the effect of the Mountain Valley Pipeline on this special river that I hold so dear.

35. As I understand it, the United States Army Corps of Engineers was required to verify whether Mountain Valley Pipeline qualified to use Nationwide Permit 12 as a Clean Water Act permit in order to cross the Greenbrier River and hundreds of other streams along the pipeline's route and in fact issued such a verification on December 22, 2017. That required regulatory approval is the

cause of my fears and concerns about the effects of the pipeline on the Greenbrier River and my time along the Greenbrier River has been less enjoyable as a result.

36. If the U.S. Army Corps of Engineer's authorization to Mountain Valley Pipeline to use Nationwide Permit 12 to trench through the Greenbrier River were vacated and remanded by this Court, my fears would be diminished and my enjoyment of my property and the Greenbrier River would be increased.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 21 day of June February 2018.

Tammy A. Capaldo

EXHIBIT 10 TO MOTION FOR PRELIMINARY RELIEF

DECLARATION OF MAURY JOHNSON

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

SIERRA CLUB, et al.,
Petitioners,

v.

U.S. ARMY CORPS OF ENGINEERS, et al., **No. 18-1173**
Respondents

and

MOUNTAIN VALLEY PIPELINE, LLC,
Intervenor-Respondent.

DECLARATION OF MAURY JOHNSON

I, Maury Johnson, state and affirm as follows:

1. I live in Greenville, West Virginia, in Monroe County, and have lived there since 1960.

2. I am a member of Sierra Club. Sierra Club is a nonprofit corporation, incorporated in California, with more than 770,000 members and supporters nationwide and approximately 2,600 members who reside in West Virginia and belong to its West Virginia Chapter. The Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass the exploration, enjoyment, and protection of surface waters in West Virginia.

3. I am also a member of the West Virginia Rivers Coalition. The West Virginia Rivers Coalition makes its mission the conservation and restoration of West Virginia's exceptional rivers and streams. It not only seeks preservation of high quality waters but also the improvement of waters that should be of higher quality.

4. I have been a member of the Indian Creek Watershed Association for approximately five years. The Indian Creek Watershed Association's mission is the preservation and protection of Monroe County, West Virginia's abundant, pure water.

5. I have been a member of the Chesapeake Climate Action Network for more than two years. The Chesapeake Climate Action Network is the first grassroots, nonprofit organization dedicated exclusively to fighting global warming in Maryland, Virginia, and Washington, D.C. It mission is to build a diverse movement powerful enough to put our region on the path to climate stability, while using its proximity to the nation's capital to inspire action in neighboring states, regions nationwide, and countries around the world.

6. The proposed right-of-way for the Mountain Valley Pipeline—a 42-inch natural gas transmission line—crosses the approximately 160-acre organic farm on which I live and co-own on Ellison Ridge Road in Greenville, West Virginia.

7. This property has been in my family since the mid-19th Century—except for a 14-year period in middle of the Twentieth Century. My great-grandfather built his house here in the late 1800's, and I have been the caretaker of the farm since I was twenty-three years old. I bought a small house adjoining the farm and I have lived in it since 1987.

8. The proposed final route for the Mountain Valley Pipeline would cross three streams on my property, including Slate Run of Hans Creek and its tributaries. Downstream of the crossings, Slate Run of Hans Creek runs past my house and near my domestic water well. The proposed Mountain Valley Pipeline would cross Slate Run and its tributaries approximately 600 feet upstream from my house.

9. My well has a hydrologic connection to the surface streams that the proposed pipeline would cross. Because of the karst-like geology of my property, the streams "sink," or run underground, and intermingle with the aquifer of my domestic well. I use water from my well for cooking, cleaning, watering livestock, and other domestic purposes.

10. I am concerned that the construction and operation of the Mountain Valley Pipeline across my property, including the stream crossings of tributaries of Slate Run of Hans Creek, will contaminate my well water with sediment and other pollutants, rendering it unusable. I am also concerned that the

construction and operation of the pipeline could affect the quantity of water available from my well.

11. When representatives of Mountain Valley Pipeline surveyed my property, I got the sense from one of the surveyors that he felt it would be hard for them not to affect the water on my property. Based on that, I have concerns about the effect of the construction and operation of the Mountain Valley Pipeline on my farm's water resources, including my well, the streams, and the springs.

12. The proposed final route for the Mountain Valley Pipeline will cross the best farming field on my farm, rendering it unusable. We currently use that field to run cattle, for hunting, for hiking, and for hay and crop production.

13. As I understand it, during construction of the pipeline, an alternative work site may be used on my property dangerously close to identified wetlands and springs on my property. I am concerned about the effects on water quality in those water features from sedimentation and other pollution from the construction of the pipeline. There are several springs on my property that are within 50 feet of the pipeline corridor, alternative worksites, and access roads.

14. I have long considered running water from one of the springs near the construction corridor to my home to use for domestic purposes. I am concerned that pollution from the construction and operation of the pipeline may render water from that spring unusable for domestic purposes, or that the flow quantity of the spring may be reduced.

15. I enjoy watching Slate Run of Hans Creek flow past my house from my living room window and enjoy listening to the frogs that gather in it and the associated wetlands. I call this place "Frog Heaven." I am concerned about the impact that pollution from the construction and operation of the pipeline across the tributaries of Slate Run could have on the wildlife in the stream that I enjoy. My enjoyment of the stream has been reduced since I learned of Mountain Valley Pipeline's proposed route across my property and my streams.

16. Past my house, Slate Run of Hans Creek flows onto my neighbor's property and feeds a small pond at which I have fished in the past and intend to continue fishing. I am concerned about water quality in the pond from the disturbance along Slate Run and its tributaries that will be cause by the pipeline. Those concerns diminish my enjoyment of the prospect of fishing in that pond and I may not fish there as often if the pipeline is constructed.

17. My property has been blessed with abundance of good water, and I am concerned that the proposed Mountain Valley Pipeline will affect both the quantity and quality of my water resources. Those concerns diminish my enjoyment of living here. I most likely will leave and/or sell my property if the pipeline is constructed. Since the pipeline was announced, I have felt upset and angry and lost sleep worrying about the effect of the pipeline on my water resources. Those negative effects have grown with each step in the pipeline approval process.

18. My two adult children had intended to move back to the farm to build their own homes here. Neither will do so if the pipeline is constructed. As a result, the construction and operation of the Mountain Valley Pipeline would deprive me of the opportunity to live here on my farm with my children.

19. In addition to its direct effects on my property and my water resources, the proposed final route of the Mountain Valley Pipeline crosses two additional streams that I use for recreational and aesthetic purposes, and those uses are harmed, and my enjoyment of them diminished, by the approval of the pipeline.

20. As I understand it, the Mountain Valley Pipeline will cross Indian Creek at or near the location where I was baptized in that creek as a young man. I drive by that section of Indian Creek almost every day, and enjoy looking at the stream and reflecting on my connection to it. My enjoyment of such reflection has been reduced recently, as I realize that that special place is never going to look the same. They are going to destroy it.

21. As I understand it, the Mountain Valley Pipeline will cross Hans Creek, a tributary of Indian Creek, at a location known as the Narrows of Hans Creek. I have been using the Narrows of Hans Creek throughout my life. I walked through the woods there and crossed Hans Creek at or near the proposed Mountain Valley Pipeline crossing at a young age to get to my grandfather's house. I still go there three to four times each summer, and would intend to keep doing so but for the pipeline. If the pipeline were to be constructed across Hans Creek, I would no longer use it for recreational or aesthetic purposes. I am concerned about the effect of the Mountain Valley Pipeline's stream crossing on the aquatic life in the creek and I know that the pipeline right-of-way would create an intolerable eyesore in that very special place and its unique ecosytem.

22. As I understand it, the United States Army Corps of Engineers was required to verify whether Mountain Valley Pipeline qualified to use Nationwide Permit 12 as a Clean Water Act permit in order to cross the Greenbrier River and hundreds of other streams along the pipeline's route and in fact issued such a verification on December 22, 2017. That required regulatory approval is the cause of my fears and concerns about the effects of the pipeline on the Greenbrier River and my time along the Greenbrier River has been less enjoyable as a result.

23. If the U.S. Army Corps of Engineer's authorization to Mountain Valley Pipeline to use Nationwide Permit 12 to trench through the Greenbrier River were vacated and remanded by this Court, my fears would be diminished and my enjoyment of my property and the Greenbrier River would be increased.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 20 day of February 2018.

Maury Johnson

Maury Johnson

EXHIBIT 10 TO MOTION FOR PRELIMINARY RELIEF

EXHIBIT 11 TO MOTION FOR PRELIMINARY RELIEF

DECLARATION OF NAOMI COHEN

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

SIERRA CLUB, et al.,
Petitioners,

v.

U.S. ARMY CORPS OF ENGINEERS, et al., **No. 18-1173**
Respondents

and

MOUNTAIN VALLEY PIPELINE, LLC,
Intervenor-Respondent.

DECLARATION OF NAOMI COHEN

I, Naomi Cohen, state and affirm as follows:

1. I live in Gap Mills, West Virginia, in Monroe County, and have lived there since 1975.

2. I am a member of Appalachian Voices and have been for approximately three years. Appalachia Voices is a nonprofit North Carolina corporation committed to protecting the land, air, and water of the central and southern Appalachian region, including North Carolina, Virginia, West Virginia, and Tennessee. Its concerns include the protection the rich natural heritage of West Virginia, including its forest and water resources.

3. I am a member of Sierra Club and have been for decades. Sierra Club is a nonprofit corporation, incorporated in California, with more than 770,000 members and supporters nationwide and approximately 2,600 members who reside in West Virginia and belong to its West Virginia Chapter. The Sierra Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting the responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass the exploration, enjoyment, and protection of surface waters in West Virginia.

4. I am also a member of the West Virginia Rivers Coalition and have been for approximately three years. The West Virginia Rivers Coalition makes its mission the conservation and restoration of West Virginia's exceptional rivers and streams. It not only seeks preservation of high quality waters but also the improvement of waters that should be of higher quality.

5. I am an avid hiker and I have been since the age of ten, when my father would invite me to accompany him on hikes in the Catskill Mountains of New York. I have hiked the Appalachian Trail and all over the world. I frequently plan my vacations based on hiking trips in both new and familiar regions.

6. For more than 40 years, I have hiked to the Hanging Rock Raptor Observatory, high atop Peters Mountain in Monroe County, West Virginia. I can see the observatory from my kitchen window and it is a special place to me. I hike to the Observatory at an elevation of 3,800 feet above sea level at least six times a year and will continue to do so for so long as I am physically able. Members of the Brooks Bird Club and others have been maintaining that former fire tower since 1972, and it is currently used for the observation of migrating birds of prey. From the Observatory, the visitor has a most incredible 360-degree view of the surrounding area.

7. To access the Observatory, I hike on the Allegheny Trail from a trailhead on Zenith Road. On those hikes, I usually hike past the Observatory a mile or two, and return to the Observatory on a side trail. The Allegheny Trail is the closest hiking trail to my front door. I have participated in trail maintenance activities on that trail through my membership in the West Virginia Scenic Trails Association, and intend to again.

8. I am drawn to the Observatory so frequently by the incredible and remarkable view along a trail just ten minutes from my house. From the Observatory, I can see Flat Mountain and Muddy Creek Mountain, as well as Potts Mountain and Brushy Mountain in Virginia.

9. The view from the Observatory rivals other vistas I have experienced in my hiking, including famous views along the Appalachian Trail in Virginia. The long-distance views from the Observatory allow me to see so much of the Appalachian Mountains and gain an understanding of their topography and geology.

10. My hikes to the Observatory are emotionally restoring. I go there to find peace, inspiration, and rejuvenation. I frequently take out-of-town

guests to the Observatory because it is a hike within the capabilities of most people and the view gives my visitors a sense as to why I choose to live here.

11. Based on my geographical knowledge of Monroe County and my reviews of maps of the proposed route for the Mountain Valley Pipeline, I have little doubt that the construction of the pipeline, as well as the right-of-way that remains after construction, will interrupt the magical view from the Observatory and several other vistas along the Allegheny Trail that I hike, including at Neel's Rocks and Cole's Cabin.

12. As of right now, the view from the Observatory is superior in many ways to other vistas in this region to which I hike because of the absence of the sight of human impacts, beyond farming, such as utility rights-of-way. I am disturbed by the knowledge that my view from the Observatory and the Allegheny Trail will be marred by a wide swath of deforested land, in the form of the Mountain Valley Pipeline right-of-way marching and snaking over the ridges and through the forests of Monroe County.

13. If the Mountain Valley Pipeline were constructed as proposed, the view of its right-of-way through Monroe County and into Virginia would diminish my enjoyment of my hikes along the Allegheny Trail and of my time at the Hanging Rock Raptor Observatory. I anticipate that the peace, inspiration, and rejuvenation that I find there would be marred by frustration, sadness, and sorrow. I am concerned not only about my own loss of pleasure, but for the loss that my children and grandchildren may suffer from their loss of the ability to see what I saw there.

14. Seeing the right-of-way would not only interrupt my view from the Observatory, it would also carry with it concerns about the Mountain Valley Pipeline's effect on wildlife and water resources along its path. I am a user and officer of Sweet Springs Valley Water Company. As I understand it, the proposed route of the Mountain Valley Pipeline would traverse dangerously close to the water source for that company, in an area of sensitive karst terrain. I am concerned that the Mountain Valley Pipeline could affect the quantity and/or quality of the Sweet Springs Valley Water Company's source, and those concerns will haunt me on my visits to the Observatory and interrupt my enjoyment of my time there.

15. As I understand it, in order for the Mountain Valley Pipeline to proceed to construction, it needs an verification from the United States Army Corps of Engineers that it is eligible to discharge fill material into streams and

wetlands under Nationwide Permit 12. In that way, the issuance of that verification has a causal relationship to the imminent diminishment of my enjoyment of my hikes on the Allegheny Trail to Hanging Rock Raptor Observatory.

16. If the verification issued by the United States Army Corps of Engineers were vacated by a court, and the Mountain Valley Pipeline project were to be cancelled or relocated as a result, the threat to my enjoyment of the Allegheny Trail and the Observatory would be eliminated.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 20th day of February 2018.

Naomi Cohen

Naomi Cohen

EXHIBIT 11 TO MOTION FOR PRELIMINARY RELIEF

EXHIBIT 12 TO MOTION FOR PRELIMINARY RELIEF

PUBLIC NOTICE SOLICITING COMMENT ON WVDEP'S SECTION 401 CERTIFICATION FOR NWPS

Public Notice Archives

DEP Enhanced Mailing List - View List Message

This Message was sent out on Thursday, February 16, 2017 @ 08:38 AM

From: dep.online@wv.gov
Subject: DEP Public Notice - State Water Quality Certification - Wood County - US Army Corps of Engineers

PUBLIC NOTICE

State Water Quality Certification, as required by Section 401 of the Clean Water Act (CWA), has been requested of the West Virginia Department of Environmental Protection (WVDEP) for:
U.S. Army Corps of Engineers, Federal Register Vol. 82 No. 4, pg 1860-2008, announcing new Section 404 Nationwide Permits for West Virginia
(Name of Project)

Department of the Army
Huntington District, Corps of Engineers
502 Eighth Street
Huntington, WV 25701-2070
(Name and address of Applicant)
SCOPE OF CERTIFCATION: Pursuant to Section 401 of the CWA, the State may either certify, certify with conditions, deny, or waive certification that the proposed activity will comply with State law. When issuing certification, the WVDEP may consider the proposed activity's impact on water resources, fish and wildlife, recreation, critical habitats, wetlands and other natural resources under its jurisdiction. Procedural and interpretive regulations governing the scope of the WVDEP's certification, public comment, hearings and appeals are in Title 47, Series 5A.
DESCRIPTION OF THE ACTIVITY: On January 6, 2017, U.S. Army Corps of Engineers (ACOE), announced in the Federal Register the reissuance of the Nationwide Permits (NWPs), general conditions, and definitions with some modifications. The 2017 NWPs will go into effect on March 19, 2017. This publication of the final NWPs served as the Corps application for West Virginia Water Quality Certification (WQC) under Section 401 of the Clean Water Act for those NWPs that will result in a discharge in the State of West Virginia.
PROJECT LOCATION: Nationwide permits will be available for use statewide once certified.
INFORMATION AVAILABLE: To view the proposed WQC special and standard conditions, please visit:
www.dep.wv.gov/WWE/Programs/Documents/2017NWPWVCertConditions.pdf
COMMENTS: Any interested person may submit written comments on the Nationwide Permits WQC special and standard conditions by addressing such to the Director of the Division of Water and Waste Management during the comment period, which begins with this notice and ends on March 19, 2017. Comments or requests should be emailed to: dep.comments@wv.gov or by mail addressed to:
Director, Division of Water and Management, DEP
ATTN: Christopher Smith, WQS Program
601 57th Street SE
Charleston, WV 25304-2345

<< View Another Message

EXHIBIT 12 TO MOTION FOR PRELIMINARY RELIEF

EXHIBIT 13 TO MOTION FOR PRELIMINARY RELIEF

EXCERPT FROM FINAL ENVIRONMENTAL IMPACT STATEMENT FOR MOUNTAIN VALLEY PIPELINE

Federal Energy Regulatory Commission
Office of Energy Projects
888 First Street, NE, Washington, DC 20426

FERC/FEIS-0272F **June 2017**

Mountain Valley Project and Equitrans Expansion Project

Final Environmental Impact Statement

Mountain Valley Pipeline, LLC and Equitrans, LP
FERC Docket Nos.: CP16-10-000 and CP16-13-000

Cooperating Agencies:

U.S. Forest Service

U.S. Army Corps of Engineers

U.S. Bureau of Land Management

U.S. Environmental Protection Agency

Pipeline Hazardous Materials Safety Administration

U.S. Fish & Wildlife Service

West Virginia Field Office

West Virginia Department of Environmental Protection

West Virginia Division of Natural Resources

EXHIBIT 13 TO MOTION FOR PRELIMINARY RELIEF

and written recommendations on seeding mixes, rates, and dates obtained from the Wildlife Habitat Council (for the MVP) or the PADEP's *Erosion and Sediment Pollution Control Program Manual* (for the EEP) and in accordance with the Applicants' construction and restoration plans.

The right-of-way would be seeded within 6 working days following final grading, weather and soil conditions permitting, although seeding would not be required in actively cultivated croplands unless requested by the landowner. Alternative seed mixes specifically requested by the landowner or required by agencies may be used. Any soil disturbance that takes place outside the permanent seeding season or any bare soil left unstabilized by vegetation would be mulched in accordance with the FERC Plan and Equitrans' Plan (see section 4.4).

2.4.2.9 Special Pipeline Construction Procedures

Special construction techniques are required when a pipeline is installed across waterbodies, wetlands, roads and railroads, foreign utilities, steep slopes, residences, agricultural lands, and other sensitive environmental resources, such as the ANST. These procedures are further discussed as they apply to specific resources in section 4.0.

2.4.2.10 Waterbody Crossings

Waterbody crossings would be completed in accordance with the Mountain Valley and Equitrans Procedures, with exceptions from the FERC Procedures as identified in table 2.4-1, and measures required in other federal or state issued permits. The MVP pipeline route would require 1,109 waterbody crossings. The EEP pipelines would require 38 waterbody crossings. The waterbodies that would be crossed and the Applicants' proposed crossing methods for each are listed in appendix F. Waterbody crossings are discussed in more detail in section 4.3.2 of this EIS.

ATWS necessary for waterbody crossings would be placed a minimum of 50 feet from the waterbody edge. The 50-foot setback would be maintained unless site-specific approval for a reduced setback is granted by the FERC and other jurisdictional agencies (see section 4.3.2).

To prevent sedimentation caused by equipment traffic crossing through waterbodies, the Applicants would install temporary equipment bridges. Bridges may include clean rock fill over culverts, equipment pads, wooden mats, free-spanning bridges, and other types of spans. Equipment bridges would be maintained throughout construction. Each bridge would be designed to accommodate normal to high streamflow (storm events) and would be maintained to prevent soil from entering the waterbody and to prevent restriction of flow during the period of time the bridge is in use.

Sediment barriers, such as silt fence and straw/hay bales, would be installed immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers would be properly maintained throughout construction, until replaced by permanent erosion controls or restoration of adjacent upland areas is complete and revegetation has stabilized the disturbed areas. Trench plugs, consisting of compacted earth of similar low permeability material would be installed at the entry and exit points of wetlands and waterbodies to prevent water from the

stream or wetland from moving along the trench. After backfilling, streambanks would be re-established to approximate pre-construction contours and stabilized.

The pipelines would be installed below scour depth (see section 4.3.2) for each waterbody crossed. In most cases, the Applicants would place at least 4 feet of cover over the pipeline at waterbody crossings; except in consolidated rock, where there would be a minimum of 2 feet of cover. See section 4.3.2 for additional information regarding scour depths and proposed mitigation measures such as installation of armor layers and revetment mats. Trench spoil would be placed on the banks above the high water mark for use during backfilling. In some cases, the pipeline would be coated with concrete for negative buoyancy. In accordance with the Applicants' Procedures, construction of minor (10 feet wide or less) waterbody crossings would be completed within 24 hours; while 48 hours would be used for intermediate crossings (between 10 and 100 feet wide).

All waterbody crossings for the MVP would be dry open-cut crossings (flume, dam-and-pump, or cofferdam). In section 4.3, we are recommending Mountain Valley cross the Pigg River via an HDD. For the EEP, either HDD, flume, or dam-and-pump techniques would be used. These measures are briefly described below.

Flume Construction Method

The flume method is a type of dry open-cut crossing that involves diverting the flow of water across the construction work area through one or more flume pipes placed in the waterbody. The first step in the flume crossing method involves placing a sufficient number of adequately sized flume pipes in the waterbody to accommodate the highest anticipated flow during construction. After placing the pipe in the waterbody, sand bags or equivalent dam diversion structures are placed in the waterbody upstream and downstream of the trench area. These devices serve to dam the stream and divert the water flow through the flume pipes, thereby isolating the water flow from the construction area between the dams. Flume pipes are typically left in place during pipeline installation until trenching under the flumes, pipe installation, and final cleanup of the streambed is complete. Once the pipeline is installed, and the streambed and banks restored, the flume pipes are removed, allowing water flow to return to pre-construction conditions.

Dam-and-Pump Construction Method

The dam-and-pump method is similar to the flume crossing method except that pumps and hoses are used instead of flumes to move water across the construction work area. Temporary dams are installed across the waterbody on both the upstream and downstream sides of the construction right-of-way, usually using sandbags or plastic sheeting. Pumps are then set up at the upstream dam with the discharge line (or hoses) routed through the construction area to discharge water immediately downstream of the downstream dam. At the request of the Virginia Department of Game and Inland Fisheries (VADGIF), fish and other aquatic wildlife would be removed from the de-watered area between the dams in Virginia waterbodies. An energy dissipation device is typically used to prevent scouring of the streambed at the discharge location. The pipeline is then installed and the trench backfilled, allowing water flow to be re-

established to pre-construction conditions. After backfilling, the dams are removed and the banks restored and stabilized.

Cofferdam Construction Method

In its original October 2015 application to the FERC, Mountain Valley indicated it would use wet open-cut measures to cross three major waterbodies (Elk, Gauley, and Greenbrier Rivers). Following issuance of the draft EIS, Mountain Valley changed the crossing method for these three rivers to dry open-cut methods (including the use of cofferdams).

A cofferdam is a temporary structure that would be installed within waterbodies to isolate a portion of the work area during construction, thereby allowing pipeline installation and construction to proceed under dry conditions. Cofferdams are typically used for waterbody crossings with larger high flow volumes that may be unsuitable for flume or dam-and-pump methods. A cofferdam consists of installing the pipeline across the waterbody in stages, using the cofferdam to divert the water around the workspace (i.e., a portion of the stream's width) in each stage. This process allows work to proceed under dry conditions during each stage after the work area is dewatered, and it could take two or more stages to complete the crossing. Cofferdam construction methods may include but not be limited to inflatable dams, sand bags, steel A-frame supports, waterproof membranes, silt booms, and turbidity curtains.

Cofferdam crossings would be designed in accordance with all applicable federal and state permits to ensure that the cofferdam could withstand elevated waterbody flows during the course of the work. Dewatering operations of the work areas isolated by the cofferdam would require silt-laden water to be pumped and discharged to an appropriate dewatering device (e.g., filter bags) in a vegetated upland area before it would be allowed to flow back towards the waterbody.

Mountain Valley would use temporary cofferdams from Portadam, Inc. (see appendix C). First, steel A-frame supports would be placed around the perimeter of the area to be isolated. These supports would be anchored to the streambed using instream bolts installed via a diver operated pneumatic hand-held hammer. Next, a waterproof membrane would be installed over the steel frame. Once the membrane is in place, water within the work area would be pumped through sediment filter bags to an upland dewatering structure. In order to reduce sedimentation, Mountain Valley would use a turbidity curtain along the waterbody bank adjacent to the dewatering structure. Mountain Valley would relocate, as practicable, aquatic species within the work area prior to dewatering. Additional information regarding the cofferdams is presented in section 4.3.

HDD Construction Method

An HDD involves drilling a hole under the waterbody (or other sensitive feature) and installing a pre-fabricated pipe segment through the hole. Mountain Valley is not proposing to use the HDD method, however, in section 4.3 we are recommending Mountain Valley cross the Pigg River via the HDD method. Equitrans proposes to use the HDD method at two locations: 1) the Monongahela River (along pipeline H-318); and 2) the South Fork Ten Mile Creek (along the H-316 pipeline).

The first step in an HDD is to drill a small-diameter pilot hole from one side of the crossing to the other using a drill rig. As the pilot hole progresses, segments of drill pipe are inserted into the hole to extend the length of the drill. The drill bit is steered and monitored throughout the process until the desired pilot hole has been completed. The pilot hole is then enlarged using several passes of successively larger reaming tools. Once reamed to a sufficient size, a pre-fabricated segment of pipe is attached to the drill string on the exit side of the hole and pulled back through the drill hole towards the drill rig. Depending on the substrate and length, drilling and pullback can last anywhere from a few days to a few weeks. Additional information regarding the HDD method is presented in section 4.3.

2.4.2.11 Wetland Crossings

Wetland crossings would be completed in accordance with the Mountain Valley and Equitrans Procedures, and other federal and state permits. For the MVP, about 183 wetlands would be crossed by the pipeline, and 520 wetlands would be crossed by other project components (including access roads). The EEP pipelines would cross a total of 17 wetlands. The wetlands that would be crossed are listed in appendix G and are discussed further in section 4.3.3.

The Applicants would typically use a 75-foot-wide construction right-of-way through wetlands unless site-specific approval for an increased right-of-way width is granted by the FERC and other jurisdictional agencies (see section 4.3.3). Mountain Valley has requested a right-of-way greater than 75 feet in wetlands at several specific locations as listed in appendix G. ATWS may be required on both sides of wetlands to stage construction equipment, fabricate the pipeline, and store materials. ATWS for wetland crossings would be located in upland areas a minimum of 50 feet from the wetland edge unless site-specific approval for a reduced setback is granted by the FERC and other jurisdictional agencies (see section 4.3). The Applicants proposal to utilize extra workspace within 50 feet of waterbodies and wetlands at specific locations are listed in appendix D.

Clearing of vegetation in wetlands would be limited to trees and shrubs, which would be cut flush with the surface of the ground and removed from the wetland. Stump removal, topsoil segregation, and excavation would be limited to the area immediately over the trenchline. A limited amount of stump removal and grading may be conducted in other areas to ensure a safe working environment. During clearing, sediment barriers, such as silt fence and staked straw bales, would be installed and maintained adjacent to wetlands and within temporary extra workspaces as necessary to minimize sediment runoff.

Construction equipment working in wetlands would be limited to that essential for right-of-way clearing, excavating the trench, fabricating and installing the pipeline, backfilling the trench, and restoring the right-of-way. The method of pipeline construction used in wetlands would depend largely on the stability of the soils at the time of construction. Wetlands would be crossed by wet or dry open trench lay, or open ditch push-pull methods.

Where wetland soils are saturated and/or inundated, the pipeline may be installed using the push-pull technique, which involves stringing and welding the pipeline outside of the wetland and excavating the trench through the wetland using a backhoe supported by equipment mats.

The water that seeps into the trench is used to "float" the pipeline into place, aided by a winch and flotation devices attached to the pipe. After the pipeline is floated into place, the floats are removed, allowing the pipeline to sink into place. Pipe installed in saturated wetlands is typically coated with concrete or equipped with set-on weights to provide negative buoyancy. Mountain Valley has proposed to use aggregate-filled sacks to decrease buoyancy. After the pipeline sinks into position, trench breakers are installed where necessary to prevent the subsurface drainage of water out of the wetland. Then the wetland is backfilled and cleanup completed. Where topsoil has been segregated from subsoil, the subsoil is backfilled first followed by the topsoil. Topsoil is not segregated in saturated wetlands due to the unconsolidated nature of the soils. Equipment mats and timber riprap would be removed from wetlands following backfilling.

For the proposed projects, construction through unsaturated wetlands would be similar to dry upland methods, with one exception; only one travel lane would be used. Up to 1 foot of topsoil from the trench would be segregated where hydrologic conditions allow.

2.4.2.12 Road and Railroad Crossings

The MVP pipeline would cross 263 roads and 12 railroads. The EEP pipelines would cross 12 roads and 5 railroads. The pipelines would be installed at least 3 feet beneath all roads, and at least 10 feet below all railroads for uncased pipe (about 5.5 feet deep for cased pipe).

Construction across roads and railroads would be conducted in accordance with the permits obtained by the Applicants and applicable laws and regulations, including DOT safety standards. Traffic control measures would be coordinated with appropriate state and county transportation and road agencies. The Applicants have developed project-specific *Transportation Management Plans*, as more fully discussed in section 4.9 of this EIS.

According to a December 22, 2016 filing by the Norfolk Southern Railway Company (Norfolk Southern), the proposed MVP pipeline route would cross at least 2 active railroads and 6 rights-of-way managed by Norfolk Southern. Norfolk Southern requested that Mountain Valley's construction contractors be aware of and follow the Federal Railroad Administration safety-related requirements and procedures, and coordinate with Norfolk Southern when crossing their railroads. In a February 9, 2017 filing, Mountain Valley agreed to adhere to the applicable Federal Railroad Administration safety-related requirements when crossing railroad property.

All railroads would be crossed with a bore. In general, crossings of paved roads would also be bored, so not to disrupt traffic. Boring involves excavating a pit on each side of the road or railroad, placing the boring equipment in the pit, and then boring a hole under the road or railroad that is at least equal to the diameter of the pipe. Once the hole is bored, a pre-fabricated section of pipe is pushed through the borehole. At particularly long crossings, pipe sections may be welded onto the pipe string just before being pushed through. If a paved road is open-cut, any asphalt removed during a road crossing would be disposed of at an approved facility. Mountain Valley and Equitrans would not recycle used asphalt.

Most gravel, dirt, and grass roads would be crossed by the open-cut method. Traffic on roads would be maintained during construction by the use of steel plates or detours. At least one

EXHIBIT 14 TO MOTION FOR PRELIMINARY RELIEF

DECLARATION OF DR. PAMELA DODDS

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

SIERRA CLUB, et al.,
Petitioners,

v.

U.S. ARMY CORPS OF ENGINEERS, et al., No. 18-1173
Respondents

and

MOUNTAIN VALLEY PIPELINE, LLC,
Intervenor-Respondent.

DECLARATION OF DR. PAMELA DODDS

I, Pamela C. Dodds, state and affirm as follows:

1. I live in Barbour County, West Virginia.

2. I am a Licensed Professional Geologist and hold a Ph.D. in Marine Science (specializing in Marine Geology) from the College of William and Mary in Williamsburg, VA.

3. I currently work as a Hydrogeological Consultant.

4. In December 2016, I prepared the document attached as Exhibit A to this Declaration entitled "Hydrogeological Assessment of Impacts Caused By Constructing the Mountain Valley Pipeline Across the Greenbrier River at Pence Springs, Summers County, West Virginia" for the Indian Creek Watershed Association. I incorporate the substance and content of the report attached as Exhibit A into this Declaration under oath by reference, as if fully set forth herein.

5. The opinions set forth in Exhibit A are mine based on my education and experience in the field of hydrogeology.

6. I hold the opinions that I state in Exhibit A to a reasonable degree of scientific certainty.

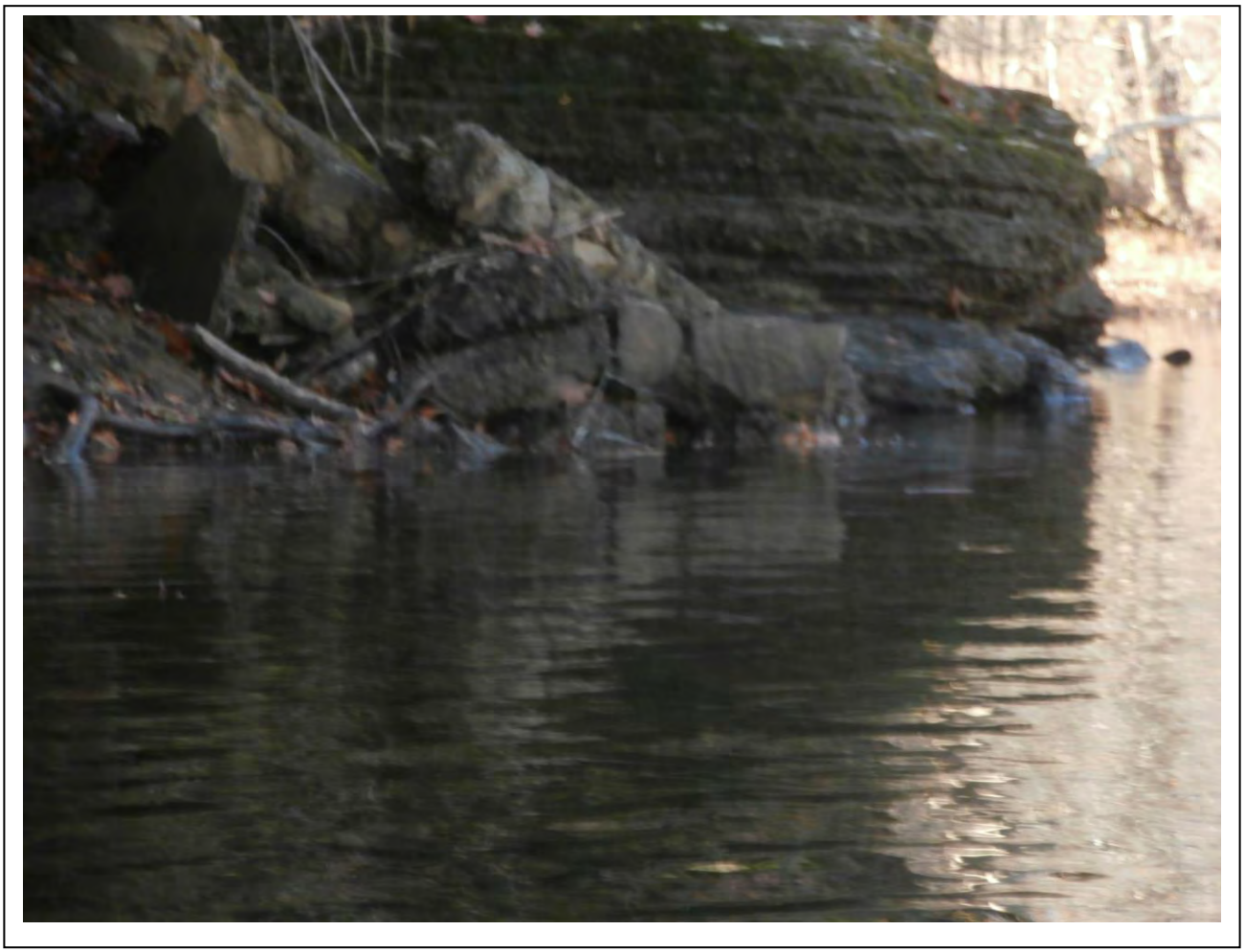
I declare under penalty of perjury that the foregoing is true and correct. Executed on this 19th day of February 2018.

Pamela C. Dodds

Pamela C. Dodds, Ph.D., L.P.G.

EXHIBIT A TO DODDS DECLARATION

HYDROGEOLOGICAL ASSESSMENT OF IMPACTS CAUSED BY CONSTRUCTING THE MOUNTAIN VALLEY GAS PIPELINE ACROSS THE GREENBRIER RIVER AT PENCE SPRINGS, SUMMERS COUNTY, WEST VIRGINIA



By Pamela C. Dodds, Ph.D., Licensed Professional Geologist
for
Indian Creek Watershed Association

December 2016

EXHIBIT 14 TO MOTION FOR PRELIMINARY RELIEF

TABLE OF CONTENTS

SECTION		Page
Executive Summary		3
1.0	Tributaries and Headwater Areas of the Greenbrier River at Pence Springs	6
2.0	Ecological Functions within UNTs to the Greenbrier River	10
2.0	Functions of Forested Ridges within the Proposed MVP Gas Pipeline Construction Route	12
4.0	Groundwater and Surface Water are One Integral Unit	13
5.0	Geology and Soils of the Greenbrier River Area where the Gas Pipeline Route is Proposed	15
6.0	MVP Gas Pipeline Construction within the Greenbrier River Crossing Area	20
7.0	Impacts to Waterbodies and Wetlands from the Proposed MVP Gas Pipeline Construction	21
8.0	Conclusions	23
9.0	References	30
Curriculum vitae for Pamela Crowson Dodds, Ph.D., L.P.G.		31

Cover: Cliffs along the Greenbrier River near the proposed MVP gas pipeline construction crossing. Photo taken by Mr. Ty Bouldin, December, 2016.

HYDROGEOLOGICAL ASSESSMENT OF IMPACTS CAUSED BY CONSTRUCTING THE MOUNTAIN VALLEY GAS PIPELINE ACROSS THE GREENBRIER RIVER AT PENCE SPRINGS, SUMMERS COUNTY, WEST VIRGINIA

By Pamela C. Dodds, Ph.D., Licensed Professional Geologist

EXECUTIVE SUMMARY

The Greenbrier River is considered a major river system, forming at the confluence of the East Fork Greenbrier River and West Fork Greenbrier River in Durbin, Pocahontas County, West Virginia and flowing into the New River at Hinton, Summers County, West Virginia. The Greenbrier River is listed in the National Rivers Inventory as exceptional waters. The Greenbrier River and its associated headwater tributaries located at Pence Springs are within the Zone of Critical Concern of the Big Bend Public Service District (PSD), which supplies public water from an intake located downstream of the Greenbrier River crossing.

In its Draft Environmental Impact Statement (DEIS) for the Mountain Valley Project and Equitrans Expansion Project Application, submitted to the Federal Energy Regulatory Commission (FERC) September, 2016, Mountain Valley Pipeline, LLC (MVP) has proposed a gas pipeline construction route which crosses the Greenbrier River at Pence Springs, Summers County, West Virginia. In Table 4.1.1-9 – "Flood Zone and Class of Pipe Crossed by the MVP" of the MVP DEIS, the following crossing length is provided: "MP 170.4 Summers County, Greenbrier River, Crossing length 1841 feet, pipe class 1, minimum depth of cover 3 feet."

MVP also proposes withdrawal of 5,763,483 gallons of water from the Greenbrier River at the crossing location, which is less than 2 miles upstream of the Big Bend PSD water intake. At the location of the proposed river crossing, steep bedrock cliffs are located on the north bank of the Greenbrier River flood plain. Wetlands are located on the flood plain. Bedrock is evident in the river bed at this proposed crossing.

The proposed construction will cause the following adverse impacts to the Greenbrier River:

1) The proposed work corridor and access road north of the crossing will degrade headwater areas of the Greenbrier River.

The proposed work corridor in the area north of the proposed river crossing intersects 4 direct drain headwater areas to a headwater area tributary to the Greenbrier River. These direct drain headwater areas are within the Zone of

Critical Concern of the Big Bend PSD. Bedrock in this area is within 20 inches to 40 inches of the ground surface and will probably require blasting. Deforestation, soil compaction, and blasting within these headwater areas will increase stormwater discharge and decrease groundwater recharge to seeps and springs in the headwater areas of the Greenbrier River.

2) Blasting will be required to place the proposed gas pipeline in the area of the steep cliffs on the north side of the river crossing, impacting groundwater and creating the potential for landslides.

Bedrock outcrops are exposed in cliffs along the north side of the Greenbrier River at the proposed crossing location, immediately adjacent to 2 identified wetlands in the flood plain of the Greenbrier River. Blasting will be required to construct the trench for the placement of the pipeline. Blasting and soil compaction in the work corridor will reduce groundwater recharge and probably change the flow of groundwater to the wetlands in the flood plain as well as to seeps and springs along the river valley of the Greenbrier River. The bedrock consists of Mauch Chunk red shales, siltstone, and sandstone, which have been evaluated by the West Virginia Geological and Economic Survey (WVGES) as the most prone to landslides in West Virginia.

3) Construction of the proposed gas pipeline work corridor, access road, and additional work space area in the flood plain on the north bank of the Greenbrier River will destroy the ecological functions of the wetlands.

Deforestation, soil compaction, and blasting in the work corridor will reduce groundwater recharge and the flow of groundwater to seeps and springs in headwater areas and in the wetlands on the Greenbrier River flood plain. Wetlands provide environments for chemical cycling of nutrients. Headwater areas provide the essential aquatic habitats for aquatic species and associated terrestrial fauna and fowl within the entire length of the river continuum in the Greenbrier River watershed.

4) Bedrock exposures in the river bed of the Greenbrier River provide evidence that blasting in the river bed will be necessary. This will result in destruction of aquatic habitats and aquatic biota.

The MVP DEIS failed to list Greenbrier River crossing in Table 4.3.2-8 – “Waterbodies Crossed by the MVP in areas of shallow bedrock”. Bedrock can be observed in the Greenbrier River where the gas pipeline installation is proposed. The MVP DEIS states that, “In-stream blasting has the potential to injure or kill aquatic organisms, displace organisms during blast-hole drilling operations, and temporarily increase stream turbidity. Additionally, shock waves created by blasting may post a threat to aquatic organisms. Chemical by-products from the blasting materials could also be released and could potentially contaminate the water.”

5) Withdrawal of 5,763,483 gallons of water from this crossing location, less than 2 miles upstream of the Big Bend PSD water intake, will negatively impact water supply for residents by reducing the water level.

In addition to withdrawing water for hydrostatic testing, it is stated in the MVP DEIS that 55,000 gallons per day will be required for dust control. The West Virginia Department of Environmental Protection (WVDEP) provides a water withdrawal guidance tool to help determine when it is environmentally safe to withdraw water. "The guidance is based on percentages of mean annual flow, based on a 10-year period that affords an appropriate flow to protect aquatic habitat." There is no mention of water reduction impacts on public water supply.

6) Construction will result in a cumulative impact of increased turbidity which will permanently degrade aquatic habitats with the Greenbrier River.

The MVP DEIS provides that an assessment was made to determine the monthly sediment load increase due to construction. For the Greenbrier River, the monthly sediment loads are estimated to increase 19 to 52 percent, which will permanently degrade aquatic habitats. Also, the Big Bend PSD is concerned about increased surface runoff, which transports sediment and chemicals to the river and can impact the public water supply intake. When the turbidity returns to baseline levels, the sediment remains. With increased stormwater discharge from the construction sites, increased stream volumes and velocities cause downstream stream bank erosion, resulting in more sediment accumulation in the stream beds. This cumulative damage to aquatic habitats, through time, will not disappear, but rather, will cause the death of aquatic organisms and will reduce water quality. The Greenbrier River is one of the few remaining locations where the Federally listed endangered Clubshell mollusk (*Pleurobema clava*) is able to survive. As a filter feeder, this species is very sensitive to turbidity and sedimentation.

7) The MVP gas pipeline construction will create the potential for pipeline collapse in areas known to have experienced earthquakes.

The U.S. Geological Survey (USGS) 2014 Seismic Hazard Map depicts the area of the proposed Greenbrier River crossing in Summers County in a zone of concern for earthquake events. The West Virginia Geological and Economic Survey 2014 earthquake map indicates several recent earthquakes in Summers County. Although MVP discounts the seismic activity as insignificant, the combination of earthquakes in landslide-prone areas where the proposed MVP gas pipeline would be located presents definite concern.

SECTION 1.0

TRIBUTARIES AND HEADWATER AREAS OF THE GREENBRIER RIVER AT PENCE SPRINGS

"Watershed" refers to all of the land that drains to a certain point on a river (Figure 1.0.1). A watershed can refer to the overall system of streams that drain into a river, or can pertain to a smaller tributary. Stream order is a measure of the relative size of streams. The smallest tributary is a first order stream, which originates in the highest elevations. The headwater areas for these first order streams are environmentally sensitive and provide seeps, springs, and wetlands in shaded areas where light is filtered and temperatures are lower, sustaining the aquatic organisms at the very base of the food chain. A second order stream occurs where a first order stream connects with another stream. A third order stream occurs where a second order stream connects with another stream. The watershed for a first order stream can be delineated as a subwatershed within the larger watershed.

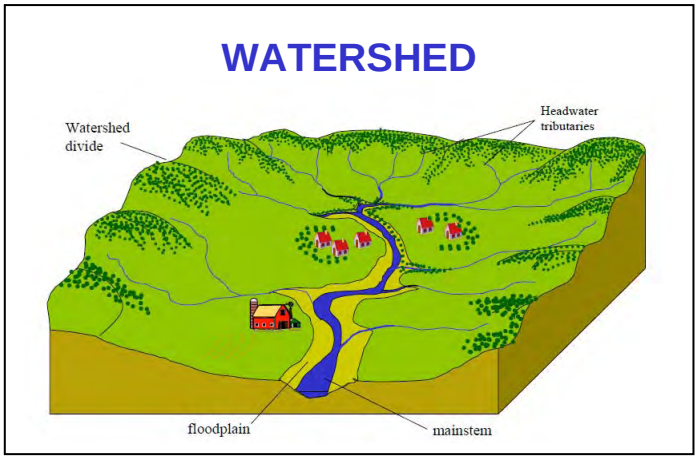


Figure 1.0.1 – Headwaters of first order high gradient streams in Summers County are located at the highest elevations on the watershed divides.

Tributaries to the Greenbrier River are mostly first order and second order high gradient streams with environmentally sensitive headwater areas. The Hungard Creek watershed has numerous first and second order UNTs and headwater areas. Hungard Creek, a tributary to the Greenbrier River, would be impacted by increased stormwater discharge and blasting in the proposed MVP work corridor and access roads. In the MVP DEIS, Appendix F, there is a listing of waterbodies crossed by the MVP, which includes the following UNTs identified as tributaries to the Greenbrier River: "TTWV-S-64 – perennial, with associated wetland TTWV-W-23, MP 170.0; TTWV-S-65 – intermittent, MP 170.1; TTWV-S-66 – ephemeral, MP 170.1; TTWV-S-67 – ephemeral, MP 170.3, TTWV-S-68 – ephemeral, MP 170.2, and TTWV-S-139 – perennial, MP 170.5". Numerous other UNTs are listed for Kelley Creek and Wind Creek, which are tributaries to the Greenbrier River within the Big Bend PSD Zone of Critical Concern (ZCC). Figure 1.0.1 depicts the ZCC.

Figure 1.0.1 – Big Bend PSD Zone of Critical Concern, depicted in purple. (Map excerpted from the Indian Creek Watershed Association interactive map project).

The MVP DEIS specifies the intent to withdraw 5,763,483 gallons of water from the Greenbrier River at the Pence Springs crossing location, less than 2 miles upstream of the Big Bend PSD water intake. This will negatively impact water supply for residents by reducing the water level.

In the MVP DEIS, it is further explained in Table 4.3.2-10 – "Hydrostatic Test Water Sources and Discharge Locations for MVP Segment 07A MP 154.5 – 170.6" that 5,763,483 gallons would be withdrawn from the Greenbrier River at MP 170.6. The water would be treated with a biocide prior to hydrostatic testing. After testing, the water would be treated with an anti-biocide and ultimately discharged (after reuse at another area) at MP 170.6, which is the Greenbrier River. This location is less than 2 miles upstream of the Big Bend PSD water intake.

In addition to withdrawing water for hydrostatic testing, it is stated in the MVP DEIS that 55,000 gallons per day will be required for dust control. The West Virginia Department of Environmental Protection (WVDEP) provides a water withdrawal guidance tool to help determine when it is environmentally safe to withdraw water. "The guidance is based on percentages of mean annual flow, based on a 10-year period that affords an appropriate flow to protect aquatic habitat." The mean annual flow estimate is based on U.S. Geological (USGS) stream gauge data. The closest USGS stream gauge is located near the Monroe County/Greenbrier County line, 12 miles upstream of the Big Bend PSD water intake, which is less than 2 miles downstream of the proposed Greenbrier River crossing at Pence Springs. Therefore, the stream gauge used for determining the time to withdraw water is located more than 10 miles upstream. The stream configuration is different at the location of the USGS stream gauge, with few tributaries and no flood plain. This is in contrast to the numerous nearby tributaries near Pence Springs and the wide floodplain areas. The MVP DEIS does not include any mention of water reduction impacts on public water supply.

In 2007, the U.S. Fish and Wildlife Service (USFWS) prepared a document, "Functional Assessment Approach for High Gradient Streams", for the U.S. Army Corps of Engineers to use in assessing impacts and mitigation with respect to processing Clean Water Act Section 404 permit applications. High gradient headwater streams are characterized as first and second order ephemeral and intermittent streams with channel slopes ranging from 4% to greater than 10%, with watersheds of approximately 200 acres. The significance of this report relates to the proposed MVP gas pipeline construction with regard to how watersheds are evaluated. Because of the impacts of construction on the functions of headwater areas in the watersheds of first order high gradient streams, it is critical to evaluate these areas not simply as a small acreage within the area encompassing the construction project, but rather as functionally contributing areas which are the basis of water quality and aquatic habitat quality within the overall watershed.

The Federal Government Agencies have established a hierarchical ordering of Hydrological Unit Codes (HUC), described as areas of land upstream from a specific point on the stream (generally the mouth or outlet) that contributes surface water runoff directly to this outlet point (Table 1.0.1).

Table 1.0.1 – Descriptions of Hydrological Unit Codes (HUC).

Code	Official Name	General Description
HUC-2	REGION	Major land areas. The lower 48 states have 18 total, 1 additional each for Alaska, Hawaii, and the Caribbean. (21 Total in US) Called 1st Level - or Watershed 1st Level.
HUC-4	SUBREGION	Each Region has from 3 to 30 Subregions. The Missouri River Region has 30 Subregions. The lower 48 states have 204. (222 Total in US). Called 2nd Level.
HUC-6	BASIN	Accounting Unit. (352 Total in US). Called 3rd Level.
HUC-8	SUBBASIN	Cataloging Unit. The smallest is 448 K Acres (700 mi^2). Most are much larger. National HQ compilations have this as the smallest size unit. (2,149 Total in US) Called 4th Level
HUC-10	WATERSHED	Typically from 40 to 250 K Acres (62 to 390 mi^2) Work continues per new Interagency Guidelines presented to Federal Geographic Date Committee on December 2000. (Was formerly called HUC-11). Called 5th Level or Watershed 5th Level.
HUC-12	SUBWATERSHED	Typically from 10 to 40 K Acres (15 to 62 mi^2) Work continues per new Interagency Guidelines presented to Federal Geographic Date Committee on December 2000. (Was formerly called HUC-14). Called 6th Level or Watershed 6th Level.

HUC designations were developed by Seaber, Paul R., F. Paul Kapinos, and George L. Knapp (“Hydrologic Unit Maps”, U.S. Geological Survey Water-Supply Paper 2294; 1987) as a “standardized base for use by water-resources organizations in locating, storing, retrieving, and exchanging hydrologic data, in indexing and inventorying hydrologic data and information, in cataloging water-data acquisition activities…” River basin designations were based on a drainage area of greater than 700 square miles. The HUC designations were not intended to determine specific details for smaller watersheds of tributaries which provide water quality and biotic functions of aquatic organisms for the overall watershed evaluations. In order to evaluate the interactions of precipitation, stormwater discharge, groundwater recharge and retention, and stream baseflow, calculations must be performed at the headwater tributary level. Because first order high gradient streams are well defined (Rosgen, 1994) and are considered to provide the basis for watershed evaluation (USFWS, 2007), it is essential to select these smaller watersheds, typically 200 acres to 600 acres in size, to evaluate the impact of construction projects.

The smallest HUC is the HUC-12 Subwatershed, which typically encompasses an area from 10,000 acres to 40,000 acres. This is in contrast to the acreage within a watershed of a high gradient first order stream in the Appalachian Plateau Physiographic Province, where tributaries to the Greenbrier River are

located. Watersheds of first order high gradient streams cannot be compared to the HUC-12 Subwatersheds that range from 10,000 acres to 40,000 acres in size. The impacts to a small watershed cannot be measured in the HUC-12 size designation. The location of construction sites in first order high gradient stream watersheds must also be considered in any evaluation of construction impact because the headwaters of these streams provide the necessary water resources, organic compounds, and food at the very base of the aquatic food chain. In the MVP DEIS, numerous high gradient first order streams are identified at locations where they are crossed by the proposed MVP gas pipeline route. However, no evaluation is presented in the MVP DEIS with respect to construction impacts on these headwater streams.

SECTION 2.0

ECOLOGICAL FUNCTIONS WITHIN UNTs TO THE GREENBRIER RIVER

The River Continuum Concept was developed by Vannote, R.L., G. W. Minshall, K.W. Cummins, J.R. Sedell, and C.E. Cushing in 1980 and presented in the Canadian Journal of Fisheries and Aquatic Sciences 37: 130-137. The U.S. Environmental Protection Agency and the U.S. Department of Agriculture have embraced the River Continuum Concept as illustrating the strong connection between headwater areas on mountain ridges and various downstream areas. The River Continuum Concept diagram (Figure 2.0.1) provides pie diagrams of predominant benthic aquatic organisms associated with various locations, starting at the headwaters, along the river continuum. Shredders, predominant in the forested headwaters, break down organic matter used downstream by collectors, predators, and filter-feeders. The filter-feeders are subsequently consumed by larger benthos and fish.

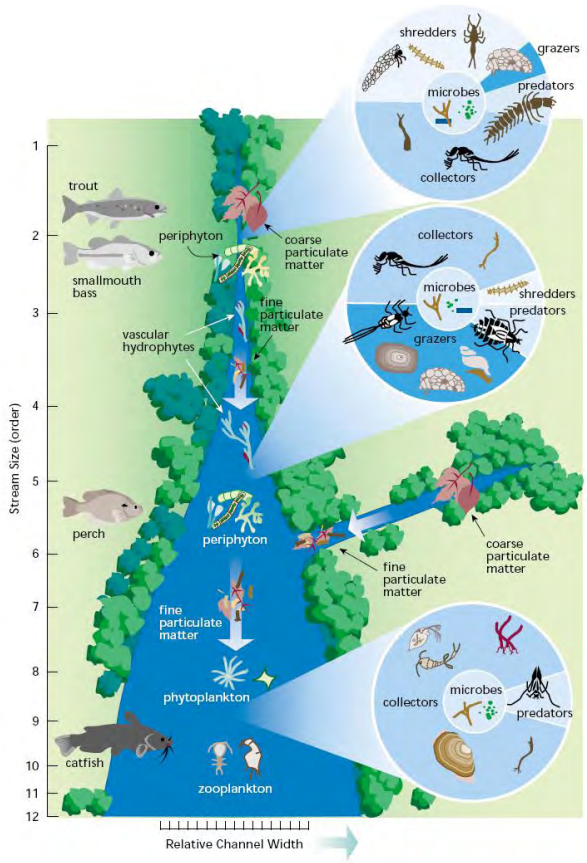


Figure 2.0.1 – The River Continuum (Vannote, et al; 1980) illustrates the food chain connection between headwater areas of first order high gradient streams and the wider, larger downstream areas in the overall watershed.

Ecological communities are typically classified with respect to the vegetation present because it is the most permanent, visible feature of a community. Biodiversity refers to the diversity within an ecological community, with emphasis on the inter-relationships and interdependence among the various species. Trees not only intercept rainfall so that it falls gently to the ground surface and is thus able to penetrate the ground as groundwater recharge, but also store nutrients in their trunks, branches, and roots (West Virginia Department of Natural Resources: http://www.wvdnr.gov/Wildlife/Plants.shtm). Fungi in the soil facilitate transport of nutrients between trees and the soil. The soil stores nutrients which are processed by soil microbes to regulate essential nutrient cycles involving oxygen, carbon dioxide, nitrogen. Roots of the trees and of herbal vegetation help to stabilize the soil so that the soil nutrients are not washed away by stormwater runoff. The ecological communities in the headwater areas of first order high gradient streams consist not only of the vegetation, but also the aquatic benthic macroinvertebrates, fungi, and soil microbes. Insect larvae, commonly grouped as shredders, constitute most of the aquatic benthic macroinvertebrates in the headwater areas because they shred organic material into components used by collectors and predators downstream.

Headwater areas of first order and second order streams provide the essential aquatic habitats for aquatic species and associated terrestrial fauna and fowl within the entire length of the river continuum in the overall watershed. The soils which have formed in the headwater areas regulate the transport of surface water and also carbon, nitrogen, and oxygen. The shade of the forest canopy provides the filtered light and lower temperatures critical to maintaining the headwater aquatic habitats. Wetlands provide the functions of flood control, groundwater recharge, maintenance of biodiversity, wildlife habitat, maintenance of water quality, and chemical recycling of nutrients.

Cobbles and pebbles within stream beds provide aquatic habitats and protection for aquatic organisms. Insect larvae, which constitute the base of the river continuum food chain, reside on the cobbles and pebbles. Minnows and juvenile fish hide in the spaces between cobbles and pebbles for protection. When sand and silt fill the spaces between the cobbles and pebbles, the aquatic habitats and protection areas are destroyed (Figure 2.0.2).

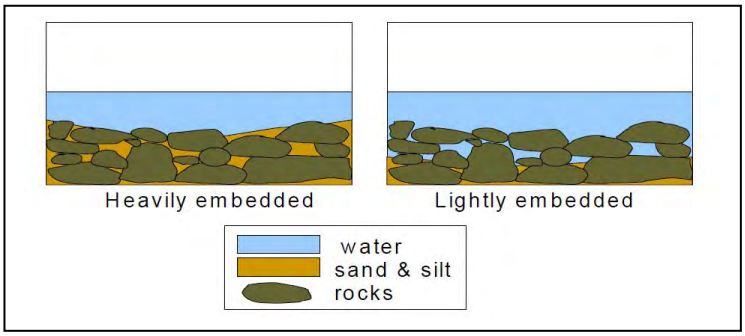


Figure 2.0.2 – Cobbles and pebbles provide aquatic habitats and protection for aquatic organisms. When the aquatic habitats are removed for trenching and stream crossing work spaces, they cannot be restored.

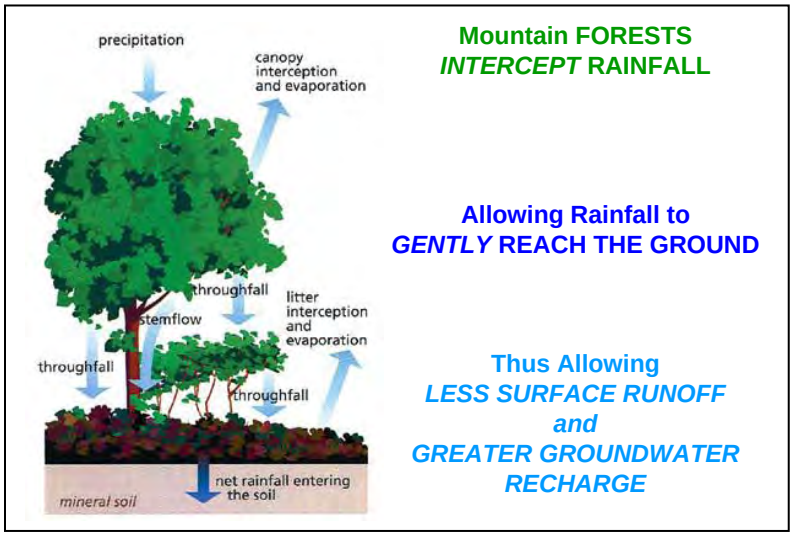
SECTION 3.0

FUNCTIONS OF FORESTED RIDGES WITHIN THE PROPOSED MVP GAS PIPELINE CONSTRUCTION ROUTE

Forested ridges are our greatest defense against drought. The trees on the mountain ridges intercept rainfall so that it gently penetrates the ground as groundwater rather than flowing overland as runoff. This means that 1) the rain will gently fall to the ground and recharge groundwater and 2) the surface flow of rainwater on the ground will be slower than in cleared areas, thereby reducing the velocity and quantity of stormwater drainage. Conversely, where development occurs on forested ridges or where there are numerous roads constructed on forested ridges, the protective tree canopy is lost, the stormwater flow is greater in the cleared areas, groundwater is intercepted by road construction, and increased stormwater drainage results in habitat destruction within streams and the consequent death of aquatic organisms.

As depicted in Figure 3.0.1, when rainwater is intercepted by trees on forested ridges, the rainfall gently penetrates the ground surface and migrates downward through the soil to bedrock. The water then flows through bedrock fractures and along bedding planes to continue migrating downward or to form seeps and springs where the fractures or bedding planes intercept the ground surface. Seeps and springs can occur at various elevations on mountain slopes, depending on where the bedrock fractures or bedding planes intercept the ground surface, and can also occur along streams and rivers. As the quantity of groundwater accumulates beneath the ground surface, a hydraulic gradient forms, causing the groundwater to move downgradient to nearby streams and rivers or to lower areas where the water may reach streams and rivers that are farther away.

Figure 3.0.1 – Forests on ridges facilitate groundwater recharge and reduced stormwater runoff.



SECTION 4.0

GROUNDWATER AND SURFACE WATER ARE ONE INTEGRAL UNIT

In its document, “Sustainability of Ground-Water Resources”, the USGS emphasizes that “Groundwater is not a renewable resource”. To understand this statement requires an understanding of the global water budget and also an understanding that groundwater and surface water are connected as one integral system. Firstly, the global water budget, or hydrological cycle, consists of precipitation, evaporation, and condensation. It is important to recognize, however, that the hydrological cycle over the ocean (covering approximately three-quarters of the earth) is essentially separate from the hydrological cycle over the continents. Dennis Hartmann, in his book “Global Physical Climatology”, provides an excellent summary diagram (Figure 4.0.1) showing the pathways of the hydrological cycle in terms of centimeters per year for the

exchange of water. Through time, there has been a delicate balance of the amount of precipitation transferred to the continents from the hydrological cycle over the oceans and the amount of surface water flowing into the ocean. In this slide, the arrow representing the amount of water from the ocean's hydrological cycle indicates that 11 centimeters per year transfers from the ocean to the continent. The arrow showing the runoff from the land surface indicates that 11 centimeters flows back to the ocean from the continent. It is obvious that when groundwater recharge is reduced and streamflow into the oceans is increased, a situation is created where there is no longer a balance: when streamflow to the oceans exceeds the amount of precipitation from the oceans back onto the continents, the water in the continental hydrological cycle is *lost forever*.

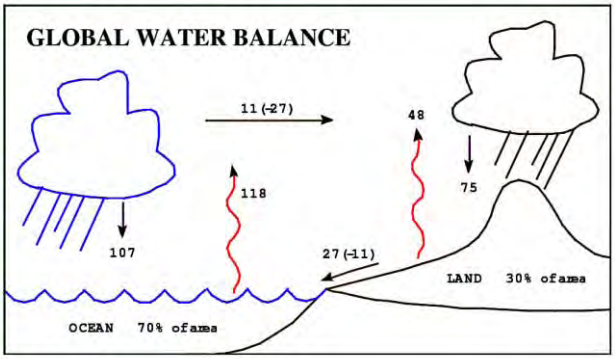


Figure 4.0.1 – Our water resources are finite on our continents. Calculations of the global water balance indicate that water transferred to land from the oceans is balanced by water drainage from land to the oceans. If water drainage to the oceans exceeds the amount of water transferred to land from the oceans, our water resources on land are lost. (Units are in centimeters per year. Diagram by Dennis L. Hartmann, Global Physical Climatology, 1994.)

When precipitation gently reaches the ground surface due to interception by forest trees, the water can penetrate the ground and travel through the bedrock fractures to form seeps and springs at lower elevations. These seeps and springs supply water to wetlands in the headwater areas of first order streams and also provide water directly to streams at lower elevations. During times of low stream water, it is the groundwater that continues the supply of water to the streams. Groundwater from seeps and springs enter the stream from stream banks to maintain aquatic habitats.

Deforestation for construction in the headwater areas of first order high gradient streams reduces the amount of precipitation to recharge groundwater. Compaction of soils for roads and work areas reduces and/or destroys the process of soils to be saturated and to serve as an avenue for groundwater recharge. Blasting for gas pipeline trenches and also for leveling of road and work corridor surfaces destroys or changes the bedrock fractures, compromising

the amount of groundwater flow and the direction of groundwater flow to seeps and springs which provide water to wetlands and to streams and rivers.

SECTION 5.0

GEOLOGY AND SOILS OF THE GREENBRIER RIVER AREA WHERE THE GAS PIPELINE ROUTE IS PROPOSED

GEOLOGY

The Greenbrier River at Pence Springs is located in Summers County in the Appalachian Plateau Physiographic Province. The surficial drainage displays a dendritic pattern, and erosional downcutting of the rock by streams has resulted in steep, mountainous terrain with up to 1200 feet of relief. Where the MVP gas pipeline route is proposed to cross the Greenbrier River, the surficial bedrock consists of interbedded, mostly red shale, siltstone, and sandstone, assigned to the Mauch Chunk Group of Mississippian geologic age.

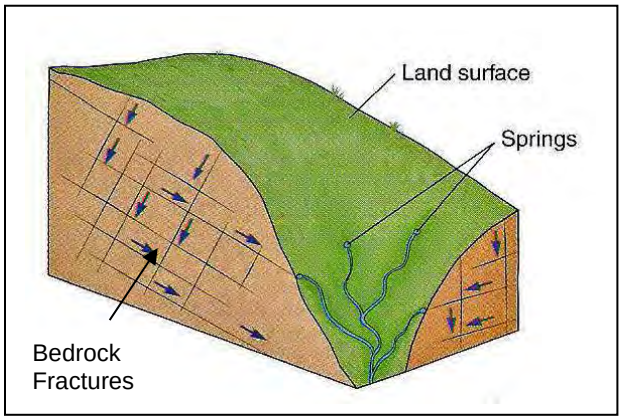
In the abstract, “19 Landslides in West Virginia” (by Peter Lessing and Robert B. Erwin; West Virginia Geological Survey, P.O. Box 879, Morgantown, West Virginia 26505; http://reg.gsapubs.org/content/3/245.abstract), it is stated that landslide-prone areas occur mostly on slopes of 15% to 45% on red shale bedrock. Landslides are, therefore, of great concern where blasting would occur in the areas of the Mauch Chunk Group red shale, siltstone, and sandstone along the proposed MVP work corridor adjacent to the Greenbrier River.

Fractures and partings along fractures occur in the Mauch Chunk Group. The fractures generally occur at angles to the relatively horizontal bedding planes of the shale, siltstone, and sandstone (Figure 5.0.1). Bedrock is also observed in the river bed of the Greenbrier River at the proposed MVP crossing location (Figure 5.0.2). Where bedding planes or fractures in the rock intercept the ground surface, it is common for springs or seeps to occur (Figure 5.0.3).

Figure 5.0.1 – Bedding planes and vertical fractures of the bedrock adjacent to the Greenbrier River near the proposed MVP crossing. Bedrock is also present in the river bed.

Figure 5.0.2 – Bedrock in the river bed of the Greenbrier River where the proposed MVP river crossing is located.

Figure 5.0.3 – Fractures within any rock provide conduits through which groundwater may flow downward or at angles to the ground surface. Where bedding planes of the rock or where fractures in the rock intercept the ground surface, it is common for springs or seeps to occur. Seeps and springs also provide water directly to streams.



Seismic Hazards

In the abstract, "West Virginia Earthquakes: Crustal Adjustments Along The Rome Trough Or Something Else?" (by Ronald R. McDowell, J. Eric Lewis, and Phillip A. Dinterman; West Virginia Geological and Economic Survey, 1 Mont Chateau Road, Morgantown, WV 26508; http://www.wvgs.wvnet.edu/www/presentations/2014/WV-seismic_2014.pdf), it is stated that there have been isolated earthquakes since 1966 which are associated with ancient faults. A map is provided (Figure 5.0.4) showing that most of these earthquakes have occurred in the western part of West Virginia within an area known as the Rome Trough. However, it is evident on the map that several earthquakes have occurred near Pence Springs in Summers County.

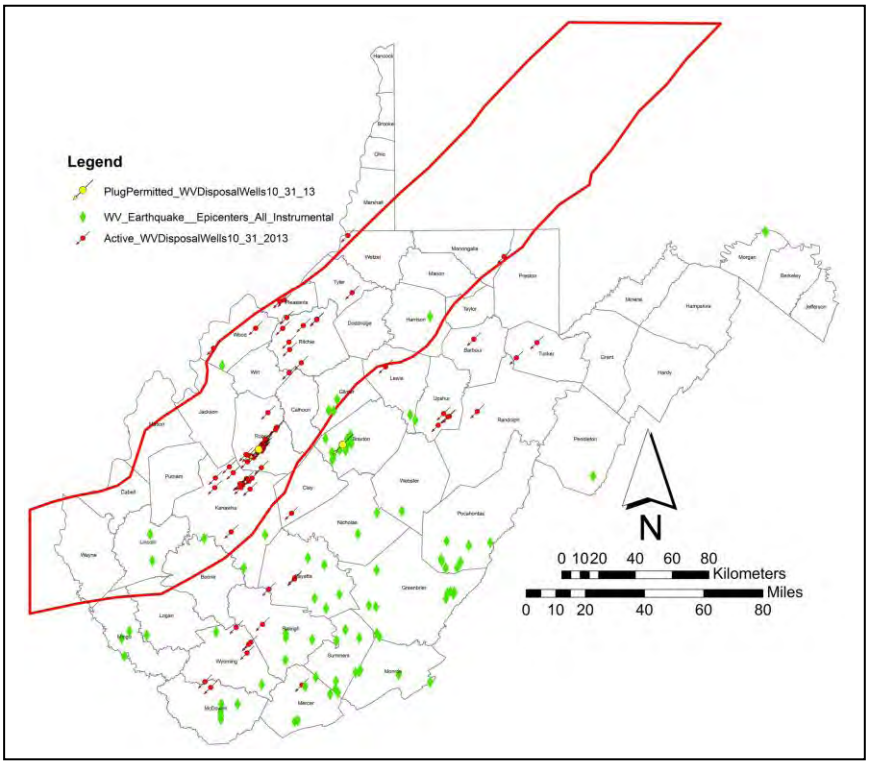


Figure 5.0.4 – WVGES map showing the locations of earthquake epicenters.

The U.S. Geological Survey provides a map, as shown in Figure 5.0.5, which depicts Summers County to be in an area of concern for seismic hazard (http://earthquake.usgs.gov/earthquakes/states/west_virginia/images/westvirginia_haz.jpg).

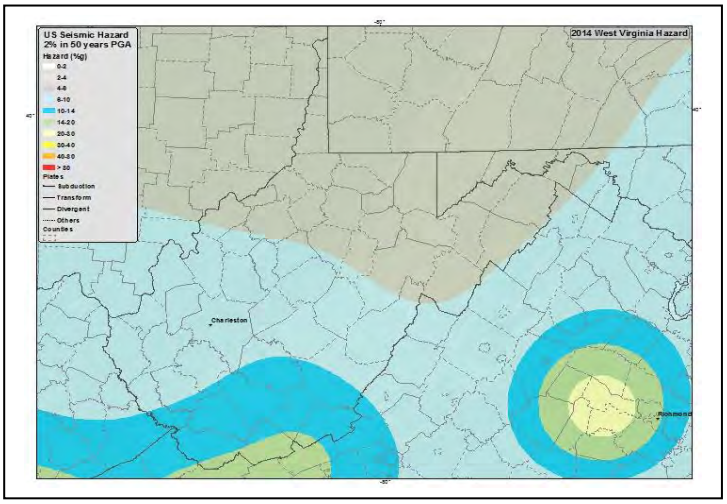


Figure 5.0.5 – USGS 2014 Seismic Hazard map showing zones of concern.

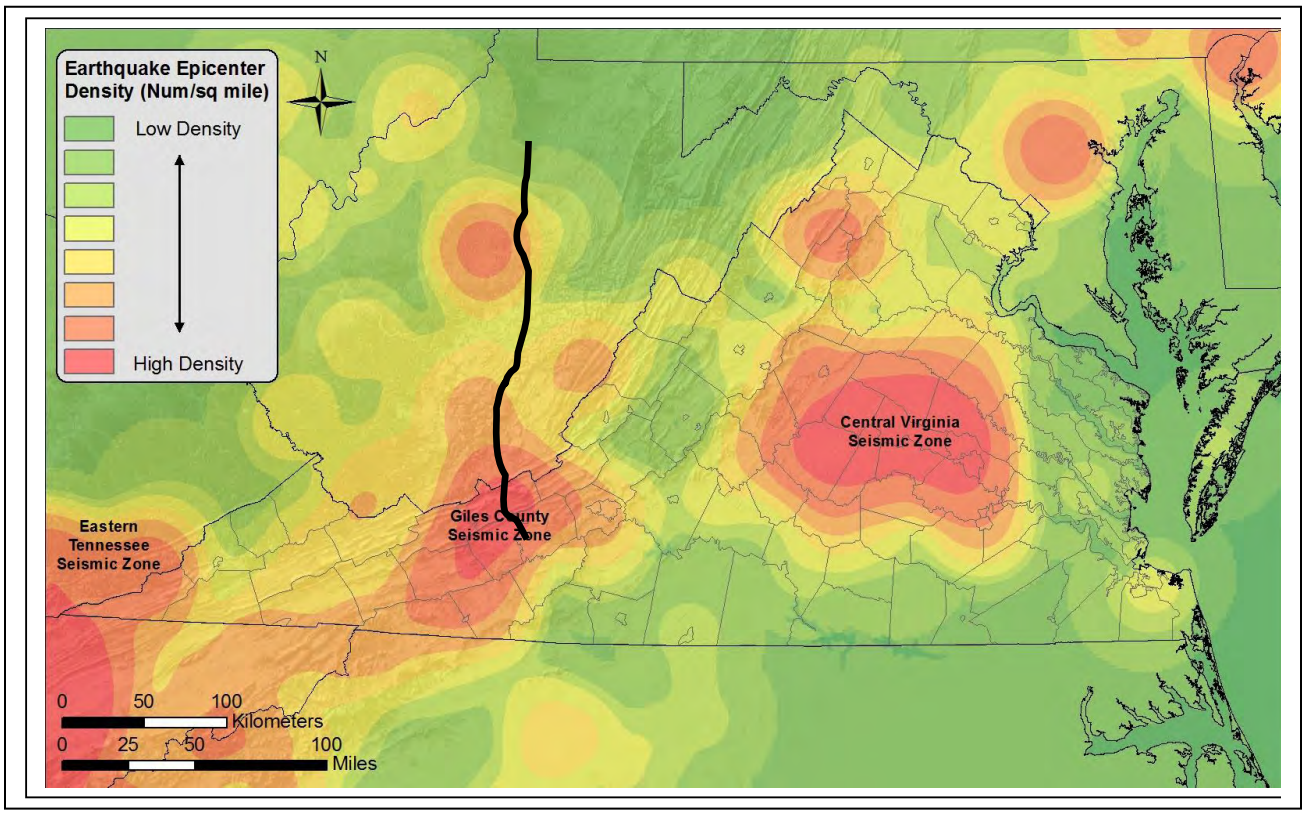


Figure 5.0.6 – Map showing the densities of earthquake epicenters, provided as a color scale indicating the relative densities in numbers per square mile. (Map from https://dmme.virginia.gov/DGMR/EQHazardMapping.shtml).

The Virginia Department of Mines, Minerals, and Energy developed an Earthquake Epicenter Density map (Figure 5.0.6) for areas in VA and WV. Three major earthquake zones are identified. Notice that the Giles County Seismic Zone extends into Monroe and Summers Counties, West Virginia. The black line is the approximate location of the proposed MVP gas pipeline.

SOILS

Specific soils series develop based on the following factors: parent material, topography, climate, living organisms, and time. Soils scientists estimate that a time period greater than 100 years is required for one inch of soil to form (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wa/soils/?cid=nrcs144p2_036333). Soil is therefore considered to be a non-renewable resource. The soils which would be traversed by the proposed MVP gas pipeline route in the Pence Springs area formed primarily on interbedded shale, siltstone, and sandstone. Soils which are described as “channery” contain “channer”, which are relatively flat rock fragments up to 6 inches in length. Along the proposed MVP gas pipeline route in Summers County, the soils predominantly described as channery, stony, or as having rock ledges or outcrops. Such channery soils will not be suitable as bedding or backfill material around the pipeline because the channers could damage the pipeline.

Soil permeability is a measure of how water can be transported through the soil. Soils in the areas proposed for the MVP Route and access roads exhibit moderate to rapid permeability. Such soils facilitate the downward flow of rainfall penetrating the ground surface to recharge the groundwater and to flow to and through rock fractures that form springs or seeps where the ground surface intercepts the rock fractures. If these essential soils are removed for pipeline construction and/or if blasting is conducted that will alter the system of fractures, the amount of groundwater flow and the direction of groundwater flow will change, such that flow of water to sustain springs and seeps will be destroyed.

Soil erosion is a major concern in the area proposed by MVP for gas pipeline construction. The Soil Survey of Mercer and Summers Counties, West Virginia, by the USDA Soil Conservation Service in cooperation with the WV University Agricultural and Forestry Experiment Station, with fieldwork conducted 1971-1979, published by the National Cooperative Soil, issued July, 1984, provides the interpretation that the land in the Pence Springs area is best suited for forests.

Detailed soil descriptions in the Soil Survey also provide the depths to bedrock for specific soils. Within the proposed MVP construction areas on land adjacent to the Greenbrier River crossing at Pence Springs, the depth to bedrock is mostly 20 to 40 inches (1.7 to 3.3 feet) and the depth to bedrock is 76 inches (6.3 feet) in isolated areas. Blasting will probably be required for all areas less than 10 feet

to bedrock in order to provide space for the required pipe bedding material below the pipe and cover material above the pipe.

GROUNDWATER

Table 4.3.1 in the MVP DEIS provides a listing of aquifers crossed by the MVP. This list indicates that the Appalachian Plateau regional aquifer system (USGS, 1997), which flows through Mississippian bedrock (sandstone, shale, and limestone) in Summers County, will be crossed in the Pence Springs area. In "Aquifer-Characteristics Data for West Virginia", by Mark D. Kozar and Melvin V. Mathes (U.S. Geological Survey, prepared in cooperation with the WV Bureau for Public Health, Office of Environmental Health Services, Water Resources Investigation Report 01-4036; 2001; http://pubs.usgs.gov/wri/wri01-4036/pdf/wri014036.pdf), the Mississippian bedrock aquifer system is reported to have relatively high transmissivity rates, meaning that fractures in the shales, siltstones, and sandstones of the Mauch Chunk Group are capable of transferring water from the land surface downward to recharge groundwater. The groundwater flow through rock fractures and bedding planes is described as diffuse flow (White, 1988).

Numerous undocumented springs and seeps occur within the headwater areas of tributaries to the Greenbrier River where the bedrock bedding planes and fractures intercept the ground surface. These smaller springs and seeps are critical to the ecosystems in the headwater areas of first order and second order high gradient streams because they supply the water necessary for the headwater area aquatic species, which comprise the base of the river continuum food chain for the Greenbrier River.

SECTION 6.0

MVP GAS PIPELINE CONSTRUCTION WITHIN THE GREENBRIER RIVER CROSSING AREA

WORK CORRIDOR LEVELING AND DEWATERING

The work corridor north and south of the proposed Greenbrier River crossing is described by MVP as being approximately 125 feet wide. The work corridor will be leveled by deforestation, excavation, and grading (Figure 6.0.1). The MVP DEIS provides a description of trench dewatering procedures: "Trench dewatering may be necessary to inspect the bottom of the trench in areas where water has accumulated. Trench water would be discharged through sediment removal devices in well-vegetated upland areas away from waterbodies and wetlands." On the left side of Figure 6.0.1, a hill has been excavated to its

intersection with a ravine. Water can be observed in the trench by the ravine where the pipeline is to be placed. Groundwater from the hillside would also flow toward the ravine and the pipeline trench. However, MVP provides no discussion concerning the interception of groundwater on cut slopes/hillsides.

Figure 6.0.1 – Leveled work corridor for pipeline installation, showing cut hillsides and evident dewatering into the pipeline trench. Heavy equipment and pick-up trucks provide a scale.

PIPELINE TRENCH DESCRIPTION

The trench in the land areas adjacent to the proposed Greenbrier River crossing will be as much as 10 feet deep in order to place the bedding material below the 42-inch pipe and the cover material over the pipe. Trench descriptions in the MVP Resources Report 1 describe that up to 2 feet of cover would be required at the base of the trench where rock is present to prevent the rock from damaging the pipe. There will be approximately 3 feet of cover material. Trench descriptions in the MVP Resources Report 1 describe that up to 2 feet of cover would be required at the base of the trench where rock is present to prevent the rock from damaging the pipe. In the MVP DEIS Table 4.1.1-9 – "Flood Zone and Class of Pipe Crossed by the MVP" provides that at MP 170.4 Summers County (at Pence Springs), the Greenbrier River crossing length is 1841 feet, with a minimum cover depth of 3 feet.

SECTION 7.0

IMPACTS TO WATERBODIES AND WETLANDS FROM THE PROPOSED MVP GAS PIPELINE CONSTRUCTION

DESTRUCTION OF AQUATIC HABITATS

Within the Greenbrier River flood plain at the proposed MVP gas pipeline crossing, there are 2 wetlands identified by MVP: "TTWV-W-76, PFO wetland and W-MM20, PFO wetland". These wetlands will be impacted by the work corridor, an access road, and a work space area. Additionally, there are several wetlands along the proposed MVP work corridor within headwater areas to tributaries to the Greenbrier River within the Big Bend PSD ZCC. Where MVP

designated wetlands and intermittent and ephemeral streams in headwater areas are located, it is apparent that groundwater from seeps or springs maintains the hydrology within these locations. Deforestation, soil compaction, and blasting will reduce groundwater flow and reduce the hydraulic head that moves groundwater toward the tributary streams and toward the Greenbrier River. Seeps and springs provide water to tributary streams and to the Greenbrier River during times of drought.

DEGRADATION OF RIVER WATER QUALITY

Within the Greenbrier River, blasting would be necessary to place the proposed gas pipeline where bedrock is encountered in the river bed. The MVP DEIS failed to list Greenbrier River crossing in Table 4.3.2-8 – "Waterbodies Crossed by the MVP in areas of shallow bedrock". Bedrock can be observed in the Greenbrier River where the gas pipeline installation is proposed. The MVP DEIS states that, "In-stream blasting has the potential to injure or kill aquatic organisms, displace organisms during blast-hole drilling operations, and temporarily increase stream turbidity. Additionally, shock waves created by blasting may post a threat to aquatic organisms. Chemical by-products from the blasting materials could also be released and could potentially contaminate the water."

It is stated in the Big Bend PSD Source Water Assessment Report (2003) that turbidity and the biological and chemical health of the surface water in the ZCC are of the greatest concern to the Big Bend PSD. In relation to turbidity, surface runoff is expressed as a critical concern. The proposed MVP gas pipeline construction would cause increased surface runoff. Blasting bedrock in the river bed of the Greenbrier River would result in increased turbidity, death of aquatic organisms, and chemical contamination of the river water due to chemical by-products of the blasting materials.

The MVP DEIS provides the following description of the adverse impacts of sedimentation: "Increased sedimentation and turbidity resulting from in-stream and adjacent construction activities would displace and impact fisheries and aquatic resources. Sedimentation could smother fish eggs and other benthic biota and alter stream bottom characteristics, such as converting sand, gravel, or rock substrate to silt or mud. These habitat alterations could reduce juvenile fish survival, spawning habitat, and benthic community diversity and health. Increased turbidity could also temporarily reduce dissolved oxygen levels in the water column and reduce respiratory functions in stream biota. Turbid conditions could also reduce the ability for biota to find food sources or avoid prey." Additionally, the Greenbrier River is one of the few remaining locations where the Federally listed endangered Clubshell mollusk (*Pleurobema clava*) is able to survive. As a filter feeder, this species is very sensitive to turbidity and sedimentation.

The MVP performed a quantitative modeling assessment for the Greenbrier River crossing at Pence Springs, with a resulting estimate that monthly sediment loads would increase by 19 to 52 percent. However, it is stated in the MVP DEIS that, "Construction and operation of the Projects would likely result in only short-term impacts on water resources... These impacts, such as increased turbidity, would return to baseline levels over a period of days or weeks following construction." The findings provided herein support the conclusion that there would be cumulative adverse impacts resulting from construction of the proposed pipeline within the headwater areas, within the tributaries to the Greenbrier River, and within the Greenbrier River. Increased turbidity results in increased sedimentation in the stream beds, which adversely impacts aquatic habitats. When the turbidity returns to baseline levels, the sediment remains. With increased stormwater discharge from the construction sites, increased stream volumes and velocities cause downstream stream bank erosion, resulting in more sediment accumulation in the stream beds. This cumulative damage to aquatic habitats, through time, will not disappear, but rather, will cause the death of aquatic organisms and will reduce water quality within the Big Bend PSD ZCC. There is no indication from the proposed MVP work description or Best Management Practices (BMPs) that there is any comprehension or consideration of the in-stream aquatic habitats (Figure 2.0.2) that will be destroyed by open trenching. There is no mention of restoring the embeddedness required by aquatic organisms as adequate habitat.

MITIGATION PROPOSED FOR WETLANDS AND STREAMS

The MVP mitigation approach for destroying wetlands and streams is to purchase credits in mitigation banks. All wetlands and first order high gradient streams within a watershed serve to maintain the aquatic ecology within that specific watershed. Simply creating a wetland bank in another watershed will never offset the damage to the watershed where the wetland is destroyed. Where a first order high gradient stream is destroyed, the damage can never be offset by restoring a stream in an entirely different watershed.

SECTION 8.0

CONCLUSIONS

The findings of this report provide evidence that construction of the proposed MVP gas pipeline will result in adverse impacts on the Greenbrier River, its tributaries, headwater areas, wetlands, and groundwater. The adverse impacts would be cumulative.

1) Construction of the proposed MVP gas pipeline will adversely impact headwater aquatic habitats which serve as the base of the food chain for the entire river continuum ecosystem.

Where seeps, springs, and wetlands are adversely impacted in the headwater areas of the Greenbrier River and its tributaries, the effects will continue along the entire river continuum. Impacts to aquatic habitats and organisms at the base of the food chain in the headwater areas would cause negative impacts to successive downriver aquatic organisms.

2) Construction of the proposed MVP gas pipeline will remove soil and compact soil, causing adverse impacts to springs and wetlands and to the hydrologic function of transporting water from the watershed to wetlands and first order stream channels.

Soil microorganisms require soil moisture in order to function in their capacity to 1) fix nitrogen for uptake by plant roots; 2) transform iron and manganese to increase their solubility and availability to higher organisms in the food chain; 3) detoxify sulfur; 4) oxidize organic carbon; and 5) transform phosphorus into soluble reactive phosphorus for uptake by higher organisms in the food chain. Dewatering and compaction of the soil during construction activities for a 125-foot wide work corridor and during trenching activities will destroy the soil microorganisms. Simple replacement of surficial topsoil after construction cannot restore the function of microorganisms in their capacity to provide organic compounds to the higher organisms in the headwater area ecosystem.

Water transport includes surface water flow necessary to create channels, both ephemeral channels in ravines as well as stream channels. It is stated in the MVP Erosion and Sediment Control Plan (E&SCP) for West Virginia counties (February 2016) that the gas pipeline construction requires leveling a 125-foot wide corridor on ridge tops as well as the mountain slopes between the ridges: “Given the ruggedness of the terrain and steep slopes, the full 125-foot construction right-of-way will be necessary in forested areas for the safe construction of the Project. MVP will neck down to a 75-foot construction right-of-way at streams and wetlands wherever possible.” When the land above the headwater areas is destroyed by leveling the ground surface, there is destruction of the slopes that would normally provide the sufficient amount of surface water to the ravines and stream channel. By leveling the ground surface, the existing soils which normally become saturated during precipitation events are removed and the remaining soils are compacted. This results in destroying the condition of saturated soils that allow surface water to flow slowly into the headwater areas. Additionally, the storage of water in soils facilitates the creation of hydric soils necessary to establish wetlands. The wetlands provide environments for chemical cycling of nutrients. With removal of soils in the headwater areas and compaction of the subsoil, the stormwater surface flow will increase in velocity, causing erosion within the stream bed and along the stream banks. The

resulting erosion will cause deposition of silt and clay within the pebbles and cobbles, destroying the aquatic habitats of the microbes and insect larvae. Additionally, trenching for the gas pipeline installation provides conduits which remove and lower the groundwater. When the groundwater is diverted into ditches, it is transported away as surface water and the groundwater table is lowered. The depletion of groundwater reduces the hydraulic head necessary to supply groundwater to downgradient seeps and springs in headwater areas and also along streams. Therefore, the reduction of groundwater recharge caused by deforestation, soil removal, and soil compaction removes the capacity for groundwater to supply water to the first order streams during drought conditions (baseflow), with the consequent death of aquatic organisms. The depletion and redirection of groundwater along the pipeline trench, as well as changes in the direction of groundwater movement caused by blasting, destroys springs, seeps, and wetlands in the headwater areas of first order streams.

3) Construction of the proposed MVP gas pipeline will adversely impact the hydraulic function of transporting water in ephemeral channels in ravines, in the channel, and through the sediments.

Water within an ephemeral channel or in a stream will determine the existence of aquatic habitats within the sediments and will interact with groundwater in the sediments of the stream bed and stream banks. The flow of water determines the size and amount of sediments that are deposited. Where the water velocity is great enough to move silt and sand away from areas of pebbles and cobbles, aquatic habitats are created for microbes and insect larvae which break down organic matter to provide food for larger aquatic species. Stream water velocities great enough to move pebbles and cobbles will obviously also result in the destruction of the aquatic habitats. Additionally, the velocity of the stream water controls the spacing and depth of stepped pools in the stream bed. The typical deep pools that form within the first order high gradient streams provide aquatic habitats for juvenile fish to live. In the MVP DEIS, the widths of access road easements are shown as 40 feet. In order to construct a flat roadbed, fill material will be required for construction, indicating wide embankment areas associated with the roadbeds. In the narrow ravines within first order stream tributaries to the Greenbrier River, the embankment area would extend into the stream beds if mountain slopes adjacent to the streams are not excavated/blasted to provide the necessary road widths. Therefore, either the streams will be directly impacted, or the seeps and springs in the adjacent mountain slope will be impacted, thereby reducing the flow of groundwater to the streams. The access roads are located not only in headwater areas, but also in the floodplains adjacent to the Greenbrier River at Pence Springs.

4) Deforestation for construction of the proposed MVP gas pipeline will adversely impact the geomorphologic function of conserving water in the ecosystem as well as transporting wood and sediment to create diverse bed forms and dynamic equilibrium.

Pipeline construction requires deforestation within an area at least 125 feet wide. The relatively dense tree canopy in the headwater areas intercepts rainfall so that it gently penetrates the ground as groundwater rather than flowing overland as runoff. This means that 1) the rain will gently fall to the ground and recharge groundwater and 2) the surface flow of rainwater on the ground will be slower than in cleared areas, thereby reducing the velocity and quantity of stormwater drainage. Woody debris in the forested headwater areas constitutes an important contribution to first order streams because the small woody debris provides particulate organic matter and the large woody debris, when transported to the stream bed, provides protected areas for aquatic organisms and also helps create the stepped pools needed by juvenile fish. MVP states in its E&SCP that the permanent ROW will be 50 feet wide and that "Future land use will be a maintained vegetated natural gas pipeline ROW." (page 3, E&SCP). The disturbed ROW will, therefore, not provide the function of the original forested area. Also, the soil compaction in the remainder of the 125-foot will not facilitate growth of the original forested area. Therefore, the proposed MVP gas pipeline construction on forested ridge-tops will adversely impact the geomorphologic function of the forested ridges.

5) Construction of the proposed MVP gas pipeline will adversely impact the physicochemical functions of temperature oxygen regulation, and also the processing of organic matter and nutrients.

The deforestation required for pipeline construction will also adversely impact the function of the relatively dense tree canopy that provides filtered light and relatively cooler, regulated temperatures. Aquatic organisms in the headwater areas and upper reaches of the first order stream channels require the filtered light and cooler, regulated temperatures in order to survive. The deep, stepped pools of stream water must provide the cooler temperatures required for certain aquatic organisms to survive.

6) Construction of the proposed MVP gas pipeline on ridge-tops will adversely impact biological functions of biodiversity and life cycles of aquatic and riparian life.

The ecology of the entire watershed is embraced in the river continuum concept, starting at the headwaters of first order high gradient streams and continuing downstream with changes of predominant benthic aquatic organisms along the river continuum. Shredders, predominant in the forested headwaters, break down organic matter used downstream by collectors and filter-feeders. The filter-feeders are subsequently consumed by larger benthos and fish farther downstream. The downstream healthy fish populations can only exist with specific water velocities, stream bed forms, temperature, and water chemistry.

Ecological systems of first and second order high gradient streams are described in detail in the "Functional Assessment Approach for High Gradient Streams,

West Virginia", written for the U.S. Army Corps of Engineers (USACE) by the U.S. Fish and Wildlife Service (USFWS) June 2007, published by the USACE (http://training.fws.gov/courses/csp/csp3112/resources/Wetland_Assessment_Methodologies/FunctionalAssessment-HighGradientStreams.pdf) and "A Function-Based Framework for Stream Assessment and Restoration Projects", by Harman, W., R. Starr, M. Carter, K. Tweedy, M. Clemmons, K. Suggs, C. Miller; 2012; U..S Environmental Protection Agency, Office of Wetlands, Oceans, and Watersheds, Washington, DC EPA 843-K-12-006. (https://www.fws.gov/chesapeakebay/StreamReports/Stream%20Functions%20Framework/Final%20Stream%20Functions%20Pyramid%20Doc_9-12-12.pdf)

7) The proposed MVP mitigation approach for wetlands and streams is deficient.

The MVP mitigation approach does not incorporate an understanding of the importance of headwater areas that supply surface and groundwater to the headwater streams and wetlands. Additionally, the MVP mitigation approach does not recognize the importance of headwater aquatic organisms as being the base of the food chain in the river continuum. Purchasing mitigation credits in areas outside of the actual watersheds for first order high gradient streams will not compensate for the cumulative damage to the specific watershed impacted or to the receiving water bodies downstream.

8) Construction of the proposed MVP gas pipeline will require deforestation and blasting, both of which will reduce groundwater recharge and cause significant changes to the amount of groundwater available as a drinking water source, as well as to groundwater flow routes.

Groundwater flows along bedrock bedding planes and fractures, forming seeps and springs where the bedding planes and fractures intercept the ground surface. The seeps and springs also occur within streams and along stream banks, providing water to streams during drought conditions. Deforestation results in reduced groundwater recharge, with the consequent decreased availability of groundwater. Blasting causes changes in the bedrock fractures, resulting in changes in the direction of groundwater flow. Consequently, seeps and springs will not receive the groundwater that was available prior to construction.

9) Construction of the proposed MVP gas pipeline will cause increased stormwater discharge and increased turbidity and sedimentation.

Increased stormwater discharge causes downstream stream bank erosion, introducing sediment into the streams. Increased amounts of silt and sand in the stream are deposited in openings between cobbles and pebbles, destroying the aquatic habitats and protective areas for minnows and juvenile fish. Blasting to remove bedrock at the proposed MVP crossing will introduce sediment and

harmful chemicals to the water, impacting the water supply intake located less than 2 miles downstream.

10) Construction of the proposed MVP gas pipeline will result in landslides on the pervasive steep slopes underlain by the Mauch Chunk red shale bedrock.

The West Virginia Geological and Economic Survey has provided documentation that landslides occur on steep slopes where the underlying bedrock is red shale. The Mauch Chunk red shale bedrock is the predominant unit in the area of Pence Springs where the MVP crossing of the Greenbrier River is proposed. Regardless of best management practices, erosion and landslides will occur within these areas.

11) The proposed MVP construction zone is within areas of earthquake concern.

Earthquakes have occurred in the Pence Springs area. Earthquakes not only cause ground shaking, which assists in causing landslides, but also causes the soil to behave as a fluid. When this happens, the soil loses its integrity and supportive capability, such that the pipeline would not be supported and could collapse due to lack of support.

12) Construction of the Proposed MVP Gas Pipeline Will Cause Cumulative Damage.

The Council on Environmental Quality (CEQ) regulations that implement the National Environmental Policy Act define cumulative effects as “the impact on the environment which results from the incremental consequences of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions” (40 CFR § 1508.7). Cumulative effects include both direct and indirect, or induced, effects that would result from the Project, as well as the effects from other projects (past, present, and reasonably foreseeable future actions) not related to or caused by the Project. Cumulative impacts may result when the environmental effects associated with a Project are added to temporary (construction-related) or permanent (operations-related) impacts associated with other past, present, or reasonably foreseeable future projects. Although the individual impact of each separate project might not be significant, the additive or synergistic effects of multiple projects could be significant. The cumulative effects analysis evaluates the magnitude of cumulative effects on natural resources such as wetlands, water quality, floodplains, and threatened and endangered species, as well as cumulative effects on land use, socioeconomics, air quality, noise, and cultural resources. The CEQ regulations (40 CFR § 1508.8) also require that the cumulative effects analysis consider the indirect effects which are caused by the

action and are later in time or farther removed in distance, but are still reasonably foreseeable.

The cumulative damage that would result from construction of the proposed MVP gas pipeline is inconsistent with the protection of West Virginia water resources and is in violation of the West Virginia Water Resources Protection Act (WV Code §22-26-1) et seq., which was enacted to determine the quantity of water resources in West Virginia. By enacting this statute, the Legislature provided for claiming and protecting state waters for the use and benefit of its citizens; evaluating the nature and extent of its water resources; and identifying activities that impede the beneficial uses of the resource ("West Virginia Water Resources Management Plan", Water Use Section, West Virginia Department of Environmental Protection, November 2013; http://www.dep.wv.gov/WWE/wateruse/WVWaterPlan/Documents/WV_WRMP.pdf).

In the MVP DEIS, it is recognized that there will be cumulative impacts. However, these impacts are dismissed as insignificant because of the proposed mitigation and because the project is within a "narrow" corridor. There is no acknowledgement that the corridor, access roads, and work spaces are within areas that are environmentally critical to maintaining surface water and groundwater resources and to maintaining the functions of the river continuum.

It is stated in the MVP DEIS that, "Construction and operation of the Projects would likely result in only short-term impacts on water resources... These impacts, such as increased turbidity, would return to baseline levels over a period of days or weeks following construction." The findings provided herein support the conclusion that there would be cumulative adverse impacts resulting from construction of the proposed pipeline within the Greenbrier River and its associated headwater areas and tributaries. Increased turbidity results in increased sedimentation in the stream beds, which adversely impacts aquatic habitats. When the turbidity returns to baseline levels, the sediment remains. With increased stormwater discharge from the construction sites, increased stream volumes and velocities cause downstream stream bank erosion, resulting in more sediment accumulation in the stream beds. This cumulative damage to aquatic habitats, through time, will not disappear, but rather, will cause the death of aquatic organisms and will reduce water quality.

The findings of this report support the conclusion that there would be significant environmental destruction and degradation within the Greenbrier River if the MVP pipeline were to be constructed.

SECTION 9.0

REFERENCES

Harman, W., R. Starr, M. Carter, K. Tweedy, M. Clemmons, K. Suggs, C. Miller; "A Function-Based Framework for Stream Assessment and Restoration Projects"; U.S. Environmental Protection Agency, Office of Wetlands, Oceans, and Watersheds, Washington, DC EPA 843-K-12-006; 2012; https://www.fws.gov/chesapeakebay/StreamReports/Stream%20Functions%20Framework/Final%20Stream%20Functions%20Pyramid%20Doc_9-12-12.pdf

Mitsch, William J. and James G. Gosselink; "Wetlands"; 1986; Van Nostrand Reinhold, NY.

Reger, David B., Paul H. Price, and I.C. White; "Mercer, Monroe, and Summers Counties"; West Virginia Geological Survey CGR-15; Wheeling News Litho Co.; 1926.

Sponaugle, Kelley N., David E. McKinney, Linton Wright, Jr., Charles E. Nelson, Roy E. Pyle, and Claude L Marra; "The Soil Survey of Mercer and Summers Counties, West Virginia"; USDA Soil Conservation Service in cooperation with the WV University Agricultural and Forestry Experiment Station, with fieldwork conducted 1971-1979, published by the National Cooperative Soil, issued July, 1984.

U.S. Fish and Wildlife Service; "Functional Assessment Approach for High Gradient Streams, West Virginia", written for the U.S. Army Corps of Engineers (USACE) by the U.S. Fish and Wildlife Service (USFWS) June 2007, published by the USACE; http://training.fws.gov/courses/csp/csp3112/resources/Wetland_Assessment_Methodologies/FunctionalAssessment-HighGradientStreams.pdf .

Vannote, R.L., G. W. Minshall, K.W. Cummins, J.R. Sedell, and C.E. Cushing in "The River Continuum Concept", 1980, Canadian Journal of Fisheries and Aquatic Sciences 37: 130-137.

West Virginia Department of Environmental Protection, Water Use Section; "West Virginia Water Resources Management Plan" November 2013; http://www.dep.wv.gov/WWE/wateruse/WVWaterPlan/Documents/WV_WRMP.pdf.

Curriculum vitae for

Pamela Crowson Dodds, Ph.D., L.P.G.
P.O. Box 217
Montrose, WV 26283
pamelart@hughes.net

My education includes a bachelor's degree in Geology and a doctoral degree in Marine Science (specializing in Marine Geology), both from the College of William and Mary in Williamsburg, VA. I have a Credential in Ground Water Science from Ohio State University and I am a Licensed Professional Geologist. I have held teaching positions at the high school level and at the college level, and have provided geology and hydrogeology presentations, workshops, and classes to state and federal environmental employees, to participants in the Regional Conference in Cumberland, MD for the American Planning Association, and to participants in the WV Master Naturalist classes. I have served as an expert witness in hydrogeology before West Virginia government agencies.

As a Hydrogeological Consultant (2000 – Present), I have conducted hydrogeological investigations, provided hydrogeological assessment reports, served as an expert witness in hydrogeology before the West Virginia Public Service Commission in three cases and before the West Virginia Environmental Quality Board in one case, and provided numerous presentations and workshops in hydrogeology to state and federal environmental employees (including USFWS and WV FEMA Managers), participants in the Regional Conference in Cumberland, MD for the American Planning Association, participants at civic and landowner meetings, and participants in the WV Master Naturalist classes.

As a Senior Geologist for the Virginia Department of Environmental Quality (1997-1999), I determined direction of groundwater flow and the pollution impacts to surface water and groundwater at petroleum release sites and evaluated corrective actions conducted where petroleum releases occurred. At sites where the Commonwealth of Virginia assumed responsibility for the pollution release investigation and corrective action implementation, I managed the site investigations for the Southwest Regional Office of the Virginia Department of Environmental Quality (DEQ). This included project oversight from contract initiation through closure.

As a Senior Geologist and Project Manager for the Environmental Department at S&ME, Inc. (Blountville, TN, 1992-1997), I conducted geology and groundwater investigations. I supervised technicians, drill crews, geologists, and subcontractors. The investigations were conducted in order to obtain permits for landfill sites and to satisfy regulatory requirements for corrective actions at petroleum release sites. My duties also included conducting geophysical investigations using seismic, electrical resistivity, and ground penetrating radar techniques. I conducted numerous environmental assessments for real estate transactions. I also conducted wetlands delineations and preparation of wetlands mitigation permits.

As the District Geologist for the Virginia Department of Transportation (1985-1992), my job duties included obtaining and interpreting geologic data from fieldwork and review of drilling information in order to provide foundation recommendations for bridge and road construction. My duties included supervision of the drill crew and design of asphalt and

concrete pavements for highway projects. Accomplishments included preliminary foundation investigations for interstate bridges and successful cleanup of leaking underground gasoline storage tanks and site closures at numerous VDOT facilities.

While earning my doctoral degree at the College of William and Mary, I worked as a graduate assistant on several grant-funded projects. My work duties included measuring tidal current velocities and tidal fluctuations at tidal inlets; land surveying to determine the geometry and morphology of numerous tidal inlets; determining pollution susceptibilities of drainage basins using data from surface water flow parameters, hydrographs, and chemical analyses; developing a predictive model for shoreline erosion during hurricanes based on calculations of wave bottom orbital velocities resulting from various wind velocities and directions; performing sediment size and water quality analyses on samples from the Chesapeake Bay and James River; conducting multivariate statistical analyses for validation of sediment laboratory quality control measures; reconnaissance mapping of surficial geologic materials in Virginia, North Carolina, and Utah for publication of USGS Quaternary geologic maps; teaching Introductory Geology laboratory classes at the College of William and Mary; and serving as a Sea Grant intern in the Department of Commerce and Resources, Virginia.

EDUCATION:

College of William and Mary
Williamsburg, VA 23185
Ph.D., 1984
Major: Marine Science (Marine Geology)

College of William and Mary
Williamsburg, VA 23185
B.A., 1972
Major: Geology

Flint Hill Preparatory
Fairfax, VA
High School Diploma, 1968

JOB-RELATED TRAINING COURSES:

2007: Certified Volunteer Stream Monitor, West Virginia (Dept. of Environmental Protection)
2006: Certified Master Naturalist, West Virginia (Dept. of Natural Resources)
1996: Karst Hydrology, Western Kentucky University
1996: Global Positioning Systems (GPS) for Geographic Information Systems (GIS) applications, seminar conducted by Duncan-Parnell/Trimble
1995: Safe Drinking Water Teleconference, sponsored by the American Water Works Association
1992-1998: OSHA Hazardous Waste Site Supervisor training with annual updates
1990: Credential in Ground Water Science, Ohio State University

JOB-RELATED LICENSE:

Licensed Professional Geologist: TN #2529

PROFESSIONAL ORGANIZATIONS

West Virginia Academy of Sciences

National Speleological Society

EXHIBIT 15 TO MOTION FOR PRELIMINARY RELIEF

EXCERPT OF TRANSCRIPT OF JANUARY 23, 2018 MOTIONS HEARING IN CIV. NO. 1:17-CV-211 (N.D. W. VA.): TESTIMONY OF ROBERT J. COOPER, SR. VICE-PRESIDENT FOR CONSTRUCTION AND ENGINEERING, MOUNTAIN VALLEY PIPELINE, LLC

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF WEST VIRGINIA

MOUNTAIN VALLEY PIPELINE, LLC

Plaintiff,

vs. CIVIL ACTION NUMBER: 1:17CV211

SHARON SIMMONS, et al,

Defendants.

VOLUME 1

Proceedings had in the Motion Hearing of the above styled action on January 23, 2018, at 9:00 a.m., before The Honorable Irene M. Keeley, Senior Judge, at Clarksburg, West Virginia.

APPEARANCES:

FOR THE PLAINTIFF:
NICOLLE R. SNYDER BAGNELL, ESQUIRE
ARIEL N. FORBES, ESQUIRE
JENNIFER M. THOMPSON, ESQUIRE
Reed Smith LLP
Reed Smith Centre
225 Fifth Avenue
Pittsburgh, Pennsylvania 15222
412-288-3063

STEPHEN E. HASTINGS, ESQUIRE
EQT Corporation
1710 Pennsylvania Avenue
Charleston, West Virginia 25302
304-561-3753

Proceedings recorded by stenomask, transcript produced by official court reporter.

EXHIBIT 15 TO MOTION FOR PRELIMINARY RELIEF

APPEARANCES: (Continued)

FOR THE DEFENDANTS:

NICHOLAS S. PRESERVATI, ESQUIRE
Spilman Thomas & Battle PLLC
300 Kanawha Boulevard, E.
P.O. Box 273
Charleston, West Virginia 25321
304-720-3437

ISAK J. HOWELL, ESQUIRE
Isak Howell Law Office
119 Norfolk Avenue
SW 330
Roanoke, Virginia 14011
540-998-7744

DEREK O. TEANEY, ESQUIRE
Appalachian Center for the
Economy and Environment
P.O. Box 507
Lewisburg, West Virginia 24901
304-793-9007

CHARLES M. LOLLAR, JR. ESQUIRE
Lollar Law, PLLC
109 E. Main Street, Suite 501
Norfolk, Virginia 23510
757-644-4657

CHARLES J. STEVENS, ESQUIRE
Stevens & Stevens PLLC
P.O. Box 635
8137 Court Avenue
Hamlin, West Virginia 25523
304-824-7779

GEORGE A. PATTERSON, III, ESQUIRE
PATRICK C. TIMONY, ESQUIRE
Bowles, Rice, McDavid, Graff & Love
P.O. Box 1386
600 Quarrier Street
Charleston, West Virginia 25325
304-347-1118

EXHIBIT 15 TO MOTION FOR PRELIMINARY RELIEF

I N D E X

WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
(For the Plaintiffs)				
Robert Cooper	76			

EXHIBITS	ADMITTED
Plaintiff's Exhibit Number 1	79
Plaintiff's Exhibit Number 2	82
Plaintiff's Exhibit Number 3	86
Plaintiff's Exhibit Number 4	90
Plaintiff's Exhibit Number 5	105
Plaintiff's Exhibit Number 6	108

building and operating the pipeline when it's completed.
Q. Okay. So you think someone might be out there trying to find a new project, but you can't tell us what any new pipeline project would be at this time, can you?
A. That's--commercial development is not under my privy.
Q. But do you have, you know, company wide meetings where you've talked to them?
A. I'm not involved in any of that at the moment, sir. I'm trying to build a pipeline.
Q. I appreciate that point. With regard to the contractors, when you issued those purchase orders in October, you could have at that time issued them for a November 2018 start date, isn't that correct?
A. Nothing would've prevented that that I know of, sir.
Q. Okay. I may be coming to the end. I just would like a moment to review my notes to be sure and perhaps confer with other counsel. Oh, I know what I forgot to ask you. If you were delayed to a start date of November 2018, you know you have a schedule there in front of you--schedules, Plaintiffs 1 and 2, you would still build this pipeline, correct?
A. Most likely, depending upon what the actual costs and issues were at the time, rehiring the contractors, the availability of those workers. There is a chance that it might not make it viable but I believe, based on the evaluations we've shown here, that an attempt would be made

to complete the project.
Q. So there's a chance it might not happen but it most likely will then, correct?
A. Correct, sir.
Q. Thank you. You testified about the three point seven billion dollar approved budget and I believe you testified that there was a contingency of some sort built into that. Is that accurate?
A. Yes.
Q. What is the value of that contingency that's built into the project?
A. It's roughly a hundred and eighty million dollars.
Q. Is that roughly five percent?
A. Yes, sir.
Q. Okay. And in your engineering experience it's not unusual to have a contingency in a project of five percent, is it?
A. No, sir, it's not.
Q. Would it be--you could have a greater contingency couldn't you?
A. Yes. I believe on the length of time that we've been developing this project and the current understanding of our costs because we've converted a lot those estimates to actual contract costs that that estimate is valuable to this project. Sometimes when you enter a project you don't have